# THE FAILURE OF RECYCLE BEHAVIOR AMONG PUBLIC UNIVERSITY STUDENTS

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The Failure Of Recycle Behavior Among Public University Students

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ABSTRACT

This research project aims to investigate the awareness of recycling behavior among university students. Recycling plays a crucial role in promoting environmental sustainability and mitigating the negative impact of waste on the planet. However, the success of recycling initiatives heavily relies on the participation and awareness of individuals, especially the younger generation. The study will focus on university students as they represent a significant demographic with the potential to drive change and influence sustainable practices within their communities. The primary objectives of this research project are to assess the level of awareness regarding recycling behavior, identify factors that influence recycling behavior, and propose government initiatives to increase recycling behavior among university students.

The research will employ a mixed-methods approach and using quantitative surveys. The surveys will be distributed among a representative sample of university students to collect data on their current recycling behaviors, perceived barriers and motivations for their recycling behavior. The collected data will be analyzed using statistical techniques such as descriptive analysis and Pearson's Correlation Coefficient. The research findings will provide valuable insights into the current state of recycling behavior among university students, highlight areas for improvement, and suggest strategies to promote and enhance recycling awareness and participation.

The implications of this study can contribute to the development of targeted educational campaigns, interventions, and policies aimed at fostering a culture of recycling among university students. By raising awareness and understanding the factors influencing recycling behaviors,

this research can help create a positive impact on the environment and promote sustainable practices within the university community.

Keywords: Recycling Behavior, Awareness, University Students, Sustainability, Waste Management, Environmental Conservation
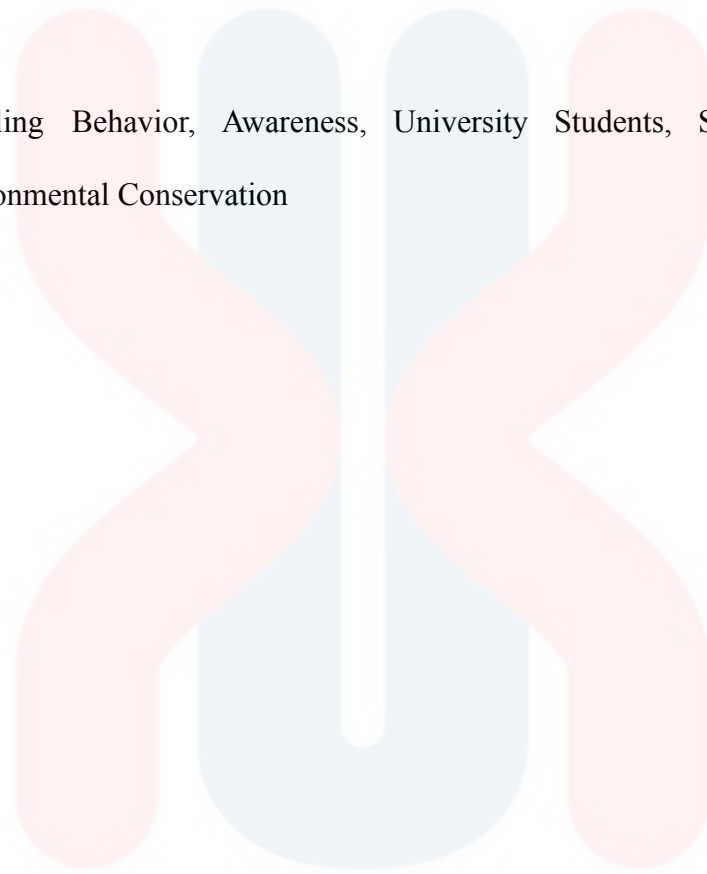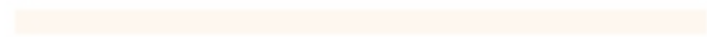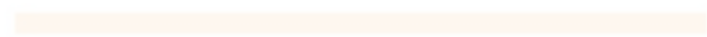
ABSTRAK

Projek penyelidikan ini bertujuan untuk menyiasat kesedaran tentang tingkah laku kitar semula dalam kalangan pelajar universiti. Kitar semula memainkan peranan penting dalam menggalakkan kelestarian alam sekitar dan mengurangkan kesan negatif ke atas planet ini. Namun begitu, kejayaan inisiatif kitar semula amat bergantung kepada penyertaan dan kesedaran individu terutamanya generasi muda. Kajian ini akan memberi tumpuan kepada pelajar universiti kerana mereka mewakili populasi demografi dan berpotensi untuk memacu perubahan dan mempengaruhi kegiatan dalam komuniti mereka. Objektif utama projek penyelidikan ini adalah untuk menilai tahap kesedaran mengenai tingkah laku kitar semula, mengenal pasti faktor yang mempengaruhi tingkah laku kitar semula, dan mencadangkan inisiatif kerajaan untuk meningkatkan tingkah laku kitar semula dalam kalangan pelajar universiti.

Penyelidikan akan menggunakan pendekatan kaedah campuran dan menggunakan tinjauan kuantitatif. Tinjauan itu akan diedarkan di kalangan perwakilan pelajar universiti untuk mengumpul data tentang tingkah laku kitar semula semasa mereka,, halangan dan motivasi untuk mereka mengamalkan kitar semula. Data yang dikumpul akan dianalisis menggunakan teknik statistik seperti analisis deskriptif dan Pearson's Correlation Coefficient. Penemuan penyelidikan akan memberikan pandangan berharga tentang keadaan semasa tingkah laku kitar semula dalam kalangan pelajar universiti, menyerlahkan bidang untuk penambahbaikan, dan mencadangkan strategi untuk menggalakkan dan meningkatkan kesedaran dan penyertaan kitar semula.

Implikasi kajian ini boleh menyumbang kepada pembangunan kempen pendidikan yang disasarkan, intervensi, dan dasar yang bertujuan untuk memupuk budaya kitar semula dalam

kalangan pelajar universiti. Dengan meningkatkan kesedaran dan memahami faktor-faktor yang mempengaruhi tingkah laku kitar semula, penyelidikan ini boleh membantu mewujudkan kesan positif terhadap alam sekitar dan menggalakkan amalan kitar semula dalam komuniti universiti .

Kata kunci: Tingkah Laku Kitar Semula, Kesedaran, Pelajar Universiti, Kecekalan, Pengurusan Sisa, Pemuliharaan Alam Sekitar.

CHAPTER 1

INTRODUCTION

1.1 BACKGROUND OF THE STUDY

In the current era of globalization, the current of rapid development has given many changes and negative implications to the country. Malaysia is also facing with pivotal issues such as garbage disposal and 3R practices (Reduce, Reuse and Recycle) which are still low (Seow, 2009; Agamuthu & Tarmudi, 2012). The intended 3R practice is that they have reduced the use of the correct bins according to categories such as plastic, glass, paper and so on for recycling. They also don't reuse items that can still be used and finally they don't recycle the items but throw them away everywhere. Therefore, this issue should be handled by all parties at various levels including at the level of educational institutions. The government through the Ministry of Education and the private sector has also held various recycling programs to overcome this problem but until today it is still lingering without the best solution. (Hasnah et al., 2012; and Murugan, 2019) waste management and recycling programs, especially among primary and secondary school students, have yet to see the practice and attitude of separating waste according to the three colors of bins provided by the school. (Seow, 2004; Zaini, 2011). Worryingly, students also do not care about the cleanliness and care of the environment where they eat, that is also where they waste. Instead, students only expect contractor workers at the school to clean them. The lack of knowledge and awareness in various recycling programs in the school area has a negative effect whereas as school students should show a good attitude and role model to every level of society (Siti Khatijah & Noraziah, 2014; Hanifah et al., 2017). The majority of students throw away trash without thinking first whether the trash can be recycled or not. On the other

hand, according to Rosmidzatul (2015), the Japanese country successfully practices recycling where 80% of the solid waste that is thrown away is recycled while only 20% is thrown away at landfills. This situation causes the lifespan of the landfill to be extended and environmental pollution can also be reduced (Abdul Hair, 2016; Mapa et al., 2019).

In order to cultivate this culture, environmental education and recycling programs have been introduced in Malaysia as a long-term measure to form a positive attitude of the next generation towards recycling (KPM, 2017). Therefore, the awareness of caring for the environment through education and curriculum is the most influential medium of change among school students. Educational institutions such as schools become the main channel to reveal recycling education to schools and communities that exist today so that knowledge, skills and noble values as well as the right actions in dealing with the issue of waste disposal and the environment can be reduced (Murugan, 2019). Education and knowledge curriculum and recycling programs are a measure of the transformation of students' attitudes and behaviors so that they can form ethics towards the environment. Many believe that only through education, the thoughts and actions of a student can be changed. So, schools are the most appropriate and important educational institutions to educate and shape recycling practices among future generations to be more concerned about the cleanliness of our environment (Seow et al., 2004).

In the Qur'an and hadith, Islam also emphasizes the idea of recycling. As is well known, Islam places a high value on both mental and physical hygiene. Based on Surah Al Hud verse 61, which means *"O my people, worship Allah; you have no deity other than Him, He has produced you from the earth and settled you in it"*. Al-Quranic verses that blatantly emphasize environmental responsibility By selling plastic bottles, old newspapers, and scrap metal instead of burning or throwing them away, recycling practices can also make money. Waste is prohibited

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by Allah SWT strongly, and this bad deed may result in waste. Allah said in Surah Al Isra'
verses 26–27, *"And do not spend wastefully. Surely the wasteful are like brothers to the devils.
And the Devil is ever ungrateful to his Lord."* Islam places a lot of value on recycling because it
can help to make the environment cleaner and healthier.

1.2 PROBLEM STATEMENT

Currently, the problem of garbage is indeed a major issue for local authorities who have
to spend a lot of money on the collection and disposal of garbage produced by the community.
However, students are not exempted as contributors to producing garbage. Majority of them
throw garbage without caring whether the garbage can be recycled or not. They mix all kinds of
garbage in one bin without separating it. However, until now recycling activities have not been
found to be a habit that is often practiced by Malaysians in managing their daily garbage. This is
worsened by the attitude of people who are less concerned and responsible in preserving the
environment that eventually has a negative impact on nature and the quality of human life.
Individual involvement in environmental conservation is a big step in environmental
conservation efforts. The low level of negligence among the educated makes the government's
recommendations in the recycling program less effective. This view is supported by (Azizan's
opinion, 2008) whereby he states that students have a good awareness of environmental
problems but this awareness is no longer converted into a practical one. Through this study, it is
hoped that it will be a guide for students in Malaysia to be able to get involved in the recycling of
used goods regardless of whether it is on campus or off campus.

The awareness of recycling behavior among university students is significantly lacking,
as evidenced by their low participation and limited understanding of recycling practices on

campuses. One key piece of evidence supporting this problem statement is the consistently low recycling rates observed in data collected from waste management departments at various universities. Despite the availability of recycling bins and educational campaigns, the majority of students fail to actively engage in recycling behavior, indicating a clear lack of awareness. Furthermore, frequent contamination of recycling bins with non-recyclable items has been observed through studies and observations conducted on university campuses. This contamination is often a result of students' unawareness regarding what can and cannot be recycled, leading to improper disposal and hindering the effectiveness of recycling practices. Surveys and interviews conducted with university students further demonstrate the limited knowledge on recycling, highlighting a lack of understanding regarding recycling processes and the environmental impact of recycling. Many students show a limited awareness of the importance of recycling and how their actions can contribute to sustainability efforts. Additionally, inadequate communication and education play a significant role in the lack of recycling awareness among university students. Universities often fail to provide comprehensive and accessible information about recycling, relying on limited or ineffective communication channels such as posters, emails, and social media campaigns, resulting in insufficient awareness and engagement among students. Considering these pieces of evidence, it is clear that addressing the problem of low awareness and participation in recycling behavior among university students is crucial. By fostering a culture of sustainability and promoting responsible waste management practices on campuses, universities can contribute to a more environmentally conscious student body

Lack of awareness and knowledge about recycling in the community not only has a negative impact on the environment but it can affect human health. However, limited recycling bins are the main reason why people lack interest in recycling. This is because they do not know about the existence of existing recycling bins and subsequently cause garbage to be dumped everywhere. This can usually be seen in various public places such as shopping centers, recreation centers, schools and other areas. Thus, this study aims to foster enthusiasm and awareness of recycling behavior among university students. The awareness that is applied to university students will make them think ahead for every behavior related to recycling practices.

1.3 RESEARCH QUESTION

To ensure that the research that has been conducted can achieve the original goals and objectives of the study, there are a number of questions that need to be clarified. There are four questions that need to be solved:

I.   What is the relationship between lack of time and the failure of recycle behavior among public university students?

II.   What is the relationship between lack of interest and the failure of recycle behavior among public university students?

III. What is the relationship between distance of recycle centre and the failure of recycle behavior among public university students?

IV.   What is the relationship between lack of recycling initiatives and the failure of recycle behavior among public university students?

1.4 RESEARCH OBJECTIVES

There are four objectives that need to be achieved:

I. To examine the relationship between lack of time and the failure of recycle behavior among public university students.

II. To examine the relationship between lack of interest and the failure of recycle behavior among public university students.

III. To examine the relationship between distance of recycle centre and the failure of recycle behavior among public university students.

IV. To examine the relationship between lack of recycling initiatives and the failure of recycle behavior among public university students.

1.5 SCOPE OF THE STUDY

This study uses recycling activities, government initiatives and benefits recycling as independent variables. The results of this study will determine whether or not the dependent variables (the failure of recycle behavior among public university student) may impact students in Malaysia. This study is aimed at and focused on students at the public university Malaysia. Recycling attitudes from public university students cause this to happen over and again. Students become less concerned about recycling as a result of these incorrect assumptions.

From this study we found that there are several theories including Theory of Planned Behavior (TPB), Model goal-directed Behavior (MGB) and Self-determination Theory (SDT) to explain recycling behavior to students and attract students' interest (Cho, 2019). However, it is

necessary to increase the desire of students who are still not aware of the importance of recycling.

1.6 SIGNIFICANCE OF STUDY

This study measures the awareness of recycle behavior among university students. There are 3 objectives that we want to attach in our study. Our study aims to identify relationship distance of recycle centre, lack of time, interest and recycling initiative influence the failure of recycle behavior among public university students. Therefore, after we have done a study on the objectives we want in our study, there are several effects or importance of this study on student universities, on societies and also on the government.

First of all, there are a number of reasons why this study on recycling behavior is significant for college students. Recycling lessens the burden on the environment and preserves precious natural resources. Students can help with resource conservation by recycling, which is important for sustainable development because it conserves energy, water, and raw materials.

Second, society would receive a whole benefit from this study. It is crucial for society as a whole to recycle. Recycling properly eases the burden on landfills and encourages the resource-efficient use of resources. Additionally, recycling supports the local economy by adding jobs in the recycling sector. Students at universities make a positive impact on everyone's health and well-being by recycling, which improves society as a whole.

Finally, the government also benefits from this study. Governments are essential in developing laws and policies that support sustainable practices. Governments are strongly encouraged to invest in recycling infrastructure, put in place efficient waste management

systems, and support programs that promote recycling by university students' recycling behavior. Universities, students, and the government working together to encourage recycling behavior can have a significant positive impact on the environment, such as lowering greenhouse gas emissions and promoting energy conservation.

1.7 DEFINITION OF TERM

1.7.1 The Failure of recycle behavior among Public Universities Students

Recycling is an excellent strategy for reducing waste while also protecting the environment. By being concerned with recycling awareness, a student's level of awareness is important in preventing something unwanted from happening. Recycle behavior is critical for overcoming environmental problems and is an important contributor to a sustainable environment (Yoke et al., 2019). The study will identify the level of students' understanding of recycling behavior, as well as whether or not students care about recycling.

1.7.2 Lack of time

Lack of time refers to a circumstance in which students do not engage in recycling because of time constraints. Recycling behavior in this case refers to the act of recycling or engaging in activities that encourage the reuse or correct disposal of waste items in order to lessen environmental effects. Lack of time might also be seen as a lack of priority, not interest in the present project recycle, or work on other projects (Scherer et al., 2015).

1.7.3 Lack of interest

Individuals or groups who demonstrate little or no enthusiasm to engage in recycling practices are said to have a lack of interest in recycling behavior. It implies a lack of enthusiasm or indifference in engaging in initiatives that encourage waste reuse, reduction, and correct disposal in order to reduce environmental effects (Tharimazi & Jusoh). There can be various reasons for the lack of interest in recycling behavior, including lack of awareness, limited understanding of recycling processes and skepticism about the effectiveness of recycling.

1.7.4 Distance of recycle centre

The distance of recycle centers in recycle behavior refers to the physical distance between recycling centers or facilities and individuals or communities, and how that distance affects their recycling behavior. The proximity of recycling centers plays a significant role in people's likelihood to recycle. If recycling centers are located far away from individuals' homes or workplaces, it can create barriers that discourage recycling behavior.

1.7.5 Lack of recycling initiatives

Governments play a crucial role in promoting and incentivizing recycle behavior through various opportunities and initiatives. some common promotion opportunities that governments can undertake like education and awareness campaigns and incentive programs. By implementing these promotion opportunities, governments can create an enabling environment for recycling behavior, raise awareness, provide infrastructure, and incentivize individuals and communities to actively participate in recycling efforts.

1.8 ORGANIZATION OF THE PROPOSAL

Chapter one covered the study's background, problem statement, research question, research purpose, scope, significance, and definitions

Chapter two presents the underlying theory, earlier research, explanations of the hypotheses, conceptual framework, and a conclusion

Chapter three comprises the following sections: introduction, research design, data collection method, study population, sample size, sampling procedures, development of research instruments, measurement of variables, data analysis procedure, and conclusion.

Chapter four contains an introduction and preliminary analysis. Then followed by the demographic profile of the respondents, a descriptive analysis, tests of the reliability and normalcy, testing of the hypotheses, and a summary.

The final chapter starts with an introduction, then moves on to discuss the study's main conclusions, consequences, and limitations. It then concludes with recommendations and ideas.

CHAPTER 2

LITERATURE REVIEW

2.1 INTRODUCTION

This chapter we discuss the literature review from our study of the failure of recycle behavior among public university students. This chapter additionally points out the root reason for the problem that causes university students to turn a blind eye to recycling. In this chapter, we will also discuss and explain the relationship between independent variables (IVs) factors such as lack of time, lack of interest, distance to recycling center, and lack of recycling initiative toward the failure of recycle behavior among public university students (DV). This chapter explains the theory used in this study that is related to recycling behavior, one of which is the theory of planned behavior (TPB). The concept of framework will also be identified in this chapter which relates the relationship between lack of time, lack of interest, distance to recycle center, and lack of recycling intiative toward the failure of recycle behavior among public university students.

2.2 UNDERPINNING THEORY

This chapter explains how the theory is used in daily life. Icek Ajzen created the theory of planned behavior (TPB) in the late 1980s as a social psychology theory. It is a theory that attempts to explain and predict human behavior based on people' attitudes, beliefs, and intentions. Thus, the theory of Planned Behavior has been widely implemented in a variety of domains, including environmental psychology, health psychology, consumer behavior, and

organizational behavior. This study points out how the theory of planned behavior influences student behavior in terms of recycling awareness.

Eco-friendly was founded in theory of planned behavior to use cloth diapers, consumption of green products and intention to use public transport is explaining eco-friendly house purchase (Jose K & Sia, 2022). A person's intention could include several things, including carrying out a certain behavior. The intention element influences behavior because it indicates how hard individuals are willing to try, and how much work they are prepared to put in to do the behavior (Godin & Kok, 1996). However, attitude toward behavior, subjective norm and perceived behavior control are matters of a person's intention towards behavior. In this study we will find out where student intentions can have an impact on recycling behavior in the college environment.

2.3 PREVIOUS STUDIES

2.3.1 The failure of recycle behavior among public university students

There have been numerous studies exploring the reasons behind people's reluctance to engage in recycling activities. Some common factors include a lack of awareness regarding recyclable materials, inconvenience, cost, and a lack of trust in the recycling system. People may be unaware of what can and cannot be recycled, leading to confusion and discouragement. Additionally, recycling can be inconvenient due to limited access to recycling bins or the time and effort required to separate trash and recyclables. Moreover, recycling programs sometimes incur costs such as fees or the need for specialized containers, making it less attractive compared to simply discarding waste. Another contributing factor is a lack of trust in whether the recycled

materials will actually be processed appropriately, with concerns about them ending up in landfills, incinerators, or being sent to countries with lax environmental regulations.

A 2012 study published in the journal "Waste Management" highlighted these common reasons for reluctance to recycle. The study also revealed that individuals with better knowledge about recycling were more likely to participate in recycling activities. Another study, published in the journal "Environmental Science & Technology" in 2014, found that people were more inclined to recycle when they believed it had a positive environmental impact. Furthermore, easy access to recycling bins and the absence of fees for recycling were found to increase recycling rates.

These studies indicate that various factors influence people's willingness to recycle. By addressing these factors, it may be possible to enhance recycling participation rates. Other studies provide additional evidence regarding recycling rates. For instance, a study conducted in the United States revealed that only 35% of people recycle regularly, while a study in the United Kingdom found the rate to be 45%, and in Australia, it was 55%. These findings emphasize the considerable room for improvement in recycling participation rates. By understanding the reasons behind reluctance to recycle, we can develop strategies to encourage greater participation in recycling and promote environmental preservation.

2.3.2 Lack of time

Lack of time has been identified as a significant factor that makes people reluctant to participate in recycling activities, as evidenced by several studies. For instance, a 2012 study published in the journal "Waste Management" revealed that 38% of surveyed individuals in the United States

cited lack of time as a common reason for not recycling. Similarly, a 2014 study published in the journal "Environmental Science & Technology" found that people were more likely to recycle if they believed in its environmental impact, but less likely if they perceived it as time-consuming, with 25% of respondents attributing their non-participation to time constraints. Additionally, a 2015 study conducted by the University of California, Berkeley demonstrated that individuals who reported being frequently pressed for time were 20% less likely to recycle compared to those who rarely or never felt time pressure.

These studies indicate that lack of time can present a significant barrier to recycling participation. However, there are various measures that can be implemented to address this issue and make recycling more convenient and time-efficient. For example, communities can enhance accessibility to recycling bins, provide pickup services, and educate individuals on quick and easy recycling practices. By addressing the lack of time constraint, we can actively promote increased recycling participation, contributing to environmental preservation.

2.3.3 Lack of interest

Previous studies have demonstrated that lack of interest can lead to people being hesitant to participate in recycling activities. For instance, the Journal of Consumer Research published a study indicating that individuals are less inclined to recycle items they perceive as less than perfect, with a higher likelihood of recycling clean, undamaged, and well-preserved items. Conversely, if an item is dirty, damaged, or flawed, people are less likely to consider it recyclable and more likely to dispose of it. Additionally, research published in the journal Environmental

Science & Technology found that people are more inclined to recycle when they believe their recycling efforts will have a positive impact. Conversely, if individuals perceive recycling as ineffective, they are less motivated to engage in recycling practices and more likely to discard recyclables. Furthermore, a study published in the journal Resources, Conservation & Recycling highlighted that easy access to recycling bins increases the likelihood of people recycling, whereas having to travel a significant distance to find a recycling bin reduces participation.

These studies collectively underscore the role of lack of interest in diminishing people's engagement in recycling activities. Nevertheless, various strategies can be implemented to foster interest in recycling, such as improving convenience, providing education on the benefits of recycling, and demonstrating how individual recycling efforts can make a difference. Additional evidence supporting the influence of lack of interest on recycling participation includes a survey by the National Recycling Coalition, revealing that 35% of individuals do not recycle due to their belief that it has no impact. Moreover, a study conducted by the University of Arizona indicated that witnessing neighbours recycling increases the likelihood of individuals engaging in recycling, while a study from the University of British Columbia found that offering incentives, such as utility bill discounts, enhances recycling participation. Overall, these research findings emphasize that lack of interest represents a significant obstacle to recycling engagement, yet implementing targeted measures can help generate interest and promote active participation in recycling initiatives.

2.3.4 Distance of recycle centre

Several studies have found that distance from recycling centers plays a significant role in people's reluctance to engage in recycling activities. One study published in the Journal of Environmental Psychology discovered that individuals residing further away from recycling centers were less likely to recycle due to limited awareness of recycling programs and limited access to recycling bins. Similarly, a study in the journal Waste Management revealed that those living farther away from recycling centers were more prone to discarding recyclable materials in the trash, primarily because they perceived the recycling process as inconvenient or difficult. Additionally, a study published in the journal Resources, Conservation and Recycling indicated that individuals residing at a distance from recycling centers were more likely to experience confusion regarding which materials could be recycled, likely stemming from limited access to recycling information.

In addition to these scientific findings, anecdotal evidence further supports the notion that distance from recycling centers can discourage participation in recycling activities. Many individuals have expressed frustration with the need to travel long distances to recycle, with some even opting to discontinue recycling altogether due to the perceived inconvenience.

While other factors, such as the availability of recycling bins, the quality of recycling programs, and personal attitudes towards recycling, can also influence individuals' willingness to recycle, the distance from recycling centers emerges as a significant deterrent.

To address the challenges associated with distance from recycling centers, several strategies can be employed. First, making recycling bins more accessible by strategically locating them in convenient areas, such as near apartment buildings or on busy streets, can enhance convenience for individuals residing farther away. Second, improving the quality of recycling programs, such as offering curbside pickup or expanding recycling options, can mitigate perceived inconveniences and encourage participation. Lastly, educating individuals about recycling through comprehensive information campaigns that clarify which materials can be recycled and provide guidance on proper recycling practices can contribute to overcoming the knowledge gap. By actively addressing these challenges, we can promote greater participation in recycling activities, fostering a sustainable future and reducing waste

2.3.5 Lack of recycling initiatives

Several studies have highlighted the unintended consequences of government promotion of recycling, revealing that it can actually discourage people from participating in recycling activities. For instance, a study published in the journal "Waste Management & Research" in 2012 examined the impact of offering financial incentives for recycling. Surprisingly, the study found that individuals who were given a financial incentive to recycle were less likely to continue recycling in the long term compared to those who were not offered any incentives. The researchers theorized that the financial reward transformed recycling from a civic duty into a burdensome chore.

Similarly, another study published in the journal "Environment and Behavior" in 2013 shed light on the effects of tracking individuals' recycling behavior. The researchers discovered that when

people were informed that their recycling was being monitored, they exhibited a decreased likelihood of recycling compared to those who were not made aware of the tracking. The perception of being watched and judged hindered their motivation to participate in recycling efforts.

Furthermore, a study featured in the journal "Public Administration Review" in 2014 explored the impact of informing individuals that their recycling efforts were not making a significant difference. Strikingly, the study revealed that individuals who were provided with this information were less inclined to recycle than those who were not given such feedback. The researchers hypothesized that learning that their recycling actions were inconsequential made participants feel that their efforts were futile, thereby reducing their motivation to recycle.

These studies collectively suggest that government promotion of recycling can have unintended negative consequences, leading people to perceive recycling as a chore, an activity under scrutiny, or an ineffective endeavor. To encourage recycling without fostering reluctance, governments should consider alternative approaches. Here are some tips for governments on how to promote recycling effectively:

Firstly, emphasizing the benefits of recycling can significantly influence people's attitudes and behaviors. By highlighting the positive impact of recycling, such as reducing pollution, conserving resources, and saving energy, individuals are more likely to engage in recycling activities willingly.

Secondly, making recycling easy and convenient is essential for fostering participation. Governments should provide clear and accessible recycling guidelines, ensure the availability and visibility of recycling bins, and offer affordable and convenient recycling services. Simplifying the process removes barriers and encourages individuals to adopt recycling habits.

Lastly, incorporating elements of fun and engagement into recycling initiatives can further motivate people to participate. Organizing recycling competitions, offering incentives or prizes for recycling efforts, and integrating recycling into educational programs can make the experience enjoyable and encourage long-term engagement. By following these recommendations, governments can effectively promote recycling without inadvertently discouraging participation. It is crucial to create a positive narrative surrounding recycling, making it a desirable and meaningful activity for individuals and communities alike.

2.4 HYPOTHESES STATEMENT

Five hypotheses of this research had been developed to study the relationship between the dependent variable, the reason of non-participation by university students in recycling activities and the other five independent variables which are lack of time, lack of interest, distance of recycle centre, recycling rates and promotion opportunities by government.

H1: There is a significant relationship between lack of time and the failure of recycle behavior among public university students

H2: There is a significant relationship between lack of interest and the failure of recycle behavior among public university students.

H3: There is a significant relationship between distance of recycle centre and the failure of recycle behavior among public university students.

H4: There is a significant relationship between lack of recycling initiatives and the failure of recycle behavior among public university students.

2.5 CONCEPTUAL FRAMEWORK

Based on this framework, this study will investigate how the independent variables (lack of time, lack of interest, distance of recycle center and lack of recycling initiatives) influence the dependent variable (the failure of recycle behavior among public university students). We would collect data related to these variables and analyze their relationships to gain insights into the factors contributing to failure in recycling activities among public university students.

It's important to note that this is just an example framework, and the specific variables and their operational definitions can vary depending on the research context and objective.

Figure 2.1 : Conceptual Framework
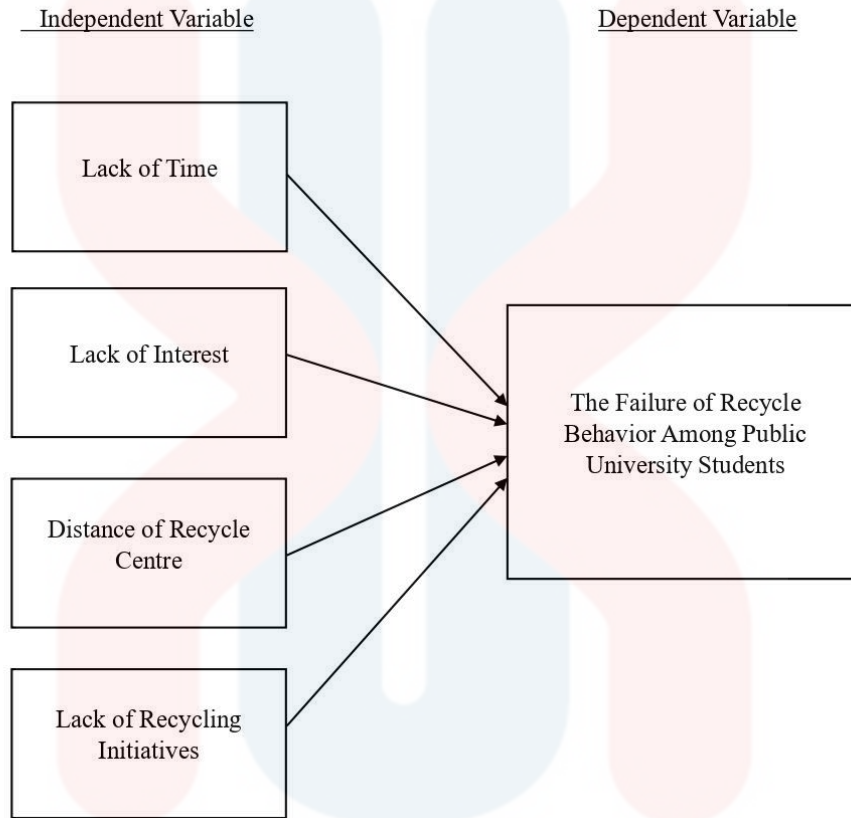
2.6 SUMMARY/ CONCLUSION

In conclusion, chapter two of this research provides a comprehensive explanation of the variables under investigation and offers an overview of the study. Furthermore, drawing from existing literature, hypotheses can be developed for each variable in the study. Additionally, a conceptual model can be constructed to depict the relationships between the independent variables (lack of time, lack of interest, distance of recycle center and lack of recycling initiatives) and the dependent variable (the failure of recycle behavior among public university students). This conceptual model will visually represent the connections among the variables.

The subsequent chapter, chapter three, will delve into the methodology employed for conducting the study, outlining the research design, data collection methods, and data analysis techniques to be utilized.
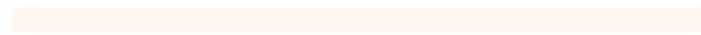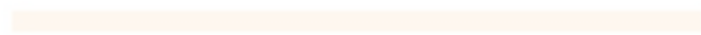
CHAPTER 3

RESEARCH METHODS

3.1 INTRODUCTION

This chapter is related to the determination of a way to do the research design, collection, sampling, and analysis of data to ensure that all hypotheses made are connected to the study. In this chapter, the researcher will be able to determine the design of a study which is to be done whether the study is qualitative or quantitative. This makes it the most significant component of the study. Not only that, but researchers can also know the sample size of population, the type of sampling, the sampling technique and methods to collect data that need to be applicable for the study. Therefore, in this study we can examine how each part is used in the study.

3.2 RESEARCH DESIGN

For this study, we decided to use a quantitative research methodology. Students at University Malaysia provided the data. The results of this study are concentrated on a problem where a variable may affect another. This study examines University Malaysia students' understanding of recycling practice and the relationship between the independent variable (lack of interest, distance or recycling centre, lack of time and lack of recycling initiative) and the dependent variable which is the failure of recycle behavior among public university students. This study uses a questionnaire and is cross-sectional in nature. However, this study was done at random on university Malaysia students. A series of questionnaires with inquiries concerning research variables were provided to the respondent. The data will be computed and analyzed before we reach a conclusion.

3.3 DATA COLLECTION METHODS

The process of gathering data from all relevant sources to address a research question and assess the results is known as the data collection method. Researchers collect data in order to identify, scrutinize, and validate their research objectives, challenges, and study. The study will collect data through the use of the questionnaires. Additionally, the data was imported into the Statistical Package for Social Science (SPSS) version 26.0 after our respondent completed the Google Form link. This version was chosen since it can save a significant amount of time, effort, and money.

In this study, both primary and secondary sources are considered important to give information for this study. This study used resources from the primary data where a survey method and the questionnaire were distributed to the respondents. To conduct the survey, we designed a questionnaire which is a google form that was distributed to the respondents. The questionnaire likely contained a series of structured questions related to the research topic. By administering the questionnaire, we were able to directly gather data from the individuals participating in the study, obtaining their perspectives, opinions, and experiences. From the questionnaire answered by them, the awareness of recycling behavior among University Malaysia students will be identified.

3.4 STUDY POPULATION

Students from all Malaysian educational institutions make up the study's population. Adults and college students make up a sizable portion of those who practise recycling attitudes. A sizable group of people who are the subject of the research might be referred to as the population of this study. The population size for this study is 589,879 students who are IPTA and

IPTS students in Malaysia, according to Higher Education Statistics for the year 2023. In order to acquire more precise data based on the number of respondents who took part in this survey, we use the sample size.

3.5 SAMPLE SIZE

Sample size, according to Etikan et al. (2016), is the number of observations taken on a subject that are determined for a certain study objective. The sample size depends on what we hope to learn from the data we gather and the connection we hope to draw with the goal of the study (Nguyen and Huynh, 2017). According to the 2021 higher education statistics released by the Kementerian Pendidikan Tinggi Malaysia (KPT), there were a total of 589,879 students who enrolled in Malaysian public universities in 2021. Therefore, this study took a total of 385 respondents according to the sample size table of Krejcie and Morgan (1970). As a result, 385 surveys to complete yourself are distributed using a Google form to public university students in Malaysia.

Table 3.1: Sample Size of Krejcie and Morgan (1970)

Table 3.1

Table for Determining Sample Size of a Known Population

N	S	N	S	N	S	N	S	N	S
10	10	100	80	280	162	800	260	2800	338
15	14	110	86	290	165	850	265	3000	341
20	19	120	92	300	169	900	269	3500	346
25	24	130	97	320	175	950	274	4000	351
30	28	140	103	340	181	1000	278	4500	354
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	191	1200	291	6000	361
45	40	170	118	400	196	1300	297	7000	364
50	44	180	123	420	201	1400	302	8000	367
55	48	190	127	440	205	1500	306	9000	368
60	52	200	132	460	210	1600	310	10000	370
65	56	210	136	480	214	1700	313	15000	375
70	59	220	140	500	217	1800	317	20000	377
75	63	230	144	550	226	1900	320	30000	379
80	66	240	148	600	234	2000	322	40000	380
85	70	250	152	650	242	2200	327	50000	381
90	73	260	155	700	248	2400	331	75000	382
95	76	270	159	750	254	2600	335	1000000	384

Note: N is Population Size; S is Sample Size   Source: Krejcie & Morgan, 1970

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3.6 SAMPLING TECHNIQUES

Probability sampling is a type of random sampling in which a sample is chosen at random rather than on purpose. Non-probability sampling, on the other hand, entails the researcher's deliberate selection of a sample from a given population using predetermined criteria. The primary goal of convenience sampling is to collect data from participants who are easily accessible to the researcher, such as physicians who attend a staff meeting to participate in a study. Regardless of how frequently it occurs, it may be more deliberate and strategic. (Palinkas and colleagues, 2015). The assumption that the target population members are homogeneous is central to convenience sampling. That is, the study results would be the same whether collected from a random sample, a near sample, a cooperative sample, or an unreachable fraction of the population.

The method of investigation in this study was non-probability sampling such as convenience sampling. According to Muhammad Hassan (2022), using this approach, the researcher chooses subjects or objects that are convenient or easily available. For instance, because they are easier to reach, a researcher conducting a study on college students might choose volunteers from their own class or residence. This study chooses this non-probability sampling method because it is a more realistic and accommodating approach for researchers using surveys in the real world. Although statisticians prefer probability sampling because it produces data in numerical form, if done correctly, it can produce results that are similar to, if not identical to, the quality of those produced by probability sampling and avoid sampling errors. Additionally, getting responses using non-probability sampling is quicker and more affordable

than using probability sampling because the researcher already knows the sample. Compared to those chosen at random, the responders answer more quickly because they are highly motivated to take part.

This study will focus on 385 Malaysian university students. Respondents were invited to complete a questionnaire to help them make decisions on the factors driving the failure of recycle behavior among public university students The sample population of Malaysian university students was drawn from a variety of racial groupings, including Malays, Chinese, Indians and others. A questionnaire created on Google Forms is used to collect responses. The subjects ranged in age from below 21 to more than 50 years old. These individuals are regarded as suitable for answering the study's questions since they are students with experience and skill in the failure of recycle behavior among public university students

3.7 RESEARCH INSTRUMENT DEVELOPMENT

Measurement tools are several techniques that the researcher employs to get information from respondents for research. According to the type of research being done, it was created to help the researcher collect data. Yaya (2014) defines a measurement instrument as one of the ways a researcher collects data from respondents. Numerical data must be gathered and analyzed for quantitative research. It can make predictions, assess causal linkages, uncover patterns and averages, and generalize findings to larger groups (Bhandari, 2022). As a result, using the questionnaires the previous study provided, we picked the questionnaire as the primary data-gathering method for this quantitative investigation. To ensure that the data collected is focused on the needs which are required in research, the questions provided are closed and give diverse respondents possible response.

3.7.1 Construct of Measurement

Table 3.2: The Questionnaires

Section	Factors	Variables	Questions	Reference
A	Demographic Profile		1 - Gender 2- Age 3 - Ethnicity 4 - Religion 5 - Years of Study 6 - Residence	Yasmina Philippsen. (2015)
B	Depedent Variables	The Failure of Recycle Behavior Among Public University Student	1. I lack time to engage 2. I am not interested in this activity 3. I don't know what to do	Abdelnaser Omran, Ana-Maria Schiopu. (2015)

			4. Lack of information or insufficient knowledge 5. I didn't get any reward	
C	Independent Variable	Lack of Time	1. I lack time because my studies are dense 2. I lack time because I focus on doing assignments 3. I lack time because I am involved in activities at the university 4. I lack time because I work part time	Abdelnaser Omran, Ana-Maria Schiopu. (2015)

		Lack of Interest	1. I am less interested because I lack encouragement from my family	Abdelnaser Omran, Ana-Maria Schiopu. (2015)
			2. I am less interested because I lack encouragement from friends	
			3. I am less interested because I don't know the benefits of recycling	
			4. I am less interested because I am not given extensive exposure	

		Distance of Recycle Centre	1. The recycling center is far from the residence	Abdelnaser Omran, Ana-Maria Schiopu. (2015)
			2. Lack of recycling places	
			3. Don't know the type of items accepted for recycling	
			4. it's not worth going to a distant recycling center	
		Lack of Recycling Initiative	1. Lack of promotion displayed from the recycling club	Abdelnaser Omran, Ana-Maria Schiopu. (2015)
			2. Lack of awareness of recycling to the community	
			3. Lack of good facilities should be	

			provided when recycling 4. Lack of reward the community involved in recycling	

3.7.2 Questionnaire Design

A five-point Likert scale with numerical values of 1 (strongly disagree), 2 (disagree), 3 (neutral), 4 (agree), and 5 (strongly agree) will be utilized as the basis for the questionnaires that will be used to gather data for the study. It has three parts: A, B, and C. Section A asked questions on the respondent's demographic profile to identify the respondent and categorize the data swiftly. The questions in this section are tailored to the appropriate student profile. Sections B and C, however, focus on what causes students do not engage in recycling.

Table 3.3: The 5 - Likert Scale

Indication	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

Rating	1	2	3	4	5

3.8 MEASUREMENT OF THE VARIABLES

To determine the test for statistical inference, researchers will gather and analyze data on the cache variable and rate it on a scale. Each variable is determined and categorized using measurement scales. Nominal, ordinal, interval, and ratio scales are frequently used in measuring. The scale of measurement that will be employed in this study will be nominal and ordinal (Likert scale). There are three sections in the questionnaire: Section A asks about the respondents' demographics; Section B asks about dependent variables; and section C asks about independent variables.

3.8.1 Nominal Scale

A measurement scale that is nominal measures a subject's category or group. Only names or categories are used to describe the replies when this scale is present. On variables having a nominal scale, subtraction, summation, multiplication, and other mathematical operations cannot be carried out. In this study, the gender, age, education level, and their institution are all quantified for the analysis of target respondents in section A of the questionnaire, which is related to the demographic profile of the respondents.

3.8.2 Ordinal Scale

A measurement scale known as an ordinal scale is used in research to separate data and includes elements of ranking, degree, or level through a particular study. Either subjectivity, objectivity, or both may be present in the evaluation. Because they include levels for evaluating interpersonal connectivity, attitudes toward assisting others, and innovativeness, ordinal scales are helpful tools. The five-point Likert scale [strongly disagree (1), disagree (2), slightly agree (3), agree (4), and strongly agree (5)] is used in sections B and C of the questionnaire in this study to measure the strength of agreement with or disagreement with the statement for the variables under study.

3.9 PROCEDURE FOR DATA ANALYSIS

Data analysis plays a role in decision making and is important in processing big data into useful information. The process of data involves gathering all the information by exploring the data and using it to find the patterns and other observations (Kelley,2022). To make wise decisions, find solutions to issues, and develop a deeper understanding of complicated phenomena, data analysis is used in a variety of fields and industries. It aids in decision-making that is supported by facts, process improvement, opportunity identification, and risk mitigation for both organizations and individuals. There are 6 steps in the procedure for data analysis.

Step 1 : Identify issues and/or opportunities for collecting data

The first step is important for start our research. Analyzing the state of data availability at the moment and identifying areas where data collection can fill in specific gaps or address needs

entails identifying problems and opportunities for data collection. For instance, deciding what kind of article will be used as a reference for the study, where the data sources will be located, who and how many respondents are appropriate for the study, and so on.

Step 2 : Select issue(s) and/or opportunities and set goals

Determining the precise areas where data analysis can offer insightful perspectives or address significant challenges is necessary for selecting issues and/or opportunities and setting goals. The chosen problems and chances must be in line with the overall goals and strategies of the organization. For this second step, the researcher will take into account a number of factors when deciding on the best topic, including the reasons why the topic was chosen for the study, whether the topic can be used to address respondents' problems, and what the study's goal is. After the questions have been addressed, objectives are determined based on how well they relate to the topic under study. The primary objectives are clear, rely on hypotheses, and can be evaluated through the use of data collection and analysis techniques.

Step 3 : Plan an approach and methods

Creating a systematic and organized plan for carrying out the analysis involves planning an approach and methods for data analysis. It includes outlining the steps and procedures to be taken, defining the overall strategy, and choosing the best analytical techniques. The researcher will choose which respondents will be surveyed in this step, as well as which data sources to use, how to collect the data, and how long it will take. The issues and findings will be discussed. The researcher will then decide on a quantitative method for this study and the study's methodology. Data can be collected in a variety of ways, including through surveys, interviews, and observational data as well as through existing data.

Step 4: Collect data

Data that is pertinent and trustworthy are gathered to answer the research question or objective during the crucial data collection phase of the data analysis process. This entails carrying out the earlier developed data collection plan. Depending on the study's purpose, data can be gathered in a variety of ways, including survey, observations, and access to pre-existing datasets. In this step, the researcher designs the best data collection strategy, always follows it,

and frequently evaluates the results. By doing this, the data gathering process will go smoothly and make it simpler for the researcher to update the plan when adjustments are made or new information is discovered.

Step 5 : Analyze and interpret data

The researcher's next step is to examine and explain the information gathered. Depending on the technique employed and the volume of data gathered, the process of data analysis can be either complex or straightforward. This analysis procedure is crucial because it transforms unprocessed data into insightful findings that can advance the researcher's comprehension and approach.

Step 6 : Act on results

The researcher then decides how to proceed with the data, whether to gather additional data of the same kind or to change their methodology, after having analyzed and interpreted the findings of the data collected. The information provided will be strengthened by the use of quantitative tools to help create a successful action plan. If the data are adequate to create an action plan, the researcher should take into account the findings of the analysis, identify obstacles, and devise solutions to overcome those obstacles so that the objectives of the study can be achieved.

The Statistical Package for Social Computing (SPSS) version 26.0 will be used to gather the data obtained through questionnaires. Through data analysis, specifically descriptive and inferential analysis, SPSS is used to produce results. For respondent demographics, descriptive analysis, such as mean and mean analysis, will be used. To examine the relationship between the dependent variable and independent variables in inference, Pearson Correlation is used.

3.9.1 Descriptive Analysis

Descriptive analysis is a method that uses the data collected to describe the respondent as a whole. The age and gender of the students can be covered in a demographic analysis to help create a picture of the respondent. Additionally, the data analysis will display socioeconomic data on income, education level, and age. Numerous researchers, whether employed by

governments, non-government organizations, or large corporations, use this demographic analysis technique to learn more about population characteristics.

Additionally, we are interested in whether students' levels of awareness may change over time. Demographic analysis was used by the researchers in this study to gather information from the respondents and analyze their recycling awareness. The data to be collected in this demographic analysis will include gender, age, ethnicity, years of study, religion, and residence.

3.9.2 Pearson's Correlation Coefficient

According to Vijay Kotu (2019), Pearson correlation takes a value from −1 (perfect negative correlation) to +1 (perfect positive correlation) with the value of zero being no correlation between X and Y. A positive correlation coefficient is shown by the propensity to increase or decrease one variable in conjunction with other variables, whereas a negative correlation coefficient is indicated by the tendency to increase one variable's value in conjunction with a drop in another variable.

In general, Pearson correlation looks at how the independent and dependent variables are related. It is also utilized in this study to prove the significance of the independent and dependent variables where the relationship between lack of time, lack of interest, distance of recycle centre, and lack of recycling initiatives towards the failure of recycle behavior among public university students.

3.9.3 Reliability Analysis

The measurement's utility, especially if it is used, is essential to the study's conclusions. It is imperative to explicitly analyze the dependability of the data analysis in order to guarantee appropriateness of the outcomes. The consistency of the instrument was evaluated using this reliability analysis method. Cronbach's alpha gauges the responders' degree of consistency. This relationship is dependent on the independent variable and the dependent variable which is the failure of recycle behavior among public university students.

3.10 SUMMARY / CONCLUSION

To gather information for the study objective, the method of performing a research inquiry is crucial. When gathering random replies, procedures for gathering quantitative research data can assist cut costs and save time. The quantitative analytical strategy employed for this inquiry is covered in this chapter. The goals of the study, the selection of the sample, the instrument (questionnaire), and the strategy for data analysis were all devised at the start of the research on this topic.

The usage of questionnaires has been carefully considered when using a quantitative method to data collection. Convenience sampling can make it simpler to find responses from various respondent subgroups and obtain a comprehensive understanding of the factors influencing the failure of recycling attitudes. The research question establishes the definition of the issue that develops during the study. How well people adapt or are convinced to engage in recycling is determined by this. This conclusion was developed in response to the study questions and data gathered.

CHAPTER 4

DATA ANALYSIS AND FINDINGS

4.1 INTRODUCTION

The data analysis results from the processes discussed in the previous chapter are examined in this chapter. The Statistical Package for Social Science (SPSS) was the analytical tool utilized to process the acquired data. The reliability analysis was examined utilizing Cronbach's alpha. The respondents' data from the Statistical Package for Social Science (SPSS) was examined using descriptive analysis. The reliability analysis utilizing Cronbach's alpha was examined in the research. To examine the demographic profile data of the respondents, descriptive research was carried out. Multiple linear regression was used to predict the failure of recycle behavior among public university students. Lastly, Pearson's correlation was used to examine the substantial relationship between lack of time, lack of interest, distance of recycle centre and lack of recycling initiatives to the failure of recycle bahavior among public university students.

4.2 PRELIMINARY ANALYSIS

The preliminary analysis method ensures the directness of every instruction and scale item. An evaluation study was designed to ensure that every participant understood the questions and could provide an accurate response. Therefore, the purpose of this pilot test was to identify any topics or inquiries that would offend potential responders as well as any possible problems that might arise throughout the information gathering process. Thirty people were the first to

receive the survey after that. Thirty respondents will have finished the survey before this analysis is finished.

Table 4.1: Reliability Coefficient Alpha from Overall Reliability (Pilot Test)

VARIABLES	NO OF ITEM	CRONBACH'S ALPHA	INTERNAL CONSISTENCY
Lack of time	4	0.945	Excellent
Lack of interest	4	0.951	Good
Distance of recycle centre	4	0.852	Excellent
Lack of recycling initiatives	4	0.920	Excellent
The failure of recycle behavior among public university students	5	0.894	Good
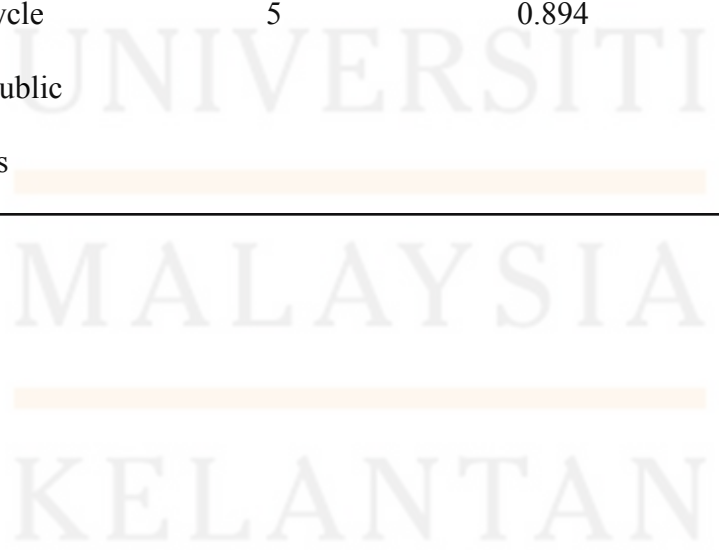
4.3 DEMOGRAPHIC RESPONDENT PROFILE

Table 4.2: Demographic Respondent Profile

Respondent Profile	Classification	Frequency N= 385	Percentage (%)
Gender	Male	205	53.0
	Female	180	46.5
Age	19-20	46	11.9
	21-25	333	86.0
	26-30	6	1.6
	30 and above	0	0
Ethnicity	Malay	342	88.4
	Chinese	27	7.0
	Indian	15	3.9
	Other	1	0.3
Year of study	Year 1	41	10.6
	Year 2	43	11.1

Respondent Profile	Classification	Frequency	Percentage
		N= 385	(%)
	Year 3	74	19.1
	Year 4	227	58.7
Religion	Islam	344	88.9
	Buddhism	19	4.9
	Christianity	13	3.4
	Hinduism	9	2.3
Residence	Johor	35	9.0
	Kedah	33	8.5
	Kelantan	66	17.1
	Melaka	13	3.4
	Negeri Sembilan	13	3.4
	Pahang	16	4.1
	Perak	23	5.9
	Perlis	11	2.8

Respondent Profile	Classification	Frequency	Percentage
		N= 385	(%)
	Pulau Pinang	12	3.1
	Sabah	6	1.6
	Sarawak	10	2.6
	Selangor	89	23.0
	Terengganu	27	7.0
	Wilayah Persekutuan	31	8.0

Table 4.2 indicates that 385 personal demographic data on respondents in this area have been successfully gathered by the data. The data that has been gathered includes gender, age, ethnicity, year of study, religion, and residence. The study has effectively documented 205 male participants and 180 female participants in terms of gender. In the age section, there are four categories which are 19 to 20 years old, 21 to 25 years old, 26-30 years old and 30 years old and above. Successfully collected data of 385 respondents shows that the age of 21 to 25 is the largest number of respondents which is a total of 333 people and shows 86%. While the smallest number for the age group is between 26 and 30 years old with 1.6%, or a total of 6 people out of 385 respondents, age 30 and above is not found in 385 respondents.

Furthermore, four categories exist for ethnicity: Malays (342 individuals, or 88.4% of the whole), Chinese (27 individuals, or 7% of the whole), Indians (15 individuals, or 3.9% of the overall), and others (one individual, or 0.3% of the total number of people).The largest group of students in the year of study category are 4th year students, 227, or 58.7% of the total. Third year students, on the other hand, make up 74, or 19.1% of the total, and second year students, totalling 43. On the other hand, just 10.6% of the 41 responders are first-year students.

There are four categories in the religion section: Islam, Buddhism, Christianity, and Hinduism. In the category of Islamic, 344 persons were correctly documented, representing 88.9% proportionally. 19 individuals, or 4.9% of the total, are Buddhists. Conversely, 9 respondents, or 2.3% of the sample, identify as Hindu, and 13 respondents, or 3.4% of the sample, identify as Christians.

Finally, is the residence part. There are 14 categories in this section, namely Johor, Kedah, Kelantan, Melaka, Negeri Sembilan, Pahang, Perak, Perlis, Penang, Sabah, Sarawak, Selangor, Terengganu, Wilayah Persekutuan. Selangor has the highest percentage of responders (23%), with 89 individuals, and Kelantan has the second-highest percentage (66 individuals, or 17.1%). The percentage of respondents from Melaka and Negeri Sembilan is 3.4%, with 13 respondents each from both cities. Sabah, with 6 respondents, or 1.6% of the total, has the fewest respondents regarding place of residence.

4.4 DESCRIPTIVE ANALYSIS

The case for 'The Failure of Recycle Behavior Among Public University Students' and four independent variables (lack of time, lack of interest, distance of recycle centre, and lack of recycling initiatives). The researcher analysed the mean for each variable.

4.4.1 Overall Mean Score for Variables

Overall mean score and standard deviation of variables and sub variables were designed based on a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree).

Table 4.3: Overall Mean Score for Variables

Part	Dimension	Mean	Std. Deviation (SD)	N
B	**Dependent Variables**	3.8831	1.03257	385
	The failure of recycle behavior among public university students.	3.8831	1.03257	385
C	**Independent Variables**	4.3055	0.91247	385
	Lack of time	4.3682	1.04333	385
	Lack of interest	3.9942	1.26249	385
	Distance of recycle centre	4.3688	0.90481	385
	Lack of recycling initiatives	4.4909	0.79851	385

Table 4.3 showed that dependent variables verified high mean score (M = 3.8831, SD = 1.03257). Besides, total independent variables verified high mean scores (M = 4.3055, SD = 0.91247). All together the four independent variables also scored strongly satisfy mean score where Lack of time score 4.3682 (SD = 1.04333), Lack of interest score 3.9942 (SD = 1.26249), Distance of recycle centre score 4.3688 (SD = 0.90481) and Lack of recycling initiatives score 4.4909 (SD = 0.7985).

4.4.2 Descriptive Analysis for Independent Variables

Table 4.4: Descriptive Analysis Lack of Time Factor

No	Lack of time	Mean	Std. Deviation (SD)	N
1	I lack time because my studies are dense	4.40	1.086	385
2	I lack time because I focus on doing assignments.	4.41	1.045	385
3	I lack time because I am involved in activities at the university.	4.30	1.163	385
4	I lack time because I am more busy with other things than with the recycling behavior.	4.36	1.121	385

Based on Table 4.4, Descriptive Analysis for the Lack of Time Factor consists of four questions. It shows the mean of respondent's response on the Lack of time factor variable according to Five-Point Likert scale range from **3.51 to 4.28**. The average mean for Lack of time factor from Table 4.4 was **4.01**. To elaborate, the mean for question 2 was the highest mean, where the respondents lacked time because focus on doing assignments was 4.41 (SD=1.045). Next, the mean of question 1 the respondents lacked time because their studies are dense was 4.40 (SD=1.086). Then, the mean for question 3, where the respondents lack time because they were involved in activities at the university was 4.30 (SD=1.163). Lastly, the mean for question 4, where the respondents lack time because busier with other things than with the recycling behavior was 4.36 (SD=1.121). In a previous study, which was published in the journal "Waste Management" in 2012, it was found that 38 percent of individuals surveyed in the United States cited a lack of time as a common reason for not recycling. The data that has been collected from the respondents shows that lack of time is a significant factor in the failure of recycle behavior among public university students. This is linked to the findings of the previous study.

Table 4.5: Descriptive Analysis Lack of Interest Factor

No	Lack of interest	Mean	Std. Deviation (SD)	N
1	I am less interested because I lack encouragement from my family.	4.00	1.389	385
2	I am less interested because I lack encouragement from friends.	4.06	1.256	385

No	Lack of interest	Mean	Std. Deviation (SD)	N
3	I am less interested because I don't know the benefits of recycling.	3.86	1.473	385
4	I am less interested because I am not given extensive exposure.	4.05	1.306	385

Based on Table 4.5, Descriptive Analysis for the Lack of Interest Factor consists of four questions. It shows the mean of respondent's response on the Lack of interest factor variable according to Five-Point Likert scale range from **3.51 to 4.28**. The average mean for Lack of interest factor from Table 4.5 was **4.01**. To elaborate, the mean for question 2 was the highest mean, where the respondents were less interested because lack of encouragement from friends was 4.06 (SD=1.256). Next, the mean of question 1 the respondents were less interested because lack encouragement from family was 4.00 (SD=1.38). Then, the mean for question 3, where the respondents were lack interested because they don't know the benefits of recycling was 3.86 (SD=1.473). Lastly, the mean for question 4, where the respondents were less interested because not given extensive exposure was 4.05 (SD=1.306). Additional evidence from previous studies that supports the influence of lack of interest on recycling participation includes a survey conducted by the National Recycling Coalition, which revealed that "35 percent of individuals do not recycle because they believe that it has no impact". The data that has been collected from the respondents illustrates that lack of interest is a significant factor in the failure of recycle behavior among public university students.

Table 4.6: Descriptive Analysis Distance of Recycle Centre Factor

No	Distance of recycle centre	Mean	Std. Deviation (SD)	N
1	The recycling centre is far from the residence.	4.58	0.881	385
2	Lack of recycling places.	4.58	0.869	385
3	I don't know the type of items accepted for recycling.	4.08	1.351	385
4	It's not worth going to a distant recycling centre.	4.25	1.040	385

Based on Table 4.6, Descriptive Analysis Distance of Recycle Centre Factor consists of four questions. It shows the mean of respondent's response on the Distance of recycle centre factor variable according to Five-Point Likert scale range from **3.51 to 4.28**. The average mean for Distance of recycle centre factor from Table 4.6 was **4.01**. To elaborate, the mean for question 1 and 2 were the same highest mean, where the respondents the recycling centre is far from the residence was 4.58 (SD=0.881) and the respondents lack of recycling places was 4.58 (SD=0.869). Next, the mean of question 3 the respondents didn't know the type of items accepted for recycling was 4.08 (SD=1.351). Lastly, the mean for question 4, where the respondents were

not worth going to a distant recycling centre was 4.25 (SD=1.040). The data that has been collected from the respondents shows that the distance of the recycle centre is a significant factor in the failure of recycle behavior among public university students, such as In a previous study published in the Journal of Environmental Psychology, it was discovered that individuals residing further away from recycling centres were less likely to recycle due to limited awareness of recycling programmes and limited access to recycling bins.

Table 4.7: Descriptive Analysis Lack of Recycling Initiatives Factor

No	Lack of recycling initiatives	Mean	Std. Deviation (SD)	N
1	Lack of promotion displayed from the recycling club.	4.57	0.867	385
2	Lack of awareness of recycling to the community.	4.53	0.875	385
3	Lack of good facilities should be provided when recycling.	4.56	0.870	385
4	Lack of reward for community involved in recycling.	4.31	0.949	385

Based on Table 4.7, Descriptive Analysis for the Lack of Recycling Initiatives Factor consists of four questions. It shows the mean of respondent's response on the Lack of recycling

initiatives factor variable according to Five-Point Likert scale range from **3.51 to 4.28**. The average mean for Lack of recycle initiatives factor from Table 4.7 was **4.01**. To elaborate, the mean for question 1 was the highest mean, where the respondents' lack of promotion displayed from the recycling club was 4.57 (SD=0.867). Next, the mean of the question 2 the respondents were lack of awareness of recycling to the community was 4.53 (SD=0.875). Then, the mean for question 3, where the respondents lack good facilities should be provided when recycling was 4.56 (SD=0.870). Lastly, the mean for question 4, where the respondents lack reward for the community involved in recycling was 4.31 (SD=0.949). The data that has been collected from the respondents shows that the lack of recycling initiatives is a significant contributor to the failure of recycle behavior among public university students. Similarly, another study published in the journal "Environment and Behaviour" in 2013 shed light on the effects of tracking individuals' recycling behavior. The researchers discovered that when people were informed that their recycling was being monitored, they exhibited a decreased likelihood of recycling compared to those who were not made aware of the tracking. The perception of being watched and judged hindered their motivation to participate in recycling efforts.

4.4.3 Descriptive Analysis for Dependent Variables

Table 4.8: Descriptive Analysis The Failure of Recycle Behavior Among Public University Students

No	The Failure of Recycle Behavior Among Public University Students	Mean	Std. Deviation (SD)	N
1	I lack time to engage in recycling activities.	4.38	1.097	385

No	The Failure of Recycle Behavior Among Public University Students	Mean	Std. Deviation (SD)	N
2	I am not interested in this activity.	3.44	1.372	385
3	I don't know what to do.	3.43	1.335	385
4	Lack of information or insufficient knowledge.	4.08	1.136	385
5	I do not get any reward for doing this activity.	4.09	1.345	385

Table 4.8 showed the descriptive analysis The failure of recycle behavior among public university students that also consists of five questions. It shows the mean of respondent's response on The failure of recycle behavior among public university students variable according to Five-Point Likert scale and the average mean was **4.328** in Table 4.7. To elaborate, the mean for question 1 where the respondents lack time to engage in recycling activities was 4.38 (SD=1.097). Next, the mean for question 2 where the respondents were not interested in this activity was 3.44 (SD=1.372). Then, the mean for question 3 was 3.43 (SD=1.335) where the respondents didn't know what to do. The mean for question 4 where the respondents lack information or insufficient knowledge was 4.08 (SD=1.136). Lastly, the mean for question 5 where the respondents said they do not get any reward for doing this activity was 4.09 (SD=1.345).

4.5 VALIDITY AND RELIABILITY TEST

4.5.1 Mean Score and Standard Deviation for Variables

Overall mean score and standard deviation for variables and sub variables were designed based on a 5-point Likert scale (1= strongly disagree to 5= strongly agree)

Table 4.9: Mean score

Part	Dimension	Mean	Std. Deviation	N
B	Dependent Variable - The Failure of Recycle Behavior among public university students	3.8831	1.03257	385
	Independent Variable	4.3055	0.91247	385
C	Lack of time	4.3682	1.04333	385
D	Lack of interest	3.9942	1.26249	385
E	Distance of recycling centre	4.3688	0.90481	385
F	Lack of recycle initiatives	4.4909	0.79851	385

Table 4.9 showed that dependent variables verified a high mean score (M= 3.8831, SD= 1.03257). Besides that, independent variables verified high mean scores (M=4.3055, SD= 0.91247). All together the four independent variables also scored strongly satisfy mean score

where lack of time score (M= 4.3682, SD= 1.04333), lack of interest score (M= 3.9942, SD= 1.26249), distance of recycle centre score (M=4.3688, SD= 0.90481), and lack of recycling initiatives score (M= 4.4909, SD= 0.79851).

4.5.2 Reliability Test for All Variables

Table 4.10: Validity and Reliability

Cronbach's Alpha	Internal Consistency
$\alpha \geq 0.9$	Excellent
$0.9 > \alpha \geq 0.8$	Good
$0.8 > \alpha \geq 0.7$	Acceptable
$0.7 > \alpha \geq 0.6$	Questionable
$0.6 > \alpha \geq 0.5$	Poor
$0.5 > \alpha$	Unacceptable
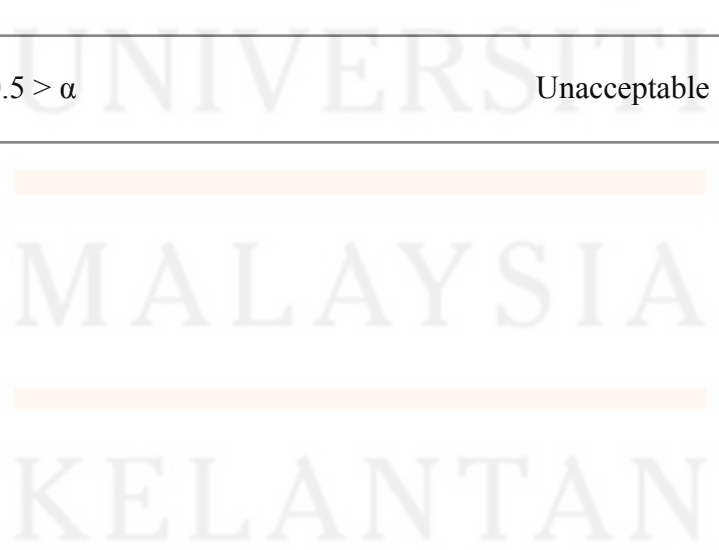
Table 4.11: Reliability table test

Variables	Cronbach's Alpha	No of item	Level of reliability
The Failure of Recycle Behavior among public university students	0.876	5	Good Reliability
Lack of time	0.960	4	Excellent Reliability
Lack of interest	0.947	4	Excellent Reliability
Distance of recycling centre	0.882	4	Good Reliability
Lack of recycle initiatives	0.918	4	Excellent Reliability

The value of Cronbach's alpha obtained for the variables is greater than 0.8 which ranges from 0.876 to 0.960. Therefore, this indicated that the measurements for all variables for the test are reliable.Result of factors analysis and Cronbach's Alpha. Each respondent was required to rate each of the questionnaire's statements on a 5-point Likert scale. Using a 5-point rating system, where 1 represents strongly disagree, 2 represents disagree, 3 represents neutral, 4

represents agree, 5 represents strongly agree, respondents are asked to indicate how they feel about various viewpoints. The following table briefly displays the statistics for the successfully collected responses. Respondents generally agreed with statements about their failure of recycle behavior among public university students toward lack of time, lack of interest, distance of recycle centre and lack of recycling initiatives.

The factors analysis and Cronbach's Alpha result are displayed below. The table below also summarizes Cronbach's value for each variable utilized in the investigation. As a result, Cronbach's Alpha was used to assess the dependability of the variables in order to determine how strongly the items in a set are positively connected to one another (Tharimazi & Jusoh).

4.5.3 Reliability Result for The Failure of Recycle Behavior among public university students

Table 4.12: Reliability results of The Failure of Recycle Behavior among public university students

Variables	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
The Failure of Recycle Behavior among public university students	0.876	0.878	5

Based on the reliability study presented in table 4.12, the researchers have determined that the dependent variable, the failure of recycle behavior among public university students, has a Cronbach's alpha of 0.876. The rules of Thumb Cronbach's alpha coefficient range indicate that the consistency and stability 0.876 represent internal solid consistency. Additionally, the data demonstrates the outstanding standardized item-based Cronbach's alpha of 0.878. The test was judged trustworthy enough to warrant additional research. 5 inquires were made concerning the respondent's plans to participate by university students in recycling activities. The reliability test demonstrated that participants comprehended and responded precisely to each topic.

4.5.4 Reliability Result for Lack of Time Influencing The Failure of Recycle Behavior Among Public University Students

Table 4.13: Reliability result for lack of time influencing The Failure of Recycle Behavior Among Public University Students

Variables	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Item	N of Time
Lack of time	0.960	0.961	4

According to the reliability analysis in table 4.13, researchers can conclude that Cronbach's alpha for the independent variable, lack of time influencing the failure of recycle

behavior among public university students is 0.960. The consistency and stability of 0.960 are good internal consistency, as shown by the rules of Thumb Cronbach's alpha coefficient range. The data also shows that the standardized item-based Cronbach's Alpha is 0.961 which is good. The test was deemed reliable to continue further study. The respondents were asked 4 questions about lack of time influencing recycling activities. In short, the reliability test proved that respondents understood and answered all the questions accurately.

4.5.5 Reliability Result for Lack of Interest Influencing The Failure of Recycle Behavior Among Public University Students

Table 4.14: Reliability result for lack of interest influencing the failure of recycle behavior among public university students

Variables	Cronbach's Alpha	Cronbach's Alpha Based on Standardized item	N of item
Lack of interest	0.947	0.948	4

The researchers may determine that in table 4.14, the independent variable influencing the failure of recycle behavior among public university students, lack of interest has a Cronbach's Alpha is 0.947 based on the reliability analysis presented in table above. The rules of Thumb Cronbach's Alpha coefficient range demonstrate the consistency and stability of 0.947, which is excellent internal consistency. Additionally, the data shows the outstanding Cronbach's

Alpha of 0.948 item-based on standardized. The test was judged trustworthy enough to warrant more research. 4 inquiries concerning the influence of lack of interest among university students in recycling activities were asked to the respondents. In summary, the reliability test demonstrated that participants comprehended and provided accurate answers to every question.

4.5.6 Reliability Result for Distance of Recycling Centre Influencing The Failure of Recycle Behavior Among Public University Students

Table 4.15: Reliability result for distance of recycle centre influencing the failure of recycle behavior among public university students

Variables	Cronbach's Alpha	Cronbach's Alpha based on Standardized item	N of Item
Distance of recycling centre	0.882	0.901	4

According to the reliability analysis in table 4.15, the researchers can conclude that Cronbach's Alpha for the independent variable, distance of recycle centre influencing the failure of recycle behavior among public university students is 0.882. The consistency and stability of 0.882 are good internal consistency, as shown by the rules of Thumb Cronbach's Alpha coefficient range. The data also shown that the standardized item-based on Cronbach's Alpha is 0.901 which is good. The test was deemed reliable to continue further study. The respondents

were asked 4 questions about the distance of recycle centre influencing the failure of recycle behavior among public university students. In short, the reliability test proved that respondents understood and answered all the questions accurately.

4.5.7 Reliability Result for Lack of Recycle Initiatives Towards The Failure of Recycle Behavior Among Public University Students

Table 4.16: Reliability result for lack of recycling initiatives towards The Failure of Recycle Behavior Among Public University Students

Variables	Cronbach's Alpha	Cronbach's Alpha based on standardized item	N of Item
Lack of recycle initiatives	0.918	0.920	4

Based on the reliability study presented in table 4.16, the researchers have determined that the independent variable, lack of recycling initiatives towards the failure of recycle behavior among public university students has Cronbach's Alpha is 0.918. The rules of Thumb Cronbach's Alpha coefficient range indicates that the consistency and stability 0.918 represent acceptable consistency. Additionally, the data demonstrate the outstanding standardized item-based on Cronbach's Alpha is 0.920. Also 4 questions were asked for respondents concerning lack of recycling initiatives towards university students in recycling activities. The

reliability test demonstrated that participants comprehended and responded precisely to each topic.

4.5.8 Model Summary

Table 4.17: Model Summary

MODEL SUMMARY

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.897[a]	0.805	0.802	0.45893

a. Predictors: (Constant), lack of recycling initiatives, lack of interest, lack of time, distance of recycle centre

R square measures how much of the variation in the dependent variable can be explained by the independent variable. In this study, R square = 0.805, it means 80.5% of variation of the failure of recycle behavior among public university students can be explained by the changes in lack of time, lack of interest, distance of recycle centre and lack of recycling initiatives.

4.5.9 Anova

Table 4.18: Anova[a]

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	329.385	4	82.346	390.968	<0.001[b]
	Residual	80.036	380	0.211		
	Total	409.420	385			

a. Dependent Variable: The Failure of Recycle Behavior Among Public University Students

b. Predictors: (Constant), lack of recycling initiatives, lack of interest, lack of time, distance of recycle centre

The value of F is 390.968, with a Sig. value of 0.001 indicating significance which is less than the 0.05 alpha level. This means that there is a statistically significant difference between dependent variables and independent variables. So, lack of time, lack of interest, distance of recycle centre, and lack of recycling initiatives do predict the percentage of the failure of recycle behavior among public university students.

4.5.10 Coefficient

Table 4.19: Coefficients[a]

COEFFICIENTS[a]

Model		Unstandardized Coefficients B	Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	0.295	0.138		2.135	0.33
	Lack of time	0.190	0.044	0.192	4.327	0.001
	Lack of interest	0.486	0.036	0.594	13.620	0.001
	Distance of recycling centre	0.182	0.055	0.160	3.288	0.001
	Lack of recycle initiatives	0.004	0.053	0.003	0.081	0.935

a. Dependent Variable: The Failure of Recycle Behavior Among Public University Students

From the table above, the results show that the p-value of lack of time, lack of interest and distance of recycle centre is 0.001 where the value is less than (0.05). It indicates that lack of time, lack of interest, and distance from the recycling centre are influencing the failure of recycle behavior among public university students. While the p-value for lack of recycling initiatives is 0.935. It is explained that this variable has no significant factors towards the failure of recycle behavior among public university students because the $P > 0.05$.

4.6 NORMALITY TEST

The results of normal tests have been analysed by researchers using SPSS software. The researcher employs the Kolmogorov-Smirnova data normality test from N>30 and the total sample size is 385 respondents (N=385). The investigation results show that significant values of 0.000 are found for all dependent and independent variable table normality tests. The data is not standard, indicating that 0.001 is less than 0.05.

For this reason, the researcher used the nonparametric skewness and kurtosis normality test. This normality test was applied to all independent and dependent variables. The researchers verified that the data had a regular distribution by measuring skewness and kurtosis values for each item.

Table 4.20: Normality Test

Variables	Skewness	Kurtosis	Result
The Failure of Recycle Behavior Among Public University Students	-1.070	0.193	Normally distributed
Lack of time	-1.737	2.175	Normally distributed
Lack of interest	-1.187	0.106	Normally distributed

Variables	Skewness	Kurtosis	Result
Distance of recycling centre	-1.756	2.761	Normally distributed
Lack of recycle initiatives	-2.150	4.834	Normally distributed

According to the normality test, all variables falling within a variable's range have skewness and kurtosis values regularly distributed when they fall. The analysis's findings for every variable, as displayed in table reliability result DV, utilize the skewness and kurtosis normality tests. Skewness scores range from -1.070 to -2.150, and kurtosis values range from -0.669 to 1.213 according to the data.

4.7 HYPOTHESIS TESTING

It is advised to reject H0 when testing hypotheses if the p-value is smaller than the significant 2-tailed of (p-value 0.001). The following displays the findings for each of the four hypotheses. Correlation coefficient measures the statistical relationship between two continuous variables (independent and dependent variables). The purpose of this test is to determine whether the correlation coefficient is significant and whether the hypothesis should be accepted or rejected. According to table 4.19, the p-value is less than 0.001, indicating that there is a significant relationship between independent variables (lack of time, lack of interest, distance of recycle centre and lack of recycling initiative) and dependent variables (the failure of recycle behavior among public university students).

4.21: Rule of Thumb of Correlation Coefficient

Coefficient Range (r)	Interpretation
0.90 to 1.00	Very High Positive Correlation
0.70 to 0.90	High Positive Correlation
0.50 to 0.70	Moderate Positive Correlation
0.30 to 0.50	Low Positive Correlation
0.00 to 0.30	Negligible Correlation

Table 4.22: Correlations

CORRELATIONS

		The Failure of recycle behavior among public university students	Lack of time	Lack of interest	Distance of recycling centre	Lack of recycle initiatives
The Failure of recycle behavior among public university students	Pearson Coefficient	1	0.808**	0.880**	0.777**	0.674**
	Sig. (2-tailed)		<0.001	<0.001	<0.001	<0.001
	N	385	385	385	385	385
Lack of time	Pearson Coefficient	0.808**	1	0.824**	0.779**	0.723**
	Sig. (2-tailed)	<0.001		<0.001	<0.001	<0.001
	N	385	385	385	385	385
Lack of interest	Pearson Coefficient	0.880**	0.824**	1	0.783**	0.673**
	Sig. (2-tailed)	<0.001	<0.001		<0.001	<0.001
	N	385	385	385	385	385
Distance of recycling centre	Pearson Coefficient	0.777**	0.779**	0.783**	1	0.826**
	Sig. (2-tailed)	<0.001	<0.001	<0.001		<0.001

		385	385	385	385	385
Lack of recycle initiatives	Pearson Coefficient	0.674**	0.723**	0.673**	0.826**	1
	Sig. (2-tailed)	<0.001	<0.001	<0.001	<0.001	
	N	385	385	385	385	385

**. Correlation is significant at the 0.01 level (2-tailed).

Table 4.22 showed correlation analysis between independent variables (lack of time, lack of interest, distance of recycle centre and lack of recycling initiative) and dependent variables (the failure of recycle behavior among public university students).

4.7.1 Hypothesis 1: Lack of Time

H1: There is a significant relationship between lack of time and the failure of recycle behavior among public university students

As a result, there is a statistically significant relationship between lack of time and the failure of recycle behavior among public university students, (p-value = 0.000 < 0.001 sig. 2 tailed). Because of that the correlation coefficient is high positive.

4.7.2 Hypothesis 2: Lack of Interest

H2: There is a significant relationship between lack of interest and the failure of recycle behavior among public university students

In other independent variables, there is a statistically significant relationship between lack of interest and the failure of recycle behavior among public university students, (p-value = 0.000 < 0.001 sig. 2 tailed). Because of that the correlation coefficient is also high positive.

4.7.3 Hypothesis 3: Distance of Recycle Centre

H3: There is a significant relationship between distance of recycle centre and the failure of recycle behavior among public university students

The third independent variable is distance of recycle centre. There is a statistically significant relationship between distance of recycle centre and the failure of recycle behavior among public university students, (p-value = 0.000 < 0.001 sig. 2 tailed). Because of that, there is a high positive relationship between the distance of recycle centre and the failure of recycle behavior among public university students.

4.7.4 Hypothesis 4: Lack of Recycling Initiatives

H4: There is a significant relationship between lack of recycling initiatives and the failure of recycle behavior among public university students

The last independent variable is lack of recycling initiative. There is a statistically significant relationship between lack of recycling initiative and the failure of recycle behavior among public university students, (p-value = 0.000 < 0.001 sig. 2 tailed). Because of that the correlation coefficient is also a moderate positive, positive relationship between independent variables and dependent variables.

Each has a correlation coefficient of 0.808, 0.880, 0.777 and 0.674 (lack of time, lack of interest, distance of recycle centre and lack of recycling initiative) are the values that fall under the alpha coefficient range of 0.70 to 0.90. The lack of recycling initiative can be considered acceptable in the alpha coefficient range 0.60 to 0.70. Hence, the strong relationship between attitude and preference level is positive.

Table 4.23: Hypothesis Statement

Hypothesis	Relationship	Positive/Negative	Correlation
H1	Relationship between lack of time and the failure of recycle behavior among public university students	Positive	Strong
H2	Relationship between lack of interest and the failure of recycle behavior among public university students	Positive	Strong
H3	Relationship between distance of recycle centre and the failure of recycle behavior among public university students	Positive	Strong
H4	Relationship between distance of recycle centre and the failure of recycle behavior among public university students	Positive	Strong

4.8 SUMMARY

Briefly it can be concluded that this chapter is to present the results or findings that were successfully collected from the data collection activities through questionnaires to complete this study. Apart from that, there is also a presentation related to some tests that have been implemented such as, reliability tests which are conducted on the reliability tests for all constructs. At the same time, testing showed a positive relationship between independent variables such as (lack of time, lack of interest, distance of recycle centre and lack of recycling initiatives) with the failure of recycle behavior among public university students as dependent variables.

Cronbach's alpha was used to evaluate the data reliability. The variables' Cronbach alpha value, which ranges from 0.876 to 0.960 is greater than 0.60. Therefore, this indicated that the measurements for all variables for the pilot test are reliable in this study. Furthermore, based on the result of the normality test, correlation coefficient was developed to analyze the relationship between independent variables and dependent variables. However, the findings of the results, discussion, and recommendations will be discussed in Chapter 5.

CHAPTER 5

DISCUSSION AND CONCLUSION

5.1 INTRODUCTION

Key findings, consequences, research limitations, and recommendations for additional research will all be included in this chapter. The start of Chapter 5 is detailed in Section 5.1. Regarding section 5.2 regarding the study's main conclusions. There is the hypothetical result. In this study, three hypotheses are put forth. Section 5.3, the results, is the next section. It provided more details regarding the hypothesis's result. The consequences of this discovery are discussed in section 5.4 once it has been substantiated by prior research. Some ramifications of this study for pertinent individuals and institutions. The section 5.5 regarding the limitations of this study comes next. During conducting this investigation, there were a few restrictions. During conducting the investigation, there were a few limitations. The research-related recommendations are covered in section 5.6 after this. In addition, there are some suggestions for future researchers who wish to pursue this area of study. Section 5.7, which provides an explanation of the research summary, is the last section.

5.2 KEY FINDINGS

Table 5.1 Summary of Hypothesis Testing Result

KEYS	HYPOTHESIS RESULTS	FINDINGS
1) Is there a relationship between lack of time and the failure of recycle behavior among public university students?	P=0.001 (p<0.01) r=0.808	There are positive relationship between lack of time and the failure of recycle behavior among public university students
2) Is there a relationship between lack of interest and the failure of recycle behavior among public university students?	P=0.001 (p<0.01) r=0.880	There are positive relationship between lack of interest and the failure of recycle behavior among public university students
3) Is there a relationship between distance of recycle centre and the failure of recycle behavior among public university students?	P=0.001 (p<0.01) r=0.777	There are positive relationship between distance of recycle centre and the failure of recycle behavior among public university students
4) Is there a relationship between lack of recycling initiatives and the failure of recycle behavior among public university students?	P=0.001 (p<0.01) r=0.674	There are positive relationship between lack of recycle initiative and the failure of recycle behavior among public university students

Source: SPSS Output

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5.3 DISCUSSION

This chapter will go into further detail on the study's hypothesis. The purpose of the statistical test hypothesis is to ascertain if the assumption made for a sample of data holds true for all students. Stated differently, a hypothesis is assessed in order to determine the relationship between two data sets, i.e., independent and dependent variables. Additionally, the hypothesis might be used to model observations of Malaysian university students in order to establish a random variable.

5.3.1 Hypothesis 1: Relationship between lack of time and the failure of recycle behavior among public university student

Based on Table 5.1, the results show that there is a relationship between lack of time and the failure of recycle behavior among public university students. According to Hypothesis 1, there is a positive relationship between lack of time and the failure of recycle behavior among public university students.

A possible way to sum up the first hypothesis is that lack of time can cause students to be unable to participate in recycling activities. The majority of respondents concurred that there is not enough time to practice recycling techniques. Students are asked four questions about the issue of time constraints, which come from dense studies, focusing on completing assignments, following university programs, and doing other things.

We propose to give students a designated day, known as a "recycling day," on which they can recycle the items they no longer need. Students will have time to experiment with recycling and learn new things about this activity. Perhaps once a month would the reasons of

non-participation by university students in recycling activitiesbe a good time to have this special day so they could have recyclables. While they can't do it on a regular basis because worrying takes up their time and prevents them from finishing assignments or club activities, it can make them realise how important recycling is.

5.3.2 Hypothesis 2: Relationship between lack of interest and the failure of recycle behavior among public university student

Table 5.1 indicates a relationship between uthe failure of recycle behavior among public university student and their lack of interest. Hypothesis 2 states that there is a positive correlation between university students' lack of interest and the failure of recycle behavior among public university students.

In its widest definition, interest is a complex idea that includes curiosity, focus, or involvement in different situations. It can signify a person's interest or inquisitiveness about a particular topic, monetary gains from borrowing or investing, ownership interests in companies, rights or legal claims, and even interpersonal connections. Interest encompasses the innate human desire to investigate, allocate resources, and participate in the various aspects of life, regardless of whether it is expressed through emotional bonds, financial involvement, or intellectual curiosity.

Another reason is a lack of interest in recycling methods. University students have determined that there are four factors that contribute to a lack of interest: lack of encouragement from friends and family, not enough knowledge of the benefits of recycling, and not enough exposure. So the second hypothesis is that lack of interest can cause students to avoid joining recycling activities.

5.3.3 Hypothesis 3: Relationship between distance of recycle centre and the failure of recycle behavior among public university student

According to Table 5.1's findings, there is a connection between the failure of recycle behavior among public university students and the distance to the recycle centre. The distance to the recycling centre and the failure of recycle behavior among public university students are positively correlated, according to Hypothesis 3.

Students at universities are less inclined to practice recycling because of the distance. Students' time and energy may be wasted travelling to the recycling centre. The agreement of 385 respondents who endorse this statement attests to this fact. There were four questions in all about the factor of distance from the recycling centre: the distance it is from the student's residence, whether there is one at all, what types of items are accepted there, and whether it is not worth the trip because it is too far.

This claim allows this study to summarise its third hypothesis, which states that students may find it more difficult to recycle their belongings if the recycling centre is farther from the university

5.3.4 Hypothesis 4: Relationship between lack of recycling initiative and the failure of recycle behavior among public university student

Based on table 5.1. The results shows that there is a relationship between lack of time and the failure of recycle behavior among public university students. According to hypothesis 4, there is a relationship between lack of recycling initiative and the failure of recycle behavior among public university students are positive.

This recycling activity should be conducted for university students every year so that they can learn more about the advantages of recycling. Many university students who responded to the survey agreed that one reason why there aren't more recycling activities among their peers is the recycling club's lack of promotion. The issues of poor facilities, a lack of community awareness of recycling, and, lastly, a lack of rewards for recycling in the community came next.

5.4 IMPLICATIONS OF THE STUDY

This study reveals theoretical and practical implications to assist public universities in Malaysia in following in the footsteps of producing knowledgeable students with the right concepts in this important area of life. For example, knowing the causes of the failure of recycling behavior among public university students in Malaysia and trying to overcome it.

5.4.1 Practical Implications

In this research, there are four independent variables: lack of time, lack of interest, distance from the recyling centre, and lack of recyling initiatives. Then the dependent variable is the reason for non-participation by university students in recycling activities. In order to conduct research on this study, the researcher has collected data by using the e-questionnaire method through Google Forms available on the web. Questionnaires were distributed to 385 respondents from various demographic backgrounds of public university students, such as gender, age, race, year of study, religion, and place of residence. The aim of this study is to examine the failure of recycling behavior among public university students in Malaysia.

5.4.2 Theoretical Implications

The implication of this study is that we can find out about the failure of recycling behavior among public university students in Malaysia. Based on this study, we can help in more depth related to the potential research problem to find out the extent of failure in recycling behavior among public university students, both subjectively and objectively. The purpose of this study is to find out and understand more deeply the causes of failure in recycling behavior among public university students.

Next, this study can help students identify the causes of their failure to raise awareness of recycling practices. With this study, it can also help public university students plan their future better. This is said to be so because this study helps students by raising awareness about this recycling practice.

The main importance of environmental practices for humans is to be able to save on expenses, both micro and macro. From a micro perspective, people don't need to spend more if they recycle essential items such as clothes and books. You can donate clothes that we don't use regularly or recycle children's clothes that are still good to be worn by relatives who have just been blessed with children.

On the macro level, recycling practices can save on waste management expenses. The cost of maintaining landfill sites is increasing day by day due to the increasing amount of waste. Efforts to prevent landfill sites from becoming a focus for disease-carrying animals should be supported. To make it easier to understand, this recycling practice can help people save part of the financial resources that are used to manage waste materials and channel them in a more beneficial direction.

5.5 LIMITATIONS OF THE STUDY

Based on this research, there are four independent variables: lack of time, lack of interest, distance from the recyling centre, and lack of recyling initiatives. Then the dependent variable is the reason for non-participation by university students in recycling activities. In order to carry out the research for this study, the researcher has collected data by using the e-questionnaire method through a Google form available on the web. The questionnaire was distributed to 385 respondents from various demographic backgrounds. failure to engage in recycling activities. The data we collect in terms of demographics, such as gender, age, race, year of study, religion, and place of residence, This is so that the research we do is easy to identify and study in relation to the failure of recycling behavior among public university students in Malaysia.

The small sample size is the first limitation. In actuality, a study's sample size is typically dictated by the necessity for sufficient statistical power as well as the expense, time, or convenience of data collection. With a population of 3000, the sample size for this study was therefore calculated to be 385 pupils. The tables created by Krejcie and Morgan were used to calculate the sample size.

In addition, respondents could find it more difficult to comprehend and reply to the questions when compared to paper forms because the questionnaire was only made available via Google Forms. Technical issues prevented respondents from getting instant answers and in-person explanations. Many respondents did not attentively study the questionnaire's contents. They consequently select responses to surveys without fully comprehending the questions. Furthermore, as the subject of this study is a new occurrence, there aren't many earlier research

on it. Because of this, it is challenging for researchers to compile data and establish the framework necessary to comprehend the study problem.

5.6 RECOMMENDATIONS/SUGGESTIONS FOR FUTURE RESEARCH

Based on this study, there are some support and research recommendations that can be used as examples. Respondents were also given a lot of advice and suggestions. In addition, we also suggest continuing to produce knowledgeable students who are aware of the consequences of failing to engage in this recycling activity.

Returning to this topic, we can see that public university students do not have the awareness that causes the failure of recycling behavior. As researchers, we expect the university to shoulder the obligation to raise awareness and encourage students to practice recycling. For example, the university should hold awareness campaigns such as talks and exhibitions about recycling for students. Pure values must also be instilled in students during moral education or civic education. The establishment of the Environment Club is also a sustainable initiative to support this effort. For example, the club can organise a competition to collect recyclable items, or they can create recyclable items. As a result, the students will be exposed to the practice of recycling, thus helping to care for the environment. In short, the university's commitment is a significant effort towards making recycling practices a success.

Then the government also needs to enact a policy on garbage disposal and recycling. For example, the government can set waste disposal rules by category. In relation to that, local authorities should increase the number of recycling bins and recycling centers. This will make it easier for people to manage their garbage. In addition, the government can also hold a campaign to increase people's awareness of recycling practices. This campaign should be supported by the

mass media to ensure that this message of recycling is widely spread. Strictly speaking, the cooperation of the government and various parties is very necessary for the success of a mission because consensus brings blessings.

In addition, the scope of our study is limited to investigating the relationship between lack of time, lack of interest, distance from the recycling centre, and lack of recycling initiatives as reasons for non-participation by university students in recycling activities. We conduct research in the field related to larger sources such as articles, books, journals, and even papers related to this study, although specifically we study the behavior of public university students only.

So for the future, to make the research more efficient, the researcher can expand from the respondents of this public university to all communities in Malaysia. We hope that in the future it can be expanded to test a wider area to find out and raise awareness about the failure of recycling activities not only among students but also among ordinary people or, more easily understood, the community. By using this change, we can see the extent to which the community is involved in recycling. In addition, there are many improvements that need to be made in terms of writing books and articles to facilitate understanding related to recycling.

Finally, the questionnaire is very important for the researcher to get respondents. In addition to this study, other studies can also be completed if they have data from the questionnaire. Therefore, we were able to survey successfully because of the expectation that respondents would easily mark an "excellent" response to this issue. In addition, they can share their own thoughts or their level of awareness about this study. The fact that the respondents responded quickly was useful for us to conduct the survey. This is because we can break down

and decipher information effectively despite time and asset constraints. However, in order to obtain more effective results, the researcher can distribute the questionnaire physically, because this will prevent the analyst from getting internal and external understanding and consideration from the general public regarding this aspect of recycling.

5.7 RESEARCH CONCLUSIONS

This study was conducted to examine the failure of recycling behavior among public university students. Through the results of the analysis and findings of the study, it shows that all the independent variables (lack of time, lack of interest, distance from the recycling centre, and lack of recycling initiatives) studied in this questionnaire have a relationship related to the reason for non-participation by university students in recycling activities. Throughout the study, we have collected and analysed data to conduct descriptive, correlation, and regression analysis, and it is easy to put hypotheses to the test and analyse the results. In addition to the main goal, this study revealed that public university students in Malaysia have a failure in recycling behavior, and they do not get full exposure to this recycling. It can be said that the majority of respondents are people who do not tend to engage in recycling behavior.

The study also found a significant relationship between the independent variables, which significantly influenced the dependent variables, and reported that public university students had a very high percentage of failure in this recycling behavior. So we, as researchers, conducted a study to find out the cause of the failure of recycling behavior among public university students in Malaysia.

In conclusion, based on this study, we can see the failure of recycling behavior among public university students in Malaysia. According to the results of the study, it can be said that a

high percentage of students fail to engage in recycling activities. The integration of sustainability approaches in the framework of public universities is seen as one of the serious initiatives to deal with ecological and social challenges in the present and in the future. These people should be given attention under the recycling component because reducing the quantity of solid waste disposed of is one of the objectives of environmental protection. Accordingly, the formation of programmes such as resource conservation and recycling in universities is a critical aspect that needs to be paid attention to in order to achieve a vision of sustainability. Therefore, these people should be emphasised more in programmes related to recycling, regardless of race and religion.

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APPENDIX A – Draft of Questionnaire

Assalamualaikum & Salam Sejahtera. We are final year students of Bachelor Business Administration (Islamic Banking andAssalamualaikumAssalamualaikum Finance) with Honors from Faculty of Entrepreneurship and Business (FKP). We are currently conducting a survey regarding "**The Failure of Recycle Behavior Among Public University Students**" for our final year research project.

Assalamualaikum & Salam Sejahtera. Kami merupakan pelajar tahun akhir Sarjana Muda Pentadbiran Perniagaan (Perbankan dan Kewangan Islam) dengan Kepujian daripada Fakulti Keusahawanan dan Perniagaan (FKP). Kami sedang menjalankan tinjauan berkenaan **"Kegagalan Tingkah Laku Kitar Semula Dalam Kalangan Pelajar Universiti Awam"** *untuk projek penyelidikan tahun akhir kami.*

Regards,

Muhammad Ammar Arham Bin Alias (A20A1503)

Muhammad Baihaqi Bin Isa (A20A1512)

Muhammad Hairie Bin Maznon (A20A1528)

Muhammad Haziq Daniel Bin Shaharudin (A20A1530)

SECTION A: DEMOGRAPHIC BACKGROUND / *LATAR BELAKANG DEMOGRAFI*

Please tick (/) on the appropriate answer.

Sila tandakan (/) pada jawapan yang sesuai.

1. Gender/*Jantina*

   Male/*Lelaki*

   Female/*Perempuan*

2. Age/*Umur*

  19-20

  21-25

  26-30

  30 and above/*30 dan keatas*

3. Ethnicity/*Bangsa*

  Malay/*Melayu*

  Chinese/*Cina*

  Indian/*India*

  Other/*Lain-lain*

4. Year of study/*Tahun pengajian*

  Year 1/*Tahun1*

  Year 2/*Tahun 2*

Year 3/*Tahun 3*

Year 4/ *Tahun 4*

5. Religion/*Agama*

Islam/*Islam*

Buddhism/*Budha*

Christianity/*Kristian*

Hinduism/*Hindu*

Other/*Lain-lain*

6.Residence/*Tempat tinggal*

Johor

Kedah

Kelantan

Melaka

Negeri Sembilan

Pahang

Perak

Perlis

Pulau Pinang

Selangor

Sabah

Sarawak

Terengganu

Wilayah Persekutuan

SECTION B : DEPENDANT VARIABLE : THE REASON OF NON-PARTICIPATION BY UNIVERSITY STUDENT IN RECYCLING ACTIVITIES/ *SEBAB TIDAK PENYERTAAN PELAJAR UNIVERSITI DALAM AKTIVITI KITAR SEMULA*

Instruction: Please respond to each question by circling your measurement using the scales provided THE FAILURE OF RECYCLE BEHAVIOR AMONG PUBLIC UNIVERSITY STUDENTS. Please, kindly use the 5-point likert scalling:-

1-Strongly disagree

2-Disagree

3-Neutral

4-Agree

5-Strongly agree

Arahan: Sila jawab setiap soalan dengan membulatkan ukuran anda menggunakan skala yang disediakan KEGAGALAN TINGKAH LAKU KITAR SEMULA DALAM KALANGAN PELAJAR UNIVERSITI AWAM. Sila gunakan penskalaan likert 5 mata:-

1-Sangat tidak setuju

2-Tidak bersetuju

3-Neutral

4-Setuju

5-Sangat setuju

DEPENDENT VARIABLES					
1. I lack time to engage in recycling activities. *Saya kekurangan masa untuk terlibat dalam aktiviti kitar semula.*	1	2	3	4	5
2. I am not interested in this activity. *Saya tidak berminat dengan aktiviti ini.*	1	2	3	4	5

3. I don't know what to do. *Saya tak tahu nak buat apa.*	1	2	3	4	5
4. Lack of information or insufficient knowledge. *Kekurangan maklumat atau pengetahuan yang tidak mencukupi.*	1	2	3	4	5
5. I do not get any reward for doing this activity. *Saya tidak mendapat sebarang ganjaran untuk melakukan aktiviti ini.*	1	2	3	4	5

SECTION C IS INDEPENDENT VARIABLE: LACK OF TIME/ *KURANG MASA*

INDEPENDENT VARIABLES					
1. I lack time because my studies are dense. *Saya kekurangan masa kerana pengajian saya padat.*	1	2	3	4	5
2. I lack time because I focus on doing assignments. *Saya kekurangan masa kerana fokus membuat tugasan.*	1	2	3	4	5
3. I lack time because I am involved in activities at the university. *Saya kekurangan masa kerana terlibat dengan aktiviti di universiti.*	1	2	3	4	5
4. I lack time because I am more busy with other things than with the recycling behavior. *Saya kekurangan masa kerana saya lebih sibuk dengan perkara lain berbanding dengan tingkah laku kitar semula.*	1	2	3	4	5

SECTION D IS INDEPENDENT VARIABLE: LACK OF INTEREST/ *KURANG MINAT*

INDEPENDENT VARIABLES					
1. I am less interested because I lack encouragement from my family. *Saya kurang berminat kerana kurang galakan daripada keluarga.*	1	2	3	4	5
2. I am less interested because I lack encouragement from friends. *Saya kurang berminat kerana kurang galakan daripada kawan-kawan.*	1	2	3	4	5
3. I am less interested because I don't know the benefits of recycling. *Saya kurang berminat kerana tidak tahu kebaikan kitar semula.*	1	2	3	4	5
4. I am less interested because I am not given extensive exposure. *Saya kurang berminat kerana tidak diberi pendedahan yang meluas.*	1	2	3	4	5

SECTION E IS INDEPENDENT VARIABLE: DISTANCE OF RECYCLING CENTER/
JARAK PUSAT KITAR SEMULA

INDEPENDENT VARIABLES					
1. The recycling center is far from the residence. *Pusat kitar semula jauh dari kediaman.*	1	2	3	4	5
2. Lack of recycling places. *Kekurangan tempat kitar semula.*	1	2	3	4	5
3. I don't know the type of items accepted for recycling. *Saya tidak tahu jenis barang yang diterima untuk dikitar semula.*	1	2	3	4	5
4. It's not worth going to a distant recycling center. *Tidak berbaloi pergi ke pusat kitar semula yang jauh.*	1	2	3	4	5

SECTION F IS INDEPENDENT VARIABLE FOR OUR RESEARCH: LACK OF RECYCLE INITIATIVES/ *KEKURANGAN INISIATIF KITAR SEMULA*

INDEPENDENT VARIABLES					
1. Lack of promotion displayed from the recycling club. *Kurang promosi yang dipamerkan daripada kelab kitar semula.*	1	2	3	4	5
2. Lack of awareness of recycling to the community. *Kurang kesedaran kitar semula kepada masyarakat.*	1	2	3	4	5
3. Lack of good facilities should be provided when recycling. *Kekurangan kemudahan yang baik disediakan semasa kitar semula.*	1	2	3	4	5
4. Lack of reward the community involved in recycling. *Kurang ganjaran kepada komuniti yang terlibat dalam kitar semula.*	1	2	3	4	5

APPENDIX B – Gantt Chart

GANTT CHART OF RESEARCH ACTIVITIES ON PROPOSAL FOR YEAR 2023 AND YEAR 2024

RESEARCH ACTIVITIES / MONTH	MAR	APR	MAY	JUN	JULY
Briefing on PPTA I and PPTA II	X				
Discussion on the title	X				
CHAPTER 1: INTRODUCTION	X				
Discussion about the problem statements, research question and research objectives (draft of PPTA 1)	X	X			
Starting up with chapter 1	X				
End of chapter 1	X				
CHAPTER 2: LITERATURE REVIEW		X	X		
Review in literature of the research studies based on independent variables and dependent variables		X	X		
Starting up with chapter 2		X	X		
End of chapter 2			X		
CHAPTER 3: RESEARCH METHODOLOGY			X	X	
Discussion on questionnaire			X	X	
Discussion on the methods used in research			X	X	
Starting up with chapter 3			X	X	
End of chapter 3 and submission				X	
Submission first draft of PPTA 1				X	

RESEARCH ACTIVITIES / MONTH	MAR	APR	MAY	JUN	JULY
Briefing on PPTA I and PPTA II	X				
Submission second draft of PPTA 1				X	
Submission third draft of PPTA 1				X	
PRESENTATION FOR FINAL YEAR PROJECT 1				X	X
FINAL SUBMISSION OF PPTA 1					X

RESEARCH ACTIVITIES/MONTH	OCT	NOV	DEC	JAN
CHAPTER 4: Data Analysis and Findings	X	X		
Discussion about the problem statement, research question and research objectives (draft of PPTA 2)	X	X		
Laboratory analysis	X	X		
Statistical analysis		X		
Starting of chapter 4		X		
End of chapter 4		X		
CHAPTER 5:		X		
Discussion of findings		X	X	
Recommendation for future research		X	X	
Starting of chapter 5		X	X	
End of chapter 5		X	X	
Submission of first draft of PPTA II				X

RESEARCH ACTIVITIES/MONTH	OCT	NOV	DEC	JAN
Submission of second draft of PPTA II				

FINAL SUBMISSION OF PPTA II
   1.   **E-Poster**
   2.   **Poster presentation**
   3. **Research paper**				

APPENDIX C – Turnitin Screening

Universiti Malaysia KELANTAN	**REKOD PENGESAHAN PENYARINGAN *TURNITIN*** ***VERIFICATION RECORD OF TURNITIN SCREENING***

Kod/Nama Kursus*: AFS 4113 - PROJEK PENYELIDIKAN PERBANKAN DAN KEWANGAN ISLAM II
Code/ Course Name: AFS 4113 - RESEARCH PROJECT ISLAMIC BANKING AND FINANCE II
Sesi/*Session:* 2023/2024
Semester*:* 1
Nama Program/*Name of Programme:* SAB
Fakulti/Pusat/*Faculty/Centre:*   Fakulti Keusahawanan Dan Perniagaan/
                                    Faculty of Entrepreneurship and Business

Pengesahan Penyaringan Plagiat/ *Verification of Plagiarism Screening*

Saya, <u>Muhammad Haziq Daniel Bin Shaharudin</u>, No.Matrik <u>A20A1530</u> dengan ini mengesahkan Kertas Projek Penyelidikan ini telah melalui saringan aplikasi turnitin. Bersama ini dilampirkan sesalinan laporan saringan Turnitin dengan skor persamaan sebanyak <u>24</u>%.

I, <u>Muhammad Haziq Daniel Bin Shaharudin</u>, Matrix number <u>A20A1530</u> hereby declare that I have screen my thesis using Turnitin Software. Enclosed here with a copy of verification of Turnitin screening with similarity score of <u>24</u>%.

Tajuk Kertas Kerja Penyelidikan/ *The Tittle of Research Project Paper*:-

<u>The Failure Of Recycle Behavior Among Public University Students</u>

Tandatangan/*Signature*

…………………………………………….
Nama Pelajar/*Student Name*: Muhammad Haziq Daniel Bin Shaharudin
No.Matrik/*Matrix No*: A20A1530
Tarikh/*Date*: 27/01/2024

Pengesahan Penyelia/*Supervisor*:   Tandatangan/*Signature*:   Tarikh/*Date*:

TURNITIN FYP SAB 10

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