Reflection of Environmental Citizenship Behaviour through Domestic Waste Disposal Practices: Examination on Youth in Sri Lanka

Sachitra, V.
Department of Commerce, University of Sri Jayewardenepura, Sri Lanka
vilani@sjp.ac.lk

Abstract

The comparison of Environmental Citizen Behaviour (ECB) and waste disposal mechanism is relatively unknown among youth. The study explores how ECB reflects through domestic waste disposal practices by analyzing extend of ECB and waste disposal practices among Sri Lankan youth descriptively. A quantitative cross-sectional online survey was adopted to collect data from students in Sri Lankan universities. ECB was measured with a modified version of the eleven-item scale developed. Measurement properties were assessed using confirmatory factor analysis. Descriptive statistics, cross-tabulation analysis and mean comparison analysis were utilized as data analysis techniques. The study operationalized ECB as eco-initiatives, eco-helping and eco-civic engagement. Relative to eco initiative and eco helping, low practice was reported to eco-civic engagement. Presence of low and moderate ECB, the probability of using waste collection arrangement was high. Respondents with higher level of ECB, applicability of composting the waste is relatively high. However, dumping waste outside premises was also high among highest ECB. Compared to individuals with high and low ECB, burning waste was higher for moderate ECB. The findings suggest that there is a certain level of ECB that is necessary for waste disposal method selection, however when the ECB level optimized, it may affect waste disposal negatively. The joint inspiration of ECB and waste disposal is relatively unknown. In Sri Lanka, which is a developing context, there is a lack of studies about the connection between ECB and waste disposal.

Keywords: *Environmental Citizen Behaviour, Waste Disposal, Youth, Developing Context, Descriptive Analysis*

Correspondence: vilani@sjp.ac.lk

ORCID of authors: Sachitra, V.- https://orcid.org/0000-0002-9384-0353

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Introduction

The world is already suffering and staggering the environmental degradation, global warming; limited access to fresh water; air pollution and so on. The environmentalists insist that overpopulation; consumption and urbanization are the main causes to derive an increase in demand for food, housing and utilities; energy consumption, land usage and transportation. Thereby implying that the limited resources on earth have been depleted at an escalating rate and lead into the environmental degradation (Arora, 2018). Solid waste management (SWM) is a crosscutting issue that impacts all three sustainability domains: ecology, economy, and society (Rodic and Wilson, 2017). Out of 17 Sustainable Development Goals (SDGs) of the 2030 Agenda for Sustainable Development, at least 12 SDGs and their pertinent targets have a direct link to SWM. Table 01 presents the SDGs with their pertinent targets and their links to SWM (Global Waste Management Outlook, 2015).

Table 01: SDGs and SWM

Global Waste Management Goals		Related SDGs
Ensure by 2020	W1 - Access for all to adequate, safe and affordable solid waste collection services	3 - Health for all 11 - Safe cities
	W2 - Stop uncontrolled dumping, open burning	3 - Health for all 11 - Safe cities 12 - Sustainable consumption and production (SCP) 6 - Clean water and sanitation 14 - Marine resources 15 - Terrestrial ecosystems
Ensure by 2030	W3 - Achieve sustainable and environmentally sound management of all waste, particularly hazardous waste	12.4 - Managing all waste 13 - Climate change 7 - Access to energy
	W4 - Substantially reduce waste generation through prevention and the 3Rs (reduce, reuse, recycle) and thereby create green jobs	12.5 - The 3Rs 8 - Growth & employment 1 - End poverty 9 - Sustainable industry
	W5 - Halve per capita global food waste at the retail and consumer levels and reduce food losses in the supply chain	12.3 - Food waste 2 - End hunger; food security

Protection of public health was the main driving force behind the attempts to introduce the forms of solid waste collection in cities around the world (Barles, 2007). Though some cities and towns have been able to organise some level of services to their citizens, in recent decades many developing countries have been struggling to keep up with the amounts of waste generated (Rodic and Wilson, 2017). Even in places where waste is collected, it may still end up being dumped in low-lying areas or just anywhere outside the city. And the uncollected waste is usually just dumped in watercourses or vacant land or burned in the open air near the residences. These practices pose health risks to the residents and exacerbate floods and pollute local water sources.

On this note, we can grasp the gravity of the situation that awaits us in future. Baillie and Zhang (2018), thus, suggest that people need to change their mind set on waste disposal and connect emotionally to the natural environment to make decisions that ensure the sustainable environment. Accordingly, there is a serious requirement to manage and prevent the environmental degradation with renewed perspective (Hou et al. 2021). The scholars advocate that an interdisciplinary approach to education for sustainable development will give the students holistic understanding and perceptions on emerging environment issues, in returns leads people to act responsibly towards environmental protection (Brunstein & King, 2018).

Citizenship implies as duties (Barry, 2009) and environmental citizenship therefore implies that individuals contribute to a livable community by taking up the values and ideals of protecting environmental quality (Ojedokun, 2018). The concept of environmental citizenship defines the relationship of people and nature and reiterates that environmental conservation is everybody's sole responsibility at all time, based on one's life choices in minimizing ecological impact on earth (Meerah et al., 2010). Accompanying this, environmental citizenship behavior (ECB) is a set of individual and discretionary innovative actions directed at protecting environmental quality (Boiral, 2009).

The ECB has been incorporated in management education to prepare work-based learning programmes to deliver education for sustainability to future on managers (Sekhar, 2020). Future managers, who are mostly enrolled in management education, are required to train on how to take on different roles in the corporate world in future because managers involve in localized efforts to manage global resources and organizational performance. Thus, management undergraduates need to be socially sensitive (Middlemiss, 2014) and they must play a proactive role in the corporate world to protect environmental quality.

Environmental conservation has always been a core component in Sri Lankan culture; inherited by Buddhist religious practices. Lord Buddha was the religious leader who practiced environmentally friendly lifestyle and inculcated those practices among his followers. However, Sri Lanka generates 8500MT of solid waste per day approximately and each person generates an average of 0.4 to 1 kg of waste per day (Dharmasiri, 2019). Waste collection and disposal responsibilities are assigned to the local authorities, Municipal Councils; Urban Councils and Pradeshiya Sabha. Several governments have been attempted to figure out the best waste management practices such as, sanitary landfills, energy project, unfortunately we still encounter the problem of lack of proper

management of waste. The most common method of municipal solid waste disposal still remains to be open dumping. As individuals we all need to be responsible for our own waste, taking responsibility to minimize waste generation and practice proper waste disposal methods. Since households are responsible for making wastes, their efforts to dispose household wastes is vital to manage waste effectively. As environmental behavioral citizen, it is our responsibility to separate waste as perishables and non-perishables and use perishable waste for making compost and handover non-perishables to recycling.

Many studies have examined the household waste disposal behavior with respect to waste management in developing and developed contexts and identified the factors (education; gender; age; social influence; household characteristics; living standards) affecting waste disposal behavior of households (Kumara and Pallegedara, 2020). Composition Surveys (WACS) conducted by the University of Peradeniya (2014), revealed that, nearly three fourth of total waste is generated from kitchens however, composting mechanism does not functioning in a proper manner (Dharmasiri, 2019). The collection of MSW in the country is very poor except in three main Municipal Councils; Colombo, Dehiwala-Mount Lavinia and Kotte which has about 50% collection value. The collection value for other parts of the country is generally 10-15% (Dharmasiri, 2019). On this point, more than 50 percent of total household wastes are managed by the respective households.

According to Sri Lanka Household Income and Expenditure Survey (SLHIES, 2016), the main mechanism of household waste disposal categorizes into five methods; collection (use waste collection agreements imposed by municipal system); burning (burning waste within own premise or outside); dumping within own premise (dump waste within own premise without further treatment); dumping outside the premises (openly dump waste outside own premise) and composting (do composting their waste). Improper ways of waste disposal are generating different complications such as diseases, unbearable stench, fire hazards, atmospheric and water pollution, aesthetic nuisance, together with social and economic losses.

The literacy rate of Sri Lankans (92.6%) is much higher than that of other developing countries. It emphasizes that literate people should work in a systematic manner in relation to waste disposal. Aforementioned, at the university level ECB has been incorporated in management education. Therefore, the main focus of this study is to explore how ECB reflects through domestic waste disposal practices of Sri Lankan youth. With the author's understanding, the empirical investigation on ECB and waste disposal was not being conducted. In that manner, this study makes novel contribution towards ECB literature as well as waste disposal practices.

Environmental Citizenship Behaviour (ECB)

The concept of environmental citizenship redefines the relationship of people and nature and reiterates that environmental conservation is everybody's sole responsibility at all time, based on one's life choices in minimizing ecological impact on earth (Meerah et al., 2010). Accompanying this, ECB is a set of individual and discretionary innovative actions directed at protecting environmental quality (Boiral, 2009). In fact, ECB entails sharing concerns for the environment and implementing innovative environmental management strategies

(Lilfs and Hahn, 2013), creating environmental awareness, helping in environmental protection activities and recruiting others to do the same, acquisition of knowledge relating to pollution and waste prevention, joining environmental protection groups and attending environmental preservation seminars, workshops, trainings and conferences (Boiral and Paille, 2012).

Individual's environmental initiative is generally considered to be one of the main success factors in global greening. Eco-initiatives and participation of individuals have generally been related with different environmental best practices such as taking environmental responsibilities, developing eco-innovations, initiating pollution prevention, implementing environmental management systems and so on (Boiral and Paille, 2012). In this aspect, Boiral (2009) defines ECB as a set of individual innovative actions directed at protecting environmental quality. Acknowledging that Lilfs and Hahn (2013) opine ECB entails sharing concerns for the environment and implementing innovative environmental management strategies. The literature has shown that ECB is generally considered the activities of eco-initiatives (personal initiatives and actions to improve the environment), eco-helping (willingness to promote and encourage others to be environmental conscious), eco-civic engagement (participating and supporting implementation of environmental management programs and activities) (Boiral and Paille, 2012; Smith and O'Sullivan, 2012). Similarly, ECB is creating environmental awareness, helping in environmental protection activities and (Management – 260; Applied Sciences – 116 and Social Sciences and Humanities - 208). The collected questionnaires were greater than the minimum sample size of 384 required for data analysis. Further, representation portion of the various recruiting others to do the same. In line with the literature, the study operationalized ECB as eco-initiatives, eco-helping and eco-civic engagement.

Methods

Participants

The scope of this study includes the university undergraduates in Sri Lanka. There are approximately 55,000 students currently enrolls in the University system including fifteen state and seven non-state universities. The study used a survey method to collect data from undergraduates studying at six state universities and two non-state universities offering Management, Applied science and Social Sciences and Humanities degrees. Rationale for selecting three faculties; they offer major or elective course units in environmental management, environmental science or sustainability. In total, 22,450 students (Management – 10,200; Applied Sciences - 2450, Social Sciences and Humanities - 9800) were considered as the target population of the study. Due to the second wave of COVID-19 pandemic; the author did not have possible opportunities to collect data in physical form. As remedy, the study utilized online survey technique to collect data. In this manner, the author prepared a structured questionnaire using google form and sent the form in respective faculties in the selected universities. Thereafter, the author has requested to the faculty dean to distribute the Google form link to undergraduates' social media groups. Following two rounds of reminders, 584 questionnaires were found usable for data analysis faculties and academic years was adequate, the author thus decided to proceed with data analysis.

Measures

A questionnaire contained some demographic variables along with measures of the ECB. ECB was measured with a modified version of the eleven-item scale developed by Boiral and Paille (2012) and Ojedokun (2018). The participants rated how much they agreed with the items on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). As shown in Table 02, the study used three-factor model of ECB. In line with SLHIES (2016) categorization, the study used collection; burning; dumping within own premise; dumping outside premises and composting as household waste disposal methods. The participants were asked to select one option as the most usable method. The joint influence of demographic factors on ECB and waste disposal of youths is relatively unknown. To gain insight into this joint influence, gender, degree programme and working experience were included in the study as control variables.

Table 02: Measurement items of ECB

Construct	Variable	Measurement Items
ECB	Eco-initiatives (EI)	Encourage others to adopt environmentally friendly behavior (ECB1) Encourage others to express their ideas on environmental issues (ECB2) Help others to understand environmental problems (ECB3) Willing to share information on environmental issues (ECB4)
	Eco-helping (EH)	Actively participate environmental events organised by relevant authorities (ECB5) Undertake environmental protection actions (ECB6) Volunteer for environmental protection projects (ECB7) Consider the effects of environment before doing something (ECB8)
	Eco-civic engagement (EEC)	Initiate environmentally friendly actions in daily works (ECB9) Make suggestions to others about way to protect the environment (ECB10) Suggest new practices that could improve the environmental performance (ECB11)

Data Analysis

Measurement items were assessed using Confirmatory Factor Analysis (CFA) to test factor structure, reliability (Cronbach Alpha) to assess internal consistency, and CFA to assess discriminant validity among theoretical measures in the study. CFA was performed using SEM in Analysis of Moment Structures (AMOS, version 24) and SPSS version 21 used to perform reliability analysis. Descriptive statistics, cross-tabulation analysis and mean comparison analysis were performed to identify the levels of ECB involvement and domestic waste disposal practices of Sri Lankan youth. For Eco-initiatives and Eco-helping, the scores range from 18 to 20 identified as high involvement; 14 to 17 as moderate and less than 14 identified as low involvement. For Eco-civic engagement, the scores range from 13 to 15 identified as high involvement; 8 to 12 as moderate and less than 8 identified as low involvement.

Results and Discussion

Discriminant Factor Analysis

To confirm whether the theoretical measures included in the study are empirically discrete, the CFA was conducted using the ECB measures with multiple scale items. The CFA indicated that the eleven items loaded on their respective factors ($p<0.01$) and the measurement model demonstrated a good fit (NFI = 0.927; CFI = 0.935; IFI = 0.935; RMSEA = 0.062) according to the commonly accepted cut-off values in structural equation modeling (SEM) (Byrne, 2013) (Figure 01 indicates the factor loadings). Item ECB 8 removed due to the insufficient factor loading values (0.471). The Cronbach coefficient (α) for eco-initiatives (α = 0.72), eco-helping (α = 0.84) and eco-civic engagement (α = 0.88).

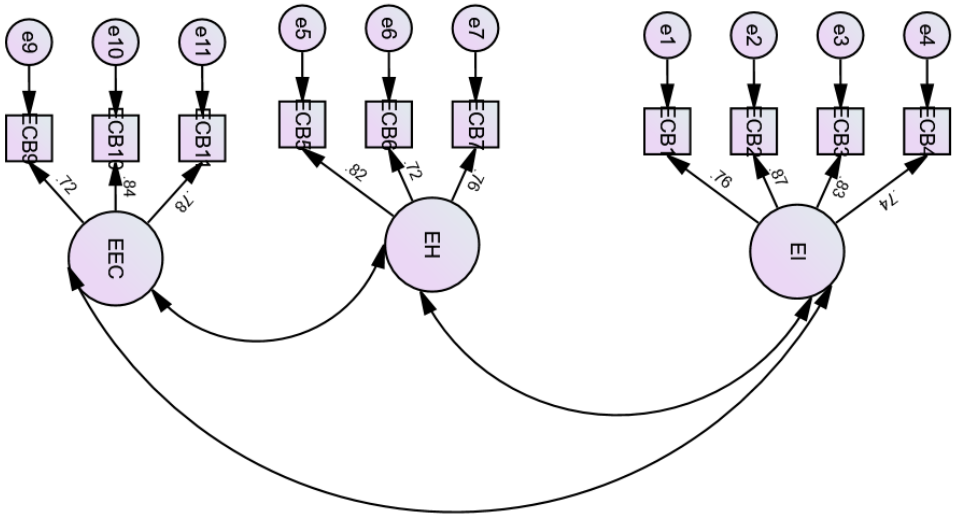

Figure 01: Factor Loadings

Table 03 shows the frequencies of faculties, academic years, gender, university type, ECB extend and waste disposal methods were adequate. As table shown, relative to eco initiative and eco helping, lower score was reported to high involvement of Eco-civic engagement (16%). The percentages of household wastes collection-arrangement and composting were 38% and 32%, respectively. For instance, approximately 30% of household wastes of the selected sample dispose primarily on burning and dumping.

Table 03: Sample Profile

Factor	Frequency (percentage)
Universities:	
State	462 (79%)
Non-state	122 (21%)
Faculties:	
Management	260 (44%)
Applied Sciences	116 (20%)
Social Sciences and Humanities	208 (36%)
Academic Year:	
Year I	139 (24%)
Year II	152 (26%)
Year III	142 (24%)
Year IV	151 (26%)
Gender:	
Male	206 (35%)
Female	378 (65%)
Did job before entering university	
Yes	226 (38%)
No	358 (62%)
Working Experience (even as internship)	
Yes	268 (46%)
No	316 (54%)
Eco-initiatives	
High	150 (26%)
Moderate	298 (51%)
Low	136 (23%)
Eco-helping	
High	158 (27%)
Moderate	320 (55%)
Low	106 (18%)
Eco-civic engagement	
High	96 (16%)
Moderate	294 (50%)
Low	194 (34%)
Waste disposal method	
Collection	222 (38%)
Burning	96 (16%)

Dumping within own premise	58 (10%)
Dumping outside premises	20 (4%)
Composting	185 (32%)

Next, the study compared the three-factor model of ECB with respect to gender, faculty, academic year and working experience of the undergraduates (Table 04). If we look at the gender-wise student count, females were mostly engaged in eco-initiative and eco-helping than male counterparts. Based on the mean comparison results, eco-helping involvement significantly differed with gender; female undergraduates record higher eco-helping mean value. Eco-helping requires extensive social interaction (Ojedokun (2018) and females are likely to have good social skills and opportunities via numerous friends and social clubs. Thus, female students report higher level of eco-helping. On the other hand, females are characterized with speaking, mobilizing and engaging others, so they are in better position to ask others directly to consider eco-helping. This finding was not in line with Ojedokun (2018); gender was not significant predictor of eco-helping. Moreover, undergraduates attached to the Applied Sciences Faculty scored highest mean values for eco-initiative and eco-civic engagement. This result confirmed that course units including ECB/environment/sustainability offered by the degree programmes are relatively differed in three faculties of the study. Since the present study did not observe the degree programmes content, further studies are needed to witness the course content and depth of knowledge delivered with regard to ECB.

Academic year comparison clearly specified that Year IV undergraduates placed highest score for eco-initiative and eco-civic engagement. Interestedly, we can also view that students who engage with career options (even as internship) tend to involve eco-initiative and eco-civic engagement than those who are not. As an requirement of the degrees, final year students are engaging internship training as compulsory (or elective) course unit. This creates a great option for final year students to get experience in industrial training. The results suggest that students who experienced career exposure have more tendencies to involve with ECB and they give prior value to protect environment. This findings confirmed that individuals who open to experience (in here industry), produce a spectrum of new ideas to promote eco-initiatives and report more pro-environmental behavior (Brick and Lewis, 2016). When considering eco-helping and academic year, we can view that Year II students were more eco-helping than others. For almost all three factors in ECB, Year I students recorded the lowest mean values.

Table 04: Comparison of ECB Extend and Demographic Characteristics (number of students in count)

Characteristics	**Eco-initiatives**			**Eco-helping**			**Eco-civic engagement**		
	Low	**Mod**	**High**	**Low**	**Mod**	**High**	**Low**	**Mod**	**High**
Gender:									
Male	40	108	58	46*	112*	48*	60	116	30
Female	96	190	92	60*	208*	110*	134	178	66

Faculties:									
Management:	47*	165*	48*	36	157	67	73*	140*	47*
Applied Sciences	21*	36*	59*	22	47	47	30*	64*	22*
Social Sciences	68*	97*	43*	48	116	44	91*	90*	27*
Academic Year:									
Year I	43*	74*	22*	54*	59*	26*	57*	74*	9*
Year II	33*	69*	50*	25*	67*	60*	54*	59*	38*
Year III	41*	82*	19*	19*	108*	60*	67*	64*	23*
Year IV	30*	78*	43*	20*	89*	42*	37*	87*	26*
Employed before entering university									
Yes	48	118	60	46	126	54	70	120	36
No	88	180	90	60	194	104	124	174	60
Internship Engage:									
Yes	56*	128*	84*	42	148	78	78*	140*	50*
No	80*	170*	66*	64	172	80	116*	154*	46*

**Mean values are significantly differed at 95 percent confidence interval*

Furthermore, the study compared the waste disposal methods in terms of gender, faculty, academic year and working experience of the undergraduates (Table 05). It is further evidence that female students are more pro-environmental than males; use composting (65%) and collection arrangement (64%) as waste disposal methods. In contrast, burning as disposal method was also higher (68%) among females. Compared with degree programmes, composting the waste was proportionally higher among Applied Sciences degrees (38%), followed by Social Sciences degrees (32%). For Management degrees, 42 percent of students use waste collection arrangement; whereas Applied Sciences students recorded 26 percent. Using composting practices were relatively low among students who did not have industry exposure before entering to the university. However, tendency of practicing waste composting getting increase among students who get industry exposure.

Table 05: Comparison of Waste Disposal Methods and Demographic Characteristics (number of students in count)

Characteristics	**Waste Disposal Methods**				
	Burning	**Composting**	**Dump outside premise**	**Dump own premise**	**Use collection arrangement**
Gender:					
Male	30	65	10	18	80
Female	66	120	10	40	142
Faculties:					
Management:	42	72	6	29	111
Applied Sciences	22	45	2	15	31
Social Sciences	32	68	12	14	80
Academic Year:					
Year I	22	53	2	12	50

Year II	19	55	5	17	56
Year III	29	37	10	9	57
Year IV	26	40	3	20	62
Employed before entering university:					
Yes	46	68	4	34	71
No	50	117	16	24	151
Internship Engage:					
Yes	46	87	4	32	97
No	50	98	16	26	125

Finally, the study compared the ECB and waste disposal methods of the respondents. Figure 02 depicts the result of eco-initiative levels and waste disposal methods. Accordingly, with the presence of low and moderate eco-initiative level, the probability of using waste collection arrangement was high. The low eco-initiators seems to be high rigid and they prefer to stick with given option; collection arrangement. On this point, they are adaptive to availabilities, given that generating low initiatives in waste disposals. They are more preferred to switch their environmental responsibility to other party, rather than do it by themselves. Because of waste collection arrangement, individuals do not make active effort to minimize waste generation; they believe that the authorities need to do necessities with their wastes. As Dharmasiri (2019) insisted, if the present rate of waste production goes on without a proper waste management system, there will be significant negative impacts on the quality of the environment. The graphic (pie chart) demonstrates that respondents with higher level of eco-initiative, applicability of composting the waste is relatively high. This is, interestedly, a positive sign; they understand that waste is from nobody, it belongs to everyone. They have a responsibility to manage waste in a proper manner. Unfortunately, dumping waste outside premises was also high among highest eco-initiators. This seems an unforeseen result and might be getting a serious issue to see forward. Compared to high and low initiators, burning waste was higher for moderate eco-initiators. There is a crucial requirement to explore why individuals behave such manner and need to deliver the message; the environment as a gift and a responsibility. Taken together, the findings suggest that there is a certain level of eco-initiative that is necessary for waste disposal method selection, however when the eco-initiative level optimized, it may affect waste disposal negatively.

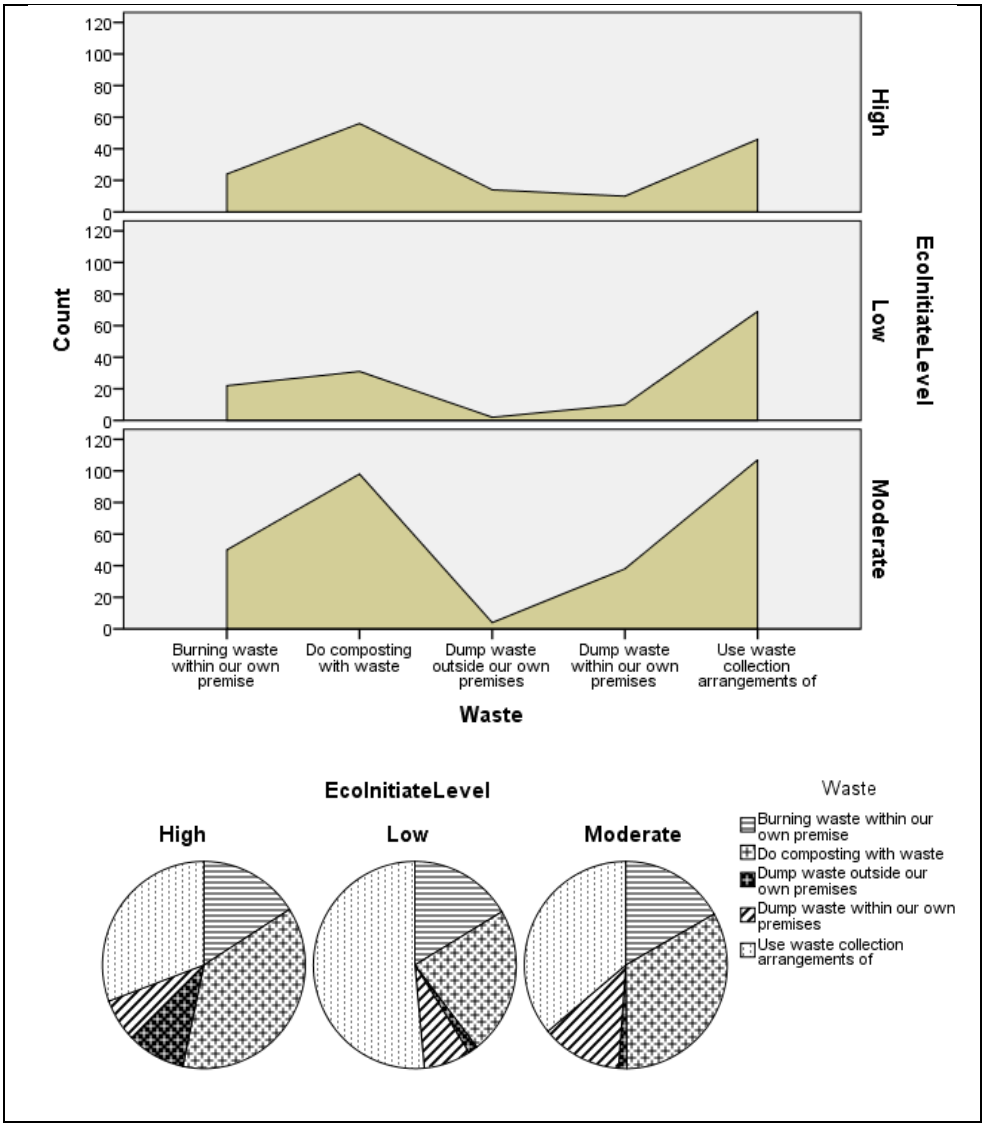

Figure 02: Eco-initiative levels and Waste disposal methods

Regarding the possible comparison of eco-helping and waste disposal, Figure 03 illustrates the results. Similar with eco-initiative levels, using waste collection arrangement was high among low and moderate eco-initiators. Though composting waste was highly practiced among high eco-helpers, dumping waste outside premises was more than double the corresponding to the low eco-helpers.

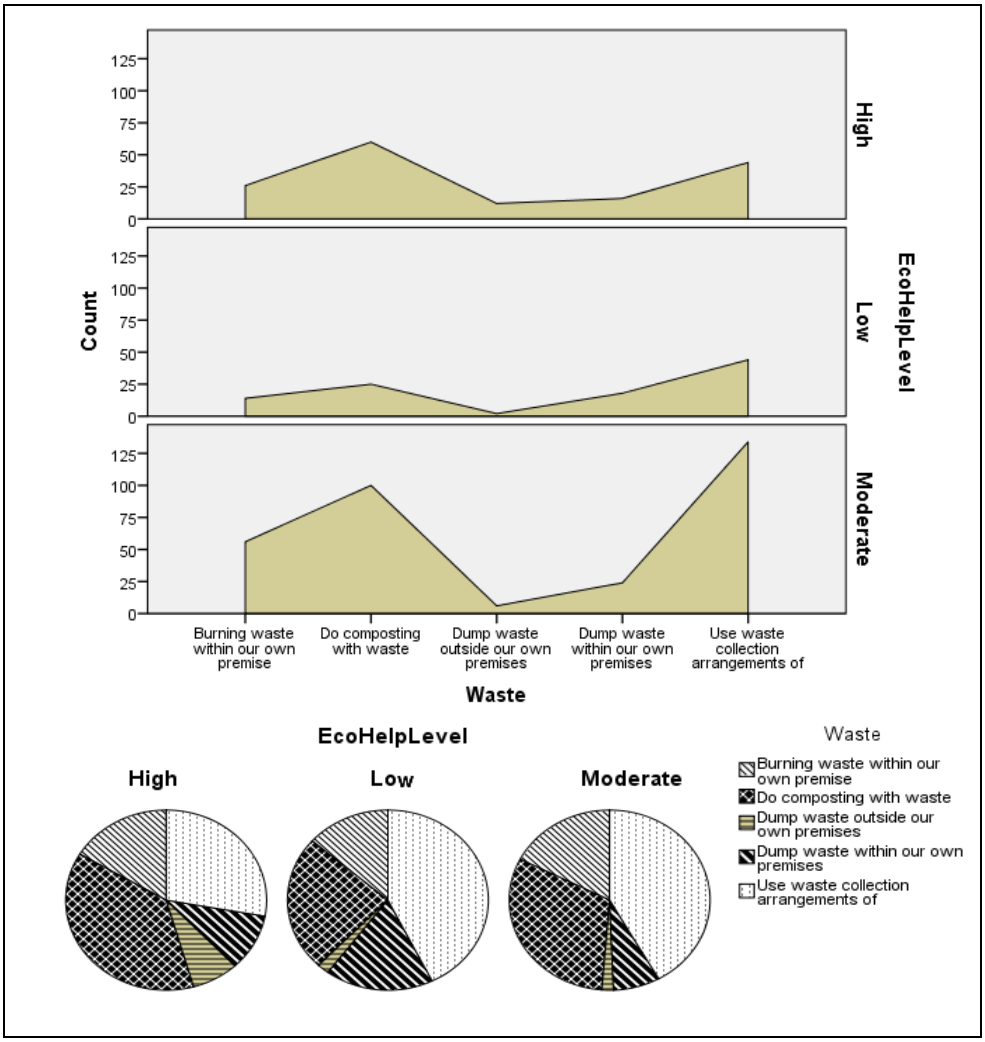

Figure 03: Eco-helping levels and Waste disposal methods

As shown in Figure 03, waste composting and dumping waste outside premises were recorded extremely among high eco-civic engagers. Instead of composting and collection arrangement, moderate eco-civic engagers practice dumping waste within their own premises. Low eco-civic engagers more prefer to use waste collection arrangement and burning as the waste disposal methods. Parallel with waste collection arrangement, burning waste was higher among moderate eco-civic engagers. More specifically, moderate eco-civic engagers do not dump waste outside their premises.

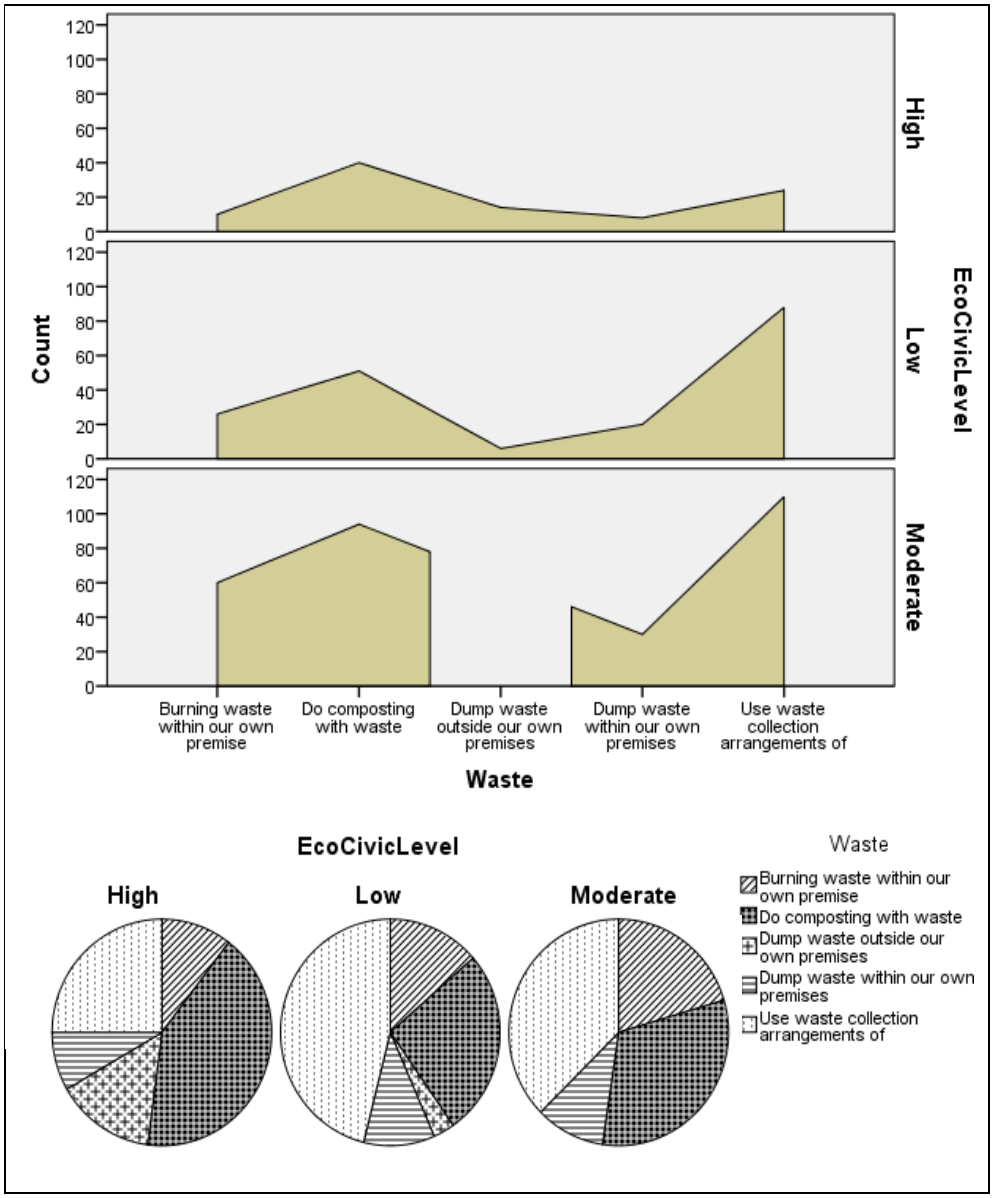

Figure 04: Eco-civic engagement levels and Waste disposal methods

Implications and Conclusion

Generally, the studies on ECB have been primarily conducted among individuals in developed context (Kim et al., 2017; Terrier et al., 2016); the study in collectivistic context is dearth. Specifically, the joint inspiration of ECB and waste disposal is relatively unknown. In Sri Lanka, which is a developing context, there is a lack of studies about the connection between ECB and waste disposal.

Taking a closer look at the results of ECB and waste disposal methods, we, interestedly, recognize that students with higher level for eco-initiative, eco-helping and eco-civic engagement report more practices on composting waste, less burning waste and low usage of collection arrangement. With the moderate level, the students follow best practice of not dumping waste outside their own premises; however, burning waste becomes a popular practice among them. In respect of the individuals with lower levels for eco-initiative, eco-helping and eco-civic engagement, their tendencies on waste disposal are; use waste collection arrangement and burning waste. These findings offer evidence for the role of higher education to provide awareness on ECB. In order to visible the reflection of students' ECB, the waste disposal method used by Sri Lankan youth was taken into account. There is a possibility to raise an argument; students do not have a sole authority to decide household waste disposal methods because students are not household header. The study, in here, believes that students are in position to make an influence on household decisions. On this basis, the findings should be valuable to various stakeholders who want to encourage youths to take ECB as a community duty.

For instance, male and female undergraduates might have had different socialization experiences, and as a result could have formed different beliefs about ECB and waste disposals. As Gambro and Switzky (1999) opined that women are more likely than men to report more concerns for the environment; however they do less and know less about environmental problems than men do. The results of the study confirmed this argument showing that female undergraduates record the highest eco-helping mean value and however they practice waste composting than male counterparts. On this note, female students respond well to the environmental issues, therefore they can evoke feeling of environmental concerns to others.

Universities or higher education institutions should incorporate environmental behavioral content into degree programme, even as elective course unit, and compulsory ECB assessment needs to be taken. These will support to track students' ECB and workshops or seminars should organize to promote environmental actions. It is not just enough to teach ECB, students have to have opportunities to put on their learning into actions. Relative to eco-initiative and helping, eco-civic engagement recorded low score. In this regards, universities can arrange environmental protection camps, social responsibility projects, awareness campaign to primary education (schools) and so on. These strategies can make open individuals more willing to reach out of their comfort zones and try something new to create environmental concern through practical engagement and train others.

The quantity of waste is continuously increasing due to the growing population and increase in development and people are therefore associated with generating larger quantities of waste. The Modern way of life has led to serious waste problems in the country. Using technological advances, now students can easily engage with social oriented acts; promoting waste minimizing hierarchy principles such as reduces, reuse and recycle. Students need to apply their knowledge to influence their parents, siblings, relatives, friends, neighbors and villages to minimize waste generation; reduce plastic and polythene

products consumption; segregate waste as perishables and non-perishables; do composting kitchen wastes and stop open burning their wastes.

Knowledge from education and awareness has been seen as a key factor affecting ECB. It is vital fact that education plays a significant role in changing the environmental behavior of youth. The findings further shed light that education with practical exposure makes students to think more on keeping the environment clean. That would be immensely beneficial for better ECB.

There are potential limitations of this study. The use of students from only three faculties at eight universities might limit the extent to which results can be generalized. To minimize the sample selection bias, the sample used matched youth profile with regard to basic socio-academic characteristics (gender, degree programme, academic year). Aforementioned, students might not have a sole authority to decide household waste disposal methods because they are not household header. In this sense, waste disposal methods measured in this study may not directly reflect the students' ECB. However, author believes that as matured students, they are in a position to make an influence over household decisions. Further, the study did not attempt to identify, in deeply, the environmental related curriculum of different degree programmes in the selected Faculties. In this manner, the influence of degree programmes towards ECB of undergraduates was not fully observed. The study only considered the degree programmes which included environmental related discipline as core or elective course unit. Additional studies utilizing larger and more representative samples, including students who follow environmental course units, would be useful to address the generalizability of the present findings.

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