

Goal Setting and Commitment to Pro-Environmental Anti-Littering and Pro-Recycling Behaviour among University Students in Rivers State

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Annatation: This study examined goal setting and commitment to pro-environmental anti-littering and pro-recycling behaviour among university students in Rivers State. The study was ex-post facto study that adopted a multivariate survey design to gather data on the independent, the mediator, and the dependent variables. The study population comprised 39,430 undergraduate students in three selected tertiary institutions in Rivers State namely: Rivers State University, Ignatius Ajuru University of Education and University of Port-Harcourt, all in Port Harcourt, Rivers State. Stratified sampling technique was used to select three hundred (300) students from the three selected tertiary institutions (University of Port-Harcourt, Ignatius Ajuru University of Education and Rivers State University) for the study. A standardized structured questionnaire was used for data collection. Descriptive statistics, correlation and multiple linear regression analysis were used to test for the joint and independent influence of the predictors on the criterion variable at 0.5 alpha level of significance. Result showed that goal setting and actual commitment had significant positive effects on pro-environmental anti-littering and pro-recycling behaviour among university students. Also demographic variables (age and gender) significantly predicted pro-environmental anti-littering and pro-recycling behaviour among university students to a high degree. These findings imply that students' goal setting and actual commitment promote pro-environmental anti-littering and pro-recycling behaviour. The study recommended that psychologists should be involved in designing of litter prevention strategies in Universities. This will ensure the inclusion of behavioral issues in such strategies to promote pro- environmental behaviour.

KEYWORD: Goal Setting, Pro-environmental, Pro-recycling, Anti-littering, Behaviour.

Introduction

Littering is a common sight in most parts of Nigeria, most people dispose their waste anywhere without being conscious of its effect on the climate in the long run. Throwing thrash from cars whether private or commercial is fast becoming a norm and this is a potential risk to the environment and our health if not curbed on time. Only very few people are conscious of these risks and adhere to the principle of disposing waste properly. The University communities do not exist in isolation. It is filled with people from the society which means that it is a microcosm of the society. The attitude

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towards disposal of waste from the larger society is what is obtainable within the campuses especially the public ones despite the provision of bins at some places, majority of the students still do not dispose their waste appropriately. Littering is perceived as both an environmental and economic concern, as it is associated with harmful effects for the environment and high costs of cleaning and getting litters off our streets is a major economic concern. It is so also in cities and communities in Nigeria but, the problem appears substantial and is increasing very fast in universities (The Nation, 2008). The subject matter is becoming more of a behavioural problem rather than an environmental problem, and because behavioural issues are domiciled in psychology, it would then be important to examine the problem from a behavioural perspective, such as goal setting and actual commitment to pro- environmental anti-liter and pro-recycling behavior.

Pro-environmental behaviour includes re-cycling (such as re-using paper, plastic, glass, containers), conserving water (limiting the use of water when taking a shower or washing hands), saving electricity (turning off lights when not needed), using public transportations, riding bikes or even walking, proper disposal of non-recyclable waste, using less paper when printing (double-sided printing), and buying and/or consuming green products. Pro-environmental behaviour may be influenced by various factors. Some of which could be demographic such as gender, age, place of residence, socio-economic status, political perspective, values and beliefs about life.

However, this study will only focus on age and gender. In the university setting, as Vicente-Molina, Fernandez-Sainz & Izagirre-Olaizola (2018) presumed pro-environmental behaviour among students can be promoted by University's plans and actions, such as providing thrash bin at every nook and cranny and creating awareness on the need to dispose properly. Recyclable items should be separated from non-recyclable items. Environmental-related subjects can also be introduced and taught just like the general courses so that students will understand the effect of litter on the environment, the health status of individuals as well as the economic implication.

Another variable of interest to this study is actual commitment. According to Rahman and Reynolds (2016), individuals may feel committed to the environment when they feel psychologically connected to it and are familiar with nature. Two theories related to environmental actual commitment. The first is interdependence theory- a social exchange theory which explains the relationships between two people and how their interactions influence one another's experience. The second is commitment model- which examines how commitment comes about. Based on the two theories, it can be argued that individuals are willing to be committed to a person, a place, or the environment when they have to rely solely on any of these for meeting their needs.

Han and Hyun (2016), Rahman and Reynolds (2016) opined that actual commitment can determine students readiness to do what is necessary for the sake of the environment. Environmental commitment of individuals has been shown to be a good determinant of pro-environmental anti littering and pro recycling behaviours. For instance, individuals tend to positively focus on the intention to practice pro-environmental attitudes that discourage littering and promote recycling behaviours. Making students committed to anti-liter and pro-recycling behaviour in the university requires goal setting. This intervention technique is based on goal setting theory, which states that individual behaviour is goal-directed and that the anticipation of reaching an attractive goal motivates respective behaviour. Goal setting is most effective when goals are high but, at the same time, realistic (Locke and Latham 1990).

Moreover, goals should be clearly formulated and achievable within a short period of time. Studies that focused on correlates of goal-setting and actual commitment to pro-environmental anti-litter and pro recycling behaviour among university students are limited. Findings from the studies of (Al-

Khatib, Arafat, Daoud & Shwahneh , 2009; Arafat, Al-Khatib ,Daoud & Shwahneh, 2007) have also demonstrated that socio- cultural factors such as gender, marital status, monthly income, religious convictions constraints, education level, age, and type of residence promote littering. Similarly, McGowan and Sauter (2005), reported that commitment toward renewable energy technologies may be influenced by proximity to energy generation site, potential differences between regions, political differences, age, gender, and social class.

Furthermore, McStay and Dunlap (1983), Van Liere and Dunlap (1980) reported sex difference in environmental behaviour. Hallin (1995) and Olli, Grendstad & Wollebark (2001) found that increase in age correlated positively with environmental behaviour. Age is a demographic variable that is a statistically significant predictor of littering and recycling behaviour, even though the effect is small (Schultz, Oskamp & Mainieri, 1995). However, while certain groups are expected to litter more than others, there has been no substantiation that there is a littering demographic-a group of people generate most litter. According to Tillet (2007); Okeoma & Nkwocha (2009); Ojedokun & Balogun (2011) and Shukor, Mohammed, Awang & Sani (2012), younger people litter more because they are not in the habit of urban cleanliness as it has not been well inculcated in them during their upbringing. This implies that most newly admitted students into the universities that are from rural environments are more likely to litter the environment. Furthermore, the young students tend to consume goods and foods on the side walk and lecture halls that litter the environment (Okeoma & Nkwocha 2009). However, as age increases, they are more likely to become aware of the negative consequences of this behaviour and hence, develop pro-environmental anti littering and pro recycling behaviour (Ojedokun & Balogun2011) and as age increases, the tendency to take littering prevention actions also increases (Ojedokun & Adekunle, 2013).

Similarly, Scott (1999) also found age to be a significant predictor of household recycling intensity. Hines, Hungerford & Tomera, (1986– 1987) reported that female exhibit more pro-environmental behaviour compared to male. In contrast, studies have shown that age and gender are not statistically related to pro environmental behaviour. Five studies examined by Schultz et al. (1995) do not show a relationship between age, gender and recycling behavior.

This study therefore, intends to examine goal setting and actual commitment to pro-environmental anti littering and pro-recycling behaviour among students in three universities in Rivers State.

Statement of the Problem

Littering in general has become a major problem in Nigeria society because of its associated risk(s). In the university environment, students aged 18 and above are amongst the biggest litterers. However, making effective interventions that target youngsters' littering behaviour has proven to be difficult as it is not yet known what the most important determinants of students littering behaviour are and with what strategies these determinants could best be targeted. To the best of my knowledge, no study have attempted to examine the relationship between goal setting and actual commitment to anti-liter and pro-recycling behaviour among university students in Rivers State. Even if such studies exist, they are not carried out in Rivers State and mostly focus on attitude towards littering. Therefore, it becomes imperative to embark upon this study to fill the gap.

Purpose of the Study

The main purpose of this study is to correlate goal setting and actual commitment to anti-liter and pro-recycling behaviour among university students in Rivers State. The specific objectives of the study are to examine:

1. Relationship between goal setting and pro-environmental anti-littering behaviour among university students
2. Relationship between goal setting and pro-environmental recycling behaviour among university students
3. Relationship between actual commitment and pro-environmental anti-littering behaviour among university students
4. Relationship between actual commitment and pro-environmental recycling behavior among university students
5. Extent to which demographic factors (age and gender) predict goal setting, actual commitment towards pro-environmental anti-littering and pro-recycling behaviour among university students

Research Questions

The study formulated the following research questions:

1. What is the relationship between goal setting and pro-environmental anti-littering behaviour among university students?
2. What is the relationship between goal setting and pro-environmental recycling behaviour among university students?
3. What is the relationship between actual commitment and pro-environmental anti-littering behaviour among university students?
4. What is the relationship between actual commitment and pro-environmental recycling behaviour among university students?
5. To what extent will demographic factors (age and gender) predict goal setting, actual commitment towards pro-environmental anti-littering and pro-recycling behavior among university students?

Hypotheses

The study formulated the following hypotheses which were tested at 0.05 alpha level of significance

1. There is no significant relationship between goal setting and pro-environmental anti littering behaviour among university students
2. There is no significant relationship between goal setting and pro-environmental recycling behaviour among university students
3. There is no significant relationship between actual commitment and pro-environmental anti-littering behaviour among university students
4. There is no significant relationship between actual commitment and pro-environmental recycling behaviour among university students
5. Demographic factors (age and gender) will not predict goal setting, actual commitment towards pro-environmental anti-littering and pro-recycling behaviour among university students

Methodology

Design of the Study

The study is an ex-post facto study that adopts a multivariate survey design to gather data on the independent, the mediator, and the dependent variables. Multivariate survey design permits an investigation of the relationship that exists between several predictors and the criterion variable of interest. The design also permits the use of many statistical tools such as correlation, multiple regression and so on in order to test hypotheses relationships. Due to the presence of many variables in the study, multivariate survey design is considered appropriate.

Population of the Study

The population of this study consists of all undergraduate students in three selected tertiary institutions in Rivers state. Therefore, the population of the study is 39,430 students in three selected tertiary institutions in Rivers State namely Rivers State University, Ignatius Ajuru University of Education and University of Port-Harcourt.

Sample and Sampling Technique

A sample is a subset of the population under study. Since the size of the population is large, the researcher cannot study the entire population. Therefore, stratified sampling technique was used to select three hundred (300) students from the three selected tertiary institutions in Port Harcourt (University of Port-Harcourt, Ignatius Ajuru University of Education and Rivers State University) for the study. 100 students were selected from each of the three universities to give the total of 300 respondents.

Instrument for Data Collection

A standardized structured questionnaire adapted from the study of (Ojedokun et al, 2010, 2011, 2013 and Shukor et al, 2012) was used for data collection in this study. The questionnaire was centered on goal setting, actual commitment, pro-environmental anti littering and pro-recycling behaviour among university students. Each of the variables contained five items structured in four point scale rating of very great extent (4), great extent (3) low extent (2) and very low extent (1). However, in measuring goal setting behaviour the response was structure thus: Almost Always, Always, Not Always and Almost Never

Validity of the Instrument

Since the instrument was standardized. The construct validity was therefore ascertained by previous studies (see Ojedokun, 2010, 2011, 2013 and Shukor et al, 2012)

Method of Data Collection

The researcher distributed 300 copies of the questionnaire to the respondents in the various universities selected for the study. 100 copies were distributed in each university. The instrument was personally administered to the participants with the help of two research assistants within two weeks. The researcher and her assistants ensured that all copies of the instruments were retrieved from the respondents after duly completed.

Data Analysis

The method of data analysis adopted in this study included descriptive statistics, correlation to examine the relationship among variables of the study, multiple linear regression analysis to test for

the joint and independent influence of the predictors on the criterion variable at 0.5 alpha level of significance.

Result and Discussion

Hypotheses Testing

Hypotheses	Relationship	Std Beta	Std Error	t-Value	p-Value	BCI LL	BCI UL	f ²
Ho ₁	There is no significant relationship between goal setting and pro-environmental anti-littering behaviour among university students	0.635	0.136	4.675	p<0.001	0.421	0.857	0.400
Ho ₂	There is no significant relationship between goal setting and pro-environmental recycling behaviour among university students	0.285	0.139	2.047	0.020	0.096	0.554	0.101
Ho ₃	There is no significant relationship between actual commitment and pro-environmental anti-littering behaviour among university students	0.155	0.076	2.039	0.036	0.057	0.307	0.047
Ho ₄	There is no significant relationship between actual commitment and pro-environmental recycling behaviour among university students	0.245	0.103	2.377	0.009	0.080	0.415	0.072

Based on Table 1, it was observed that there was a strong positive relationship between goal setting and pro-environmental anti-littering behaviour ($\beta = 0.65$, $p < 0.01$), goal setting and pro-environmental recycling behaviour ($\beta = 0.285$, $p < 0.01$), actual commitment and pro-environmental anti-littering behavior ($\beta = 0.155$, $p < 0.01$) actual commitment and pro-environmental recycling behaviour ($\beta = 0.245$, $p < 0.01$). Hence the hypotheses of no relationship (Ho₁, Ho₂, Ho₃ and Ho₄) were all rejected. Thus, H₁, H₂, H₃, and H₄ were all supported. The correlation coefficients presented in Table 1; revealed the general description of the relationship among the study variables (goal setting, actual commitment, pro-environmental anti littering and pro-recycling behaviour) among university students in Rivers State. Results indicate significant positive relationship among the variables. This relationship can be classified as a strong relationship. This result suggests that an increase in goal setting, actual commitment result in an increase in pro-environmental anti littering and recycling behaviour among the students. This means that as students set goals and become more concerned about climate issue and more committed about the welfare of others, anti littering and pro

recycling behaviour becomes favourable. This implies that these goals and commitments drive the students toward changing their negative behaviour about litter and thereby discourage littering the school environment.

Ho5. Demographic factors (age and gender) will not predict goal setting, actual commitment towards pro-environmental anti-littering, and pro-recycling behaviour among university students

Table 2: multinomial logistic regression showing the degree demographic factors (age and gender) predict goal setting, actual commitment towards pro-environmental anti-littering, and pro-recycling behaviour among university students

Gender	B	S.E	Wald	Df	Sig.	Odds ratio (OR)	95% C.I for OR Lower	Upper
Female	2.100	.230	69.021	1	.777			
Female	Ref							
Male	-.201	.640	.001	1	.000	.542	.0240	4.01
Age								
Intercept	15.321	.653	500.502	1	.000			
<15	Ref							
16-20	-9.54	1.000	100.905	1	.000	.408	.064	1.00
21-25	-15.70	.600	430.545	1	.000	1.007	.902	1.08

The result in Table 2 revealed that demographic variables such as age and genders significantly predicts goal setting and actual commitment towards pro-environmental anti-littering, and pro-recycling behaviour among university students. This is because the result of the multinomial logistic regression on gender show that female students were 1.62 times (OR = 0.777: 95%CL = 0.542-0.240) more likely to practice goal setting and more committed to pro-environmental anti-littering and pro-recycling behaviour compared to male students. Therefore, the null hypothesis which states that gender will not predict goal setting and actual commitment towards pro-environmental anti-littering and pro-recycling behaviour among university students is rejected. Also, result on age reveals that as age increases goal setting and actual commitment to pro-environmental anti-littering and pro-recycling behaviour increases among the students.

Discussion

The findings indicated that students' goal setting and actual commitment had significant positive effects on pro-environmental anti-littering and pro-recycling behaviour among university students. Students' goal setting and actual commitment influenced their pro-environmental anti-littering and pro-recycling behaviour most significantly. This is consistent with previous findings which have suggested that individuals' willingness to sacrifice and be environmentally committed towards the environment shape their pro-environmental behaviour (Han and Hyun, 2016). The findings also revealed that the students from the three universities studied were able to comprehend their responsibility towards nature by setting goals which motivate them in promoting clean environment, and this in turn stimulated and extended their feelings of commitment to amending the environmental issues of littering through their engaging in the pro-environmental anti-littering and recycling behaviour such as re-use of papers, disposing sachet water in the right place (waste bin). This finding is consistent with (Chen and Tsai, 2015) who reported that students in campus in Malaysia avoided littering of the environment or doing activities that cause pollution within their campus because of their concern on the consequences that might arise from their actions, such as air pollution. Such commitment stemmed from their high sense of satisfaction when investing towards

nature to ensure that the goal of environmental preservation could be achieved (Davis, Green & Reed, 2011).

Furthermore, the findings revealed that students' goal setting and actual commitments towards the environment were high especially among the older students and females. This finding led to the rejection of the hypotheses that demographic variables such as gender and age were not a predictor of pro-environmental anti-littering and pro-recycling behaviour among the students. This finding agrees with McStay and Dunlap (1983), Van Liere and Dunlap (1980) who reported gender difference in environmental behaviour. From this finding, age was found as demographic variable that statistically predicted littering and recycling behaviour. This corroborates with the studies of Hallin (1995) and Olli et al. (2001) in which it was discovered that old age correlated positively with environmental behavior.

This findings implies that most young students newly admitted into the universities that are from rural areas are more likely to litter the environment. This is because they are not in the habit of urban cleanliness as it has not been well inculcated in them. Therefore as they get older, they are more likely to become aware of the negative consequences of this behaviour and hence develop pro-environmental anti littering and pro recycling behaviour (Ojedokun, 2011).

Conclusions

This study investigated goal setting and actual commitment to pro-environmental anti-littering and pro-recycling behaviour among university students in Rivers State. The findings suggest that students' goal setting, actual commitment plays a vital role in influencing the pro-environmental anti-littering and pro-recycling behaviour of the students. One of the startling findings in this study was that students had strong environmental understanding and intention to protect nature which was influenced by demographic variable such as age and gender. This can be attributed to the fact that the older students have been aware and more alert with environmental-related activities. It is equally important to state that pro-environmental anti-littering and pro-recycling behavior has been widely acknowledged in universities in Rivers State that seek to be part of 'green universities', whereby the role of the students is pivotal to achieving pro-environmental anti-littering and recycling behaviour goals. From the findings of this study, the researcher concludes that environmental-based knowledge and education are crucial for the younger generation for the preservation of nature and future continuity. Hence, goal setting and commitment to pro-environmental anti littering and pro-recycling behaviour should be encouraged among students in all universities in Rivers State.

Recommendations

The following recommendations were made based on the findings of the study.

1. It is recommended that psychologists should be involved in designing of litter prevention strategies in universities in Rivers State. This will ensure the inclusion of behavioural issues in such strategies to promote pro- environmental behaviour.
2. The students should be educated on the practices of pro-environmental anti-littering and Pro-recycling behaviour through goal setting and actual commitment to their environment.
3. The various universities in Rivers State Should provide more litter bins such that students will not walk far to dispose waste and ensure removal of litter as frequent as possible.
4. Students should be taught on how to set achievable and well-defined goals particularly those relating to environmental issues and they should learn to celebrate when goals are achieved.

Reinforcement can be put in place to promote pro-environmental anti-littering pro-recycling behaviour.

5. The government agencies particularly the National Orientation agency (NOA) should embark on campaign against litter and its effect on the environment. University students can also be recruited on part time basis so as to drive home the message easily.

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