

Analyzing Factors Influencing Recycling Behaviors Among Students at Strategy First Education Group in Yangon, Myanmar

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Abstract

This study explores the factors influencing recycling behavior among students at Strategy First Education Group in Yangon, Myanmar. The research investigates the role of subjective norms, perceived behavioral control, and recycling intentions in shaping students' recycling habits. The study uses a quantitative research design with a survey method, gathering responses from 182 students. Data analysis includes descriptive statistics, reliability and validity testing, factor analysis, and regression analysis. The findings reveal a significant positive relationship between subjective norms and recycling intentions, suggesting the strong influence of social pressure. Perceived behavioral control was found to significantly affect students' intentions, with the availability of recycling facilities and confidence in recycling practices being key determinants. Additionally, recycling intentions were found to have a strong influence on actual recycling behavior. The study highlights the importance of psychological factors and environmental awareness in promoting sustainable recycling habits and provides practical recommendations for educational institutions to improve recycling behaviors among students.

Keywords: Recycling; Students; Behavioral Control; Subjective norms; Myanmar

1. Introduction

Pollution poses significant threats to human health and biodiversity, requiring immediate action to mitigate its effects. In the research of recycling habits, there are several varieties of psychological components which stimulate individuals' intention to participate in recycling. Many students may express the intention to recycle, these intentions often do not translate into actual behavior. This disconnect raises important questions about the barriers that prevent students from acting on their intentions. One of these components, subjective norms, which is the social pressure of consumers experience. Besides, there is perceived behavioral control, which indicates how people feel confident in their potential to recycle, can greatly decide both their actual behaviors and intentions. On the other hand, there is a gap in knowing how these components impact the actual recycling habits.

Additionally, individuals' intentions to recycle do not drive directly to actual recycling habits. This huge void between actual action and willingness creates critical questions of what barriers exist between them even if people's intentions to recycle are present. The aim of this research is to find out the major factors that affect students' behaviors in the direction of recycling. By studying the impacts of subjective norms, perceived behavioral control and intentions to recycle, this research pronounces the psychological and actual challenges that students encounter.

1.1 Problem Statement

This study explores the gap between students' recycling intentions and actual behaviors at Strategy First Education Group. By exploring the impact of subjective norms, perceived behavioral control, and recycling intentions, this research seeks to identify the key psychological and contextual factors that influence recycling behavior among

students, ultimately contributing to the promotion of more sustainable recycling practices within educational institutions.

1.2 Research Objectives

- To examine how subjective norms and perceived behavioral control affect the recycling intentions of Myanmar students.
- To determine the impact of recycling intentions on the recycling behaviors of Myanmar students.
- To explore the effect of perceived behavioral control on the recycling behaviors of Myanmar students.

1.3 Research Questions

- How do social influences shape students' motivations to engage in recycling behaviors?
- To what extent does students' perceived ability to recycle affect their recycling intentions and practices?
- What factors contribute to the gap between students' recycling intentions and their actual recycling behaviors?
- How can educational institutions enhance students' recycling habits through perceived behavioral control and supportive environments?

2.Literature Review

2.1 Environmental Awareness

Environmental Awareness is an important role that controls behaviors of consumers in sustainable applications like recycling and using upcycled products. In accordance with Kollmuss and Agyeman (2002), the first step for encouraging pro-environmental behaviors is environmental awareness. In studies that focus on recycling habits, environmental awareness is commonly mentioned as a determinant of whether consumers will encourage recycling. Oskamp et al. (1991) said that people who concern environmental issues higher can accelerate more sustainable behaviors. Vincente and Reis (2008) spotted that the public awareness is essential to grow recycling rates.

Environmental awareness also includes positive impacts of using upcycled products. Kozlowski et al. (2012) research that individuals who have more environmental awareness, support using sustainable fashion products, like buying upcycled clothes.

2.2 Circular Economy

In compliance with the Ellen McArthur Foundation (2013), which is one of the most major supporters of the circular economy, stated three main points, making a maintenance strategy of pollution and waste, continue using products and materials and revitalize nature.

According to Fletcher (2008), clothing industries use most of the environmental resources and one of the most major pollution factors around the world due to high energy consumption, water use and waste generation. Niinimäki and Hassi (2011) highlighted that upcycling clothes can minimize textile waste and can also create innovative approaches to the fashion industry by using different ways to reuse materials.

Both producers and consumers need to participate actively in order to apply circular economy theory in clothing industry. Bocken et al. (2016) said that circular business practices pivot extremely on participation of consumers' habits which include returning used materials, actively get involved in recycling programs and supporting upcycled goods.

2.3 Subjective Norms

Subjective norms indicate peer pressures or supposition which affects individuals' habits. Subjective norms are one of the major factors that influence intentions, attitudes and perceived behavioral control according to Ajzen's Theory of Planned Behavior (TPB). Subjective norms also influence society and people's decisions to participate in such behavior.

Cialdini, Reno, and Kallgren (1990) stated the theory of normative influence, which recommends that people have more probability to support behaviors they accept are socially appropriated. If the surroundings support and encourage recycling, consumers have more probability to motivate themselves in it. White et al. (2009) stated that the effect of subjective norms on behavior is related to perceived acceptance of close to surroundings.

Nonetheless, only subjective norms are not enough to encourage recycling practices. Bamberg and Möser (2007) performed multiple analysis on pro-environmental behaviors and discovered that subjective norms can influence intentions and behaviors are also depended on availableness of resources. Park and Ha (2014) found out that subjective norms are more beneficial when merged with environmental awareness.

2.4 Perceived Behavioral Control

According to Ajzen's Theory of Planned Behavior (TPB), the major factor of perceived behavioral control which mentioned people's understanding to participate in specific behavior. Perceived behavioral control means people are able to identify in their potential to recycle in the concept of recycling habits. Perceived behavioral control is an important predictor of pro-environmental habits which includes recycling according to research. Ajzen (2002) said that perceived behavioral control influences both intention and behavior of people to participate in such behavior.

Kaiser, Wölfing, and Fuhrer (1999) stated that people with higher perceived behavioral control have more probability to support pro-environmental habits because they feel more confident to act. Armitage and Conner (2001) made multiple studies of TPB and discovered that perceived behavioral control is essential when people face difficulties to act. According to Chan and Bishop (2013), perceived behavioral control is also influenced by external situations such as accessibility to recycling systems and government policies. De Leeuw et al. (2015) pointed out that perceived behavioral control can be changed from time to time as people feel easier and more convenient to recycle.

2.5 Recycling Behavior

Ajzen's Theory of Planned Behavior (TPB) points out an effective system to understand recycling habits. TPB stated that people's behaviors rely on three factors, attitudes about the behavior, subjective norms and perceived behavioral control. In the reference of recycling, subjective norms indicate the social pressure or influence on individuals to participate in recycling.

Intention is another key factor of recycling behavior. Oskamp et al. (1991) researched that people with higher intention to engage in recycling are more likely to support recycling habits but the intention-barrier gap increases when they fail to follow their intention because of external barriers, for example, lack of convenience to access to recycling systems. Various studies point out that recycling behavior depends greatly on perceived behavioral control and subjective norms. Tonglet, Phillips, and Read (2004), also highlighted that people's intention on recycling hinged upon social influences. Psychological factors, which are the ease of recycling systems also influence individuals' recycling habits. Barr, Gilg, and Ford (2001) argued that even individuals with higher motivation may fail to participate in recycling if they face difficulties to assess recycling infrastructures.

Lastly, demographic components, like educational quality, age and environmental awareness also decided recycling behavior. Saphores et al. (2006) said that teenagers with higher education levels are more likely to engage in recycling.

2.6 Intention and Behavior

The relationship between intention and behavior is central to understanding pro-environmental actions like recycling. Ajzen's Theory of Planned Behavior (1991) suggested that attitudes, subjective norms, and perceived behavioral control influence recycling intentions, which should, in turn, drive behavior. However, a significant intention-behavior gap exists, particularly in recycling, where individuals often fail to act on their intentions.

Bandura's (2001) Social Cognitive Theory further explained that self-efficacy and social learning are critical for bridging this gap. People are more likely to translate intentions into behavior if they believe in their ability to perform the action and observe others doing so. While intentions are generally predictive of behavior, they may not always result in action, especially when practical barriers exist. Studies by Verplanken & Wood (2006) and Sheeran (2002)

stressed the need for objective measures of behavior, such as tracking actual recycling actions, rather than relying on self-reported intentions, to accurately predict recycling behavior.

3. Conceptual Framework

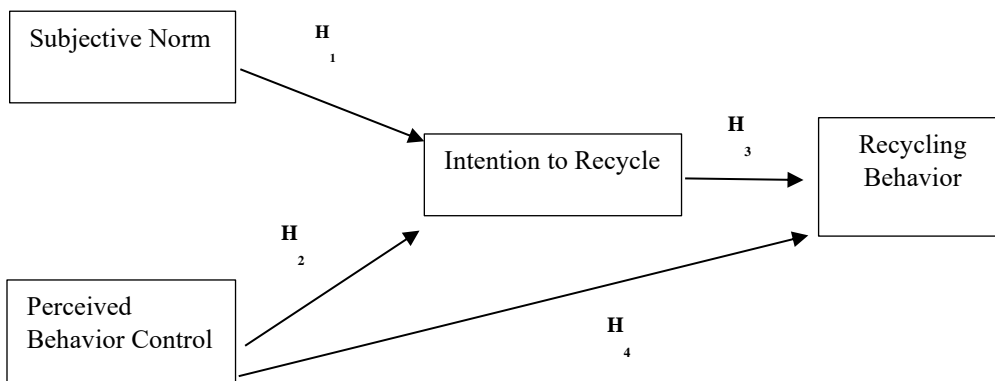


Figure 1: Conceptual Framework of the Study

4. Research Hypotheses

Hypothesis 1 This study investigates whether subjective norms significantly influence students' intentions to recycle.

Hypothesis 2 This study explores the extent to which perceived behavioral control influences students' intentions to recycle.

Hypothesis 3 This study examines whether students' recycling intentions have a significant impact on their actual recycling behaviors.

Hypothesis 4 This study considers whether perceived behavioral control directly affects students' actual recycling behaviors.

5. Research Methodology

This study employs a descriptive research design to provide a standardized and comprehensive explanation aligned with the research objectives. The researcher adopted a stratified random sampling method, which divides the population into non-overlapping subgroups that collectively represent the entire population (Sekaran & Bougie, 2013). This sampling technique ensures better representation and reduces sampling bias.

A survey method was also utilized for data collection, using a structured questionnaire based on a five-point Likert scale. Questionnaires were distributed to students aged 15 and above who are currently enrolled in Global Pathways Programs and Undergraduate Programs under Strategy First Education Group. As the total population size is unknown, the sample size was determined using Cochran's Formula, with a 95% confidence level and a 7% margin of error, resulting in a minimum required sample size of 196 respondents (Sekaran & Bougie, 2013).

The sampling procedure followed a probability sampling approach, allowing each member of the population a known and non-zero chance of being selected. Cooper and Schindler (2014) emphasized that this method minimizes bias and ensures the representativeness of the sample, making it suitable for statistical inference. Within this framework, the stratified random sampling technique was applied to select respondents from the defined target group.

In terms of data analysis, descriptive statistics were used to interpret the demographic profile of respondents, including gender, age, residence area, transportation mode, education level, and involvement in environmental clubs or organizations. This approach helps to present raw data clearly through frequencies, percentages, bar charts, and tables (Zikmund et al., 2013).

To test the research hypotheses, the study applied inferential statistics to explore relationships between variables. Lyons and Douek (2010) noted that inferential analysis is essential to understand how variables relate or differ across groups. Accordingly, simple linear regression analysis was employed to examine the relationships between selected variables and validate the hypotheses (Sekaran & Bougie, 2013; Lyons & Douek, 2010).

6. Empirical Results

Descriptive analysis is used when the researcher wants to describe specific behavior of a target population as it occurs in designated location (Zikmund et al., 2013). In this research, all the general information of the collected valid samples is analyzed in terms of gender, area of residence, age level, primary mode of transportation, participation in environmental clubs/organization and education level. Davis (2004) expressed that descriptive statistics can be described as percentage, distribution and frequency of the demographic factors of the respondents.

6.1 Descriptive analysis of general information

In this study, frequency distribution of descriptive statistic applies to describe the demographic factors of students who have studied at Strategy First Education Group in Yangon, Myanmar. Although the calculated minimum sample size was 196 respondents, due to limited availability and response rate during the data collection period, a total of only 182 valid responses were obtained for the analysis.

Table 4.1: Gender

Gender			
No.	Category	No. of respondents	Percentage
1	Male	59	32.40%
2	Female	121	66.50%
3	Prefer not to say	2	1.10%
Total		182	100%

According to the Table 4.1, the highest percentage of gender is 66.5% (121) of female, the percentage of male is 32.4% (59) and the percentage of prefer not to say is 1.1% (2), respectively.

Whereby the distribution data by age level for the study population aged between 21-23 years is 65, 35.7%, while those aged between 15 to 17 years are 56, 30.8%, members of the sample population within the 18 to 20 years made up 26.4%, 48 and those aged 24 and above accounted for 13, 7.1 %, respectively. For the total sample data for area of residence, the highest percentage is 83.5% (151) by urban. The others percentage is 11% (20) by Rural, while 5.5% (10) is sub urban, respectively.

Table 4.2: Primary mode of transportation

Primary Mode of Transportation			
No	Category	Frequency	Percentage
1.	Personal Car	71	40.7%
2.	Public	65	35.7%
3.	Bicycle	25	13.7%
4.	Walking	4	2.2%
5.	Others	14	7.7%
Total		182	100%

The data presented in table 4.2 on the analysis of a primary mode of transportation. The highest percentage is personal car 40.7% with a frequency of 71. The others percentage are public transportation is 35.7% or 65, bicycle is 13.7% (25), others is 7.7%, with a frequency of 14 and walking is 2.2% (4).

The analysis of education level, using the frequency and percentage of respondents was found that the highest percentage of the respondent's education level is 59.3% (108) studied at global pathways program and the others are 40.7% (74) studied at undergraduate program, respectively.

Table 4.3: Participation in environmental clubs/organization

Participation in Environmental Clubs			
No	Category	Frequency	Percentage
1.	Yes, I am actively involved	15	8.2%
2.	Yes, but I'm not actively involved	79	43.4%
3.	No, but I am interested in participating	38	20.9%
4.	No, and I'm not interested in participating	50	27.5%
Total		182	100%

Based on the Table 4.3, it was found that the highest percentage of participation in environmental clubs/organization is 43.4% (79) of Yes, but I am not actively involved.

6.2 Descriptive Analysis of Variables

In this part, the researcher analyses the mean and standard deviation of each variable applied in the study. Zikmund et al. (2013) explored that descriptive statistics consists of mean which describes as a measure of the central tendency of the data being collected, and the standard deviation which indicates as a measurement of variation or distribution of a set of data values.

Students generally reported positive attitudes and behaviors toward recycling, with all mean scores significantly above neutral ($CI > 3$). Among subjective norms, teacher encouragement received the highest agreement ($M = 3.97$), while peer discussions were least influential ($M = 3.19$). For perceived behavioral control, students valued educational tools most ($M = 3.97$), but noted limited time for managing recyclables ($M = 3.16$) and some concerns about facility availability. Recycling intentions were strongest for structured activities like school campaigns ($M = 3.73$), with slightly less engagement in self-directed learning ($M = 3.36$). Actual recycling behaviors were reflected in practices like repurposing items ($M = 3.69$) and separating waste ($M = 3.49$), although actions like avoiding over-packaged products showed lower scores ($M = 3.35$). Standard deviations varied moderately across items, indicating some diversity in student responses. Overall, the consistently positive confidence intervals support strong influences from social norms, perceived ability, and intentions, in line with Ajzen's (1991) Theory of Planned Behavior and Field's (2013) interpretation of statistical significance.

6.3 Reliability and Validity Test for Variables

The survey gathered responses from students in Yangon, Myanmar, focusing on various factors influencing recycling behavior. The dependent variable, Recycling Behavior, has a Cronbach's Alpha score of 0.822, indicating very strong reliability. The scores for the independent variables are as follows: Subjective Norms – 0.715 (strong), Perceived Behavioral Control – 0.694 (acceptable), and Recycling Intentions – 0.804 (very strong). According to Cronbach (1951), a Cronbach's Alpha value above 0.7 indicates strong reliability. Since all values exceed this threshold, the questionnaire is reliable and consistent, making it suitable for this study.

The Kaiser-Meyer-Olkin (KMO) values, which measure sampling adequacy, are also reported. The independent variables—Subjective Norms (0.75), Perceived Behavioral Control (0.726), and Recycling Intentions (0.845)—all have KMO values above 0.6. The dependent variable, Recycling Behavior, has a KMO value of 0.818. According to Kaiser (1974), a KMO value above 0.6 is considered adequate for factor analysis. Since all variables meet this criterion, the data is suitable for further analysis.

6.4 Factor Analysis of the Variables

Factor analysis results confirmed that all retained items had factor loadings above 0.5, indicating strong construct validity. Two items from the Perceived Behavioral Control variable (PBC 5 and PBC 7) were removed due to low loadings (0.436 and 0.457). The final items across all constructs demonstrated strong internal consistency and were deemed suitable for further analysis.

6.5 Hypothesis Testing

Inferential Analysis

In this part, the researcher applied inferential analysis to make inferences from the collected data to interpret into general conditions. In this research, the researcher has constructed four hypotheses to find factors influencing recycling behavior among students in Myanmar by applying Simple Linear Regression Analysis to test the hypotheses.

Hypothesis 1: Influence of subjective norm on intention to recycle

The analysis explores whether subjective norms significantly affect students' intentions to recycle.

Regression Model Summary

Regression Model summary of Hypothesis 1

Table 4.4: Regression Model summary of Hypothesis 1

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.686 ^a	0.47	0.467	0.42684
a. Predictors: (Constant), Subjective Norm				

Based on Table 4.4, the Correlation Coefficient (R) is equal to 0.686, which means that there is a strong positive relationship between subjective norm and recycling intentions from which the researcher can conclude that subjective norm and recycling intentions move in the same direction. Also, strength association (R^2) is equal to .470 which means that if subjective norm increases, it will affect to recycling intentions to increase by 47%.

The result from the ANOVA Regression Table showed that the significant level is equal to .000, which is less than .05 ($.000 < .05$). It means that null hypothesis is rejected and it can be considered that at least one independent variable has influence on recycling intentions at the significance level of 0.05.

The result of the Regression Coefficient table showed that subjective norm is significant level at .000 which is less than 0.05 and it means that subjective norm has influence on recycling intentions at the 0.05 significant level. In addition, the betas of standardized coefficient of subjective norm are equal to .686, respectively.

Hypothesis 2: Influence of perceived behavior control on intention to recycle

The analysis evaluates the extent to which perceived behavioral control influences students' intentions to recycle.

Regression Model summary of Hypothesis 2

Table 4.5: Regression Model summary of Hypothesis 2

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.595 ^a	0.354	0.351	0.47126
a. Predictors: (Constant), Perceived Behavior Control				

Based on Table 4.5, the Correlation Coefficient (R) is equal to 0.595, which means that there is a medium positive relationship between perceived behavior control and recycle intentions from which the researcher can conclude that perceived behavior control and recycle intentions move in the same direction. Also, strength association (R^2) is equal to .354 which means that if perceived behavior control increase, it will affect to recycling behavior to increase by 35.4%.

The result from the ANOVA Regression Table showed that the significant level is equal to .000, which is less than .05 ($.000 < .05$). It means that null hypothesis is rejected and it can be considered that at least one independent variable has influence on recycling intentions at the significance level of 0.05.

The result of the Regression Coefficient table showed that perceived behavior control is significant level at .000 which is less than 0.05 and it means that perceived behavior control has influence on recycling intentions at the 0.05 significant level. In addition, the betas of standardized coefficient of perceived behavior control are equal to 0.595, respectively.

Hypothesis 3: Influence of recycling intentions on actual recycling behavior

This analysis examines whether students' intentions to recycle significantly predict their actual recycling behaviors.

Regression Model summary of Hypothesis 3

Table 4.6: Regression Model summary of Hypothesis 3

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.682 ^a	0.465	0.462	0.42496
a. Predictors: (Constant), Recycling Intentions				

Based on Table 4.6, the Correlation Coefficient (R) is equal to 0.682, which means that there is a strong positive relationship between recycling intentions and actual recycling behavior from which the researcher can conclude that recycling intentions and actual recycling behavior move in the same direction. Also, strength association (R^2) is equal to .465 which means that if recycling intentions increase, it will affect to actual recycling behavior to increase by 46.5%.

The result from the ANOVA Regression Table showed that the significant level is equal to .000, which is less than .05 ($.000 < .05$). It means that null hypothesis is rejected and it can be considered that at least one independent variable has influence on actual recycling behavior at the significance level of 0.05.

The result of the Regression Coefficient table showed that recycling behavior are significant level at .000 which is less than 0.05 and it means that recycling intentions have influence on actual recycling behavior at the 0.05 significant level. In addition, the betas of standardized coefficient of recycling intentions are equal to 0.682, respectively.

Hypothesis 4: Influence of perceived behavior control on actual recycling behavior

This section investigates whether perceived behavioral control has a significant impact on students' actual recycling behaviors.

Regression Model summary of Hypothesis 4

Table 4.7: Regression Model summary of Hypothesis 4

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.572 ^a	0.328	0.324	0.47647
a. Predictors: (Constant), Perceived Behavior Control				

Based on Table 4.7, the Correlation Coefficient (R) is equal to 0.572, which means that there is a medium positive relationship between perceived behavior control and actual recycling behavior from which the researcher can conclude that perceived behavior control and actual recycling behavior move in the same direction. Also, strength association (R^2) is equal to .572 which means that if perceived behavior control increase, it will affect to actual recycling behavior to increase by 5.7 (32.8%).

The result from the ANOVA Regression Table showed that the significant level is equal to .000, which is less than .05 ($.000 < .05$). It means that null hypothesis is rejected and it can be considered that at least one independent variable has influence on actual recycling behavior at the significance level of 0.05.

The result of the Regression Coefficient table showed that perceived behavior control is significant level at .000 which is less than 0.05 and it means that perceived behavior control has influence on actual recycling behavior at the 0.05 significant level. In addition, the betas of standardized coefficient of perceived behavior control are equal to 9.367, respectively.

7. Findings and Discussions

This study confirmed that subjective norms, perceived behavioral control, and recycling intentions significantly influence students' recycling behaviors. Subjective norms showed a strong positive correlation with recycling intentions ($R = .686$, $R^2 = .470$, $p < .001$), especially through teachers and family members, reflecting Myanmar's high institutional trust and the role of educators as social referents. These results align with Cialdini et al. (1990), White et al. (2009), and Park and Ha (2014), and are reinforced by Win (2001) and Bamberg & Möser (2015), who emphasized family and teachers as key influencers.

Perceived behavioral control also significantly predicted both intentions ($R = .595$) and actual behaviors ($R = .572$), showing that confidence, access to recycling systems, and educational tools are crucial. However, infrastructure limitations—such as time and facility availability—remained barriers. These findings support Ajzen's (2002) and Armitage & Conner's (2001) models, and align with Bandura's Social Cognitive Theory, which highlights the role of self-efficacy and observational learning in sustaining pro-environmental behavior.

Recycling intentions were strongly linked to actual behavior ($R = .682$), suggesting that structured institutional support, such as school campaigns, helps close the intention-behavior gap often observed in other settings (Bamberg & Möser, 2007). Peer influence and social media were also noted as contributing factors, echoing findings by Muro & Jeffrey (2024). Overall, these results validate the Theory of Planned Behavior and underscore the value of culturally grounded interventions that combine awareness, social reinforcement, and practical access to recycling systems.

8. Limitations and Recommendations

This study is designed to understand the analyzing factors influencing recycling behaviors among students at strategy first education group in Yangon, Myanmar. The following are the recommendations from the researcher as the reference for future studies to help and support other researchers to make better research in the future.

Firstly, the researcher applies three independent variables such as subjective norm, perceived behavior control and recycling intentions to understand the analyzing factors influencing recycling behaviors among students at strategy

first education group in Yangon, Myanmar. However, for future studies, other researchers can consider different independent variables which may influence on recycling behavior such as attitude towards behavior, public awareness, awareness of environmental consequences, moral obligation, perceived convenience and etc.

This study did not explore the potential moderating or mediating effects of demographic factors on recycling behavior. While demographic data were collected and summarized, they were not included in hypothesis testing. Future research could investigate how these variables influence or interact with behavioral constructs in more depth.

Secondly, the study focuses only on strategy first education group in Yangon city, Myanmar. Therefore, these findings cannot represent other geographical area which may differ from others. Further studies could study different college located in another cities. This may describe different effect on recycling behaviors. Other researchers may induce other college to understand the perception of recycling behavior in Myanmar.

9. Conclusion

This study examined psychological and contextual factors influencing recycling behavior among students at Strategy First Education Group in Yangon, Myanmar. The results confirmed that subjective norms, perceived behavioral control, and recycling intentions significantly impact students' recycling habits. Among these, social pressures—particularly from family and teachers—emerged as the strongest predictor, reinforcing the role of normative influence in pro-environmental behavior. Perceived behavioral control, including students' confidence and access to recycling facilities, also contributed to both intention and actual behavior. While intentions strongly predicted recycling actions, some students faced barriers such as inadequate infrastructure, highlighting a persistent intention-behavior gap. These findings support the Theory of Planned Behavior (Ajzen, 1991) and emphasize the importance of institutional support in translating awareness into action.

To address this gap, educational institutions should promote environmental awareness, improve recycling infrastructure, and foster supportive social norms. Future research may consider additional variables like attitudes, moral obligation, or demographic influences, and employ longitudinal designs to assess how behaviors and interventions evolve over time.

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Appendix

Table A1: Subjective Norm

No.	Subjective Norm	Mean	Std Dev	CI Lower	CI Upper
1.	My family members often recycle and encourage me to do the same.	3.68	.932	3.54	3.82
2.	My friends regularly discuss recycling and its importance.	3.19	.971	3.05	3.33
3.	Teachers or instructors at my institution promote the importance of recycling.	3.97	.796	3.85	4.08
4.	I feel that society expects me to participate in recycling efforts.	3.81	.837	3.68	3.93
5.	Most people in my community view recycling as a positive behavior.	3.78	.978	3.63	3.92
6.	Influential figures in my life practice recycling behaviors.	3.60	.811	3.48	3.71
7.	The social media I consume frequently highlights the benefits of recycling.	3.70	.826	3.58	3.82

Table A2: Perceived Behavioral Control

No.	Perceived Behavioral Control	Mean	Std Dev	CI Lower	CI Upper
1.	I know where and how to recycle various materials	3.68	.818	3.56	3.8
2.	I feel confident that I know which items can be recycled and which cannot	3.80	.875	3.67	3.92
3.	Recycling facilities are readily available to me	3.30	.930	3.16	3.43
4.	I have enough time to sort and manage recyclable	3.16	.889	3.02	3.29
5.	I feel that I can overcome barriers to recycling when they arise	3.45	.844	3.32	3.57
6.	I believe that the facilities provided for recycling at my campus/institution are adequate	3.55	.754	3.43	3.66
7.	I believe utilizing educational tools such as posters, workshops, and online content is an effective strategy for promoting recycling	3.97	.786	3.85	4.08

Table A3: Recycling Intentions

No.	Recycling Intentions	Mean	Std. Dev	CI Lower	CI Upper
1.	I intend to recycle all materials that are recyclable	3.70	.819	3.58	3.82
2.	I make a conscious effort to buy products that can be recycled	3.50	.839	3.37	3.62
3.	I regularly look for information on how to improve my recycling habits.	3.36	.834	3.24	3.48
4.	Recycling is a priority for me when disposing of waste.	3.57	.802	3.45	3.69
5.	I will actively participate in workshops or seminars about recycling.	3.46	.944	3.32	3.6
6.	I will influence my peers to adopt better recycling practices through my own actions.	3.62	.802	3.5	3.74
7.	I am willing to participate in a school-organized recycling competition or campaign	3.73	.838	3.61	3.85

Table A4: Actual Recycling Behaviors

No	Actual Recycling Behaviors	Mean	Std. Dev	CI Lower	CI Upper
	I consistently recycle paper, glass, and plastics	3.68	.818	3.56	3.8
2.	I separate my recyclables from other types of waste	3.49	.902	3.36	3.62
3.	I bring my own reusable bags to stores to reduce waste	3.39	.990	3.24	3.53
4.	I repair or repurpose items instead of throwing them away	3.69	.855	3.56	3.81
5.	I check if items are recyclable before disposing of them	3.54	.844	3.41	3.66
6.	I avoid purchasing products with excessive packaging	3.35	.897	3.21	3.48
7.	I educate others about the benefits of recycling	3.44	.931	3.3	3.58

Table A5: Reliabilities of the Variables

Sr. No.	Variables	No. of items	KMO	Cronbach's Alpha Value	Reliability
1	Subjective Norm	7	0.75	0.715	$0.8 > \alpha \geq 0.7$ (strong)
2	Perceived Behavior Control	7	0.726	0.694	$0.7 > \alpha \geq 0.6$ (acceptable)
3	Intention to Recycle	7	0.845	0.804	$0.95 > \alpha \geq 0.8$ (very strong)
4	Recycling Behavior	7	0.818	0.822	$0.95 > \alpha \geq 0.8$ (very strong)

Table A6: Factor Analysis

Sr. No.	Variables	Subjective Norms	Perceived Behavior Control	Intention to Recycle	Recycling Behavior
1	Subjective Norms				
A	SN 1	0.579			
B	SN 2	0.657			
C	SN 3	0.561			
D	SN 4	0.572			
E	SN 5	0.623			
F	SN 6	0.727			
G	SN 7	0.534			
2	Perceived Behavior Control				
A	PBC 1		0.729		
B	PBC 2		0.705		
C	PBC 3		0.642		
D	PBC 4		0.554		
E	PBC 6		0.612		
3	Intention to Recycle				
A	IR 1			0.566	
B	IR 2			0.605	
C	IR 3			0.712	
D	IR 4			0.733	
E	IR 5			0.732	
F	IR 6			0.717	
G	IR 7			0.676	
4	Recycling Behavior				
A	RB 1				0.616
B	RB 2				0.760
C	RB 3				0.652
D	RB 4				0.614
E	RB 5				0.72
F	RB 6				0.579
G	RB 7				0.750
H	RB 8				0.647

Table A7: ANOVA Table for Regression Model of Hypothesis 1

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	29.100	1	29.100	159.722	.000 ^b
	Residual	32.795	180	.182		
	Total	61.895	181			
a. Dependent Variable: Recycling Intentions						
b. Predictors: (Constant), Subjective Norm						

Summary of coefficient for Regression Model of Hypothesis 1

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.798	.220		3.622	.000
	Subjective Norm	.748	.059	.686	12.638	.000
a. Dependent Variable: Recycling Intentions						

Table A8: ANOVA Table for Regression Model of Hypothesis 2

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	21.919	1	21.919	98.698	.000 ^b
	Residual	39.975	180	.222		
	Total	61.895	181			
a. Dependent Variable: Recycling Intentions						
b. Predictors: (Constant), Perceived Behavior Control						

Summary of coefficient for Regression Model of Hypothesis 2

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.079	.251		4.293	.000
	Perceived Behavior Control	.694	.070	.595	9.935	.000

a. Dependent Variable: Recycling Intentions

Table A9: ANOVA Table for Regression Model of Hypothesis 3

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	28.275	1	28.275	156.567	.000 ^b
	Residual	32.507	180	.181		
	Total	60.782	181			

a. Dependent Variable: Actual Recycling Behavior

b. Predictors: (Constant), Recycling Intentions

Summary of coefficient for Regression Model of Hypothesis 3

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.144	.194		5.884	.000
	Hedonic	.676	.054	.682	12.513	.000

a. Dependent Variable: Actual Recycling Behavior

Table A10: ANOVA Table for Regression Model of Hypothesis 4

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	19.919	1	19.919	87.739	.000 ^b
	Residual	40.864	180	.227		
	Total	60.782	181			
a. Dependent Variable: Actual Recycling Behavior						
b. Predictors: (Constant), Perceived Behavior Control						

Summary of coefficient for Regression Model of Hypothesis 4

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.188	.254		4.672	.000
	Perceived Behavior Control	.661	.071	9.367	9.367	.000
a. Dependent Variable: Actual Recycling Behavior						