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**AN EMPIRICAL ANALYSIS OF THE EXTENDED THEORY OF
PLANNED BEHAVIOUR INCORPORATING PERSONAL
NORMS IN PREDICTING MALAYSIAN GENERATION Z'S
ADOPTION OF HEALTHY EATING HABITS**



MASTER OF SCIENCE (MANAGEMENT)

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By

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UUM
Universiti Utara Malaysia

**Thesis Submitted to
School of Business Management
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in Partial Fulfilment of the Requirement for the
Master of Science (Management)**



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ABSTRACT

The primary aim of this study is to examine the factors influencing healthy eating intentions among Malaysian Generation Z by applying an extended Theory of Planned Behaviour (TPB) framework that incorporates personal norms. In this study, attitude toward healthy eating, subjective norms, perceived behavioural control, and personal norms are treated as the independent variables, while intention to consume healthy foods is the dependent variable. The target respondents comprise Generation Z individuals in Malaysia who have experience making daily food consumption decisions. A total of 396 valid questionnaire responses were collected and analysed using Statistical Package for the Social Sciences (SPSS) version 30. Several statistical techniques were employed to address the research objectives and hypotheses, including descriptive analysis, factor analysis, reliability analysis, Pearson's correlation analysis, and multiple regression analysis. The findings indicate that all proposed TPB constructs, including personal norms, have a positive and statistically significant relationship with intention to adopt healthy eating habits. Correlation results confirm strong associations between the psychological and moral determinants and healthy eating intention. Further analysis using multiple regression reveals that attitude toward healthy eating is the strongest predictor of intention, followed by subjective norms, personal norms, and perceived behavioural control. These findings highlight the importance of both cognitive and moral factors in shaping healthy eating intentions among Generation Z. Accordingly, health promotion initiatives should emphasise positive attitudes, social influence, perceived control, and personal moral responsibility to effectively encourage healthier dietary behaviours. Overall, this study provides empirical support for the extended TPB model and offers practical insights for policymakers and health practitioners in developing targeted interventions to promote healthy eating among young Malaysians.

Keywords: Healthy eating intention, Generation Z, Theory of Planned Behaviour, personal norms, eating behaviour

ABSTRAK

Matlamat utama kajian ini adalah untuk meneliti faktor-faktor yang mempengaruhi niat pengambilan makanan sihat dalam kalangan Generasi Z di Malaysia dengan menggunakan kerangka Teori Tingkah Laku Terancang (Theory of Planned Behaviour, TPB) yang diperluas melalui penggabungan norma peribadi. Dalam kajian ini, sikap terhadap pemakanan sihat, norma subjektif, kawalan tingkah laku terpersepsi, dan norma peribadi ditetapkan sebagai pemboleh ubah bebas, manakala niat untuk mengambil makanan sihat merupakan pemboleh ubah bersandar. Responden sasaran terdiri daripada individu Generasi Z di Malaysia yang mempunyai pengalaman membuat keputusan pengambilan makanan dalam kehidupan seharian. Sebanyak 396 respons soal selidik yang sah telah dikumpulkan dan dianalisis menggunakan perisian Statistical Package for the Social Sciences (SPSS) versi 30. Beberapa teknik statistik telah digunakan bagi mencapai objektif kajian dan menguji hipotesis, termasuk analisis deskriptif, analisis faktor, analisis kebolehpercayaan, analisis korelasi Pearson, dan analisis regresi berganda. Dapatan kajian menunjukkan bahawa semua konstruk TPB yang dicadangkan, termasuk norma peribadi, mempunyai hubungan yang positif dan signifikan secara statistik dengan niat untuk mengamalkan pemakanan sihat. Keputusan korelasi mengesahkan kewujudan hubungan yang kukuh antara faktor psikologi dan moral dengan niat pemakanan sihat. Analisis lanjut melalui regresi berganda menunjukkan bahawa sikap terhadap pemakanan sihat merupakan peramal paling dominan terhadap niat, diikuti oleh norma subjektif, norma peribadi, dan kawalan tingkah laku terpersepsi. Dapatan ini menekankan kepentingan faktor kognitif dan moral dalam membentuk niat pemakanan sihat dalam kalangan Generasi Z. Sehubungan itu, inisiatif promosi kesihatan perlu menekankan pembentukan sikap positif, pengaruh sosial, persepsi kawalan, serta tanggungjawab moral peribadi bagi menggalakkan amalan pemakanan yang lebih sihat secara berkesan. Secara keseluruhannya, kajian ini menyediakan sokongan empirikal terhadap model TPB yang diperluas dan menawarkan pandangan praktikal kepada pembuat dasar serta pengamal kesihatan dalam merangka intervensi bersasar untuk mempromosikan pemakanan sihat dalam kalangan golongan muda di Malaysia.

Kata kunci: Niat pemakanan sihat, Generasi Z, Teori Tingkah Laku Terancang, norma peribadi, tingkah laku pemakanan



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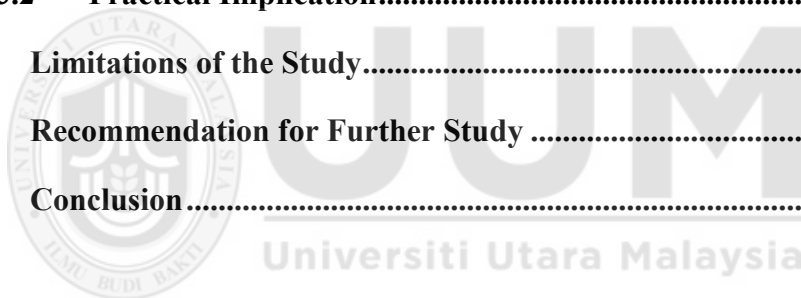
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LIST OF ABBREVIATION

AT	Attitude
DOSM	Department of Statistics Malaysia
Gen Z	Generation Z
IPH	Institute for Public Health
MOH	Ministry of Health
NAM	Norm Activation Model
NHMS	National Health and Morbidity Survey
PBC	Perceived Behavioural Control
PN	Personal Norms
RQ	Research Question
SN	Subjective Norms
SPSS	Statistical Package for the Social Sciences
TPB	Theory of Planned Behaviour
WHO	World Health Organization
UUM	Universiti Utara Malaysia



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CHAPTER ONE

INTRODUCTION

1.1. Background of Study

Healthy eating habits have also gained attention in public health and sustainability research, especially among young people. With increasing occurrence way of living related illness including obesity, cardiovascular and diabetes diseases, researchers and stakeholders are working to substantiate the determinants and identify factors that affect the eating habits, especially among such young and vulnerable age groups. With new ways to express opinions and values, Generation Z is considered highly digitally active and socially responsible and displays differing behaviours from the previous generations (Turner, 2015).

Eating patterns have been changing dramatically across the globe because of transformations in social and economic structural circumstances, urbanization, and the ubiquity of modern food marketing efforts (Hopwood et al., 2020; Sorić et al., 2021). Even though health has progressively gained prominence as a driving force behind food choices, there continue to be striking differences in attitudes and behaviour, particularly among teenage and young adult population groups (Kuribayashi & Wansink, 2015; Powell et al., 2019). The younger age groups consume more of the sweet, salty and ultra-processed food as compared to older (Bleich et al., 2018; Nour et al., 2017). Such changes in the dietary pattern, together with increasing rates of overweight and obesity in children and adolescents, have occurred at the worldwide level (Ng et al., 2014; Bustillo et al., 2016).

The situation in Malaysia is no different; urban youth frequently do not adhere to national nutritional recommendations and unhealthy dietary choices, especially among the poor, are greatly influenced by socioeconomic and environmental factors (Ali & Abdullah, 2012; Eng et al., 2022). Furthermore, passive smoking was also found to be associated with an increased risk of being overweight and obese among Malaysian adolescent, namely, National Health and Morbidity Survey that was conducted by the Institute for Public Health (Institute for Public Health [IPH], 2017). In the most recent Malaysian adolescent health data, 28% of children and adolescents (ages 5 to 19) are overweight (14.4%) or obese (13.6%) (IPH, 2022; MOH, 2024).

The TPB (Ajzen, 1991) is one of the most frequently used theoretical models to explain and predict health behaviours, such as eating behaviours. The TPB proposes that individuals' behavioural intention is the most important determinant of behaviour, and it is driven by three constructs: attitude toward the behaviour, subjective norms, and perceived behavioural control. TPB has been used in several studies to investigate health and food behaviours and culture (Grønhøj et al., 2013, Close et al., 2015, Boustani & Guiné, 2021). TPB constructs predicted intentions to eat healthily, across samples of Danish adolescents but there were sociocultural and peer influences (Grønhøj et al., 2013). Form, research among US office workers showed that TPB variables significantly predicted intentions to adhere to dietary guidelines (Close et al., 2015).

In recent years, researchers have suggested that there should be an extension of TPB to consider other psychological factors that might be

relevant to enhance its predictive power. One such variable is personal norm, which is defined as an individual's internalized moral duties or standards about behaviours (Schwartz, 1977; Thøgersen, 2006). Personal norms represent feelings of obligation or moral responsibility, and it is assumed that individuals may be driven by these to act particularly with respect to health-related choices, like dietary change for sustainability or health. There is evidence from several studies that PN can increase the explanatory power of the TPB model with respect to pro-social and pro-environmental behaviour (Gärling et al., 2003; Thøgersen & Ölander, 2006). Specific regulative focus on personal norms with respect to the topic of food choices, personal norms were identified to affect both the intention and the actual behaviour of healthy or sustainable consumption (Cardoso, Miranda, & Maria Rangel, 2022) (Mallah Boustani & Guiné, 2021).

1.2 Problem Statement

Nowadays, this issue has become major or massive public health concern widely. Unhealthy eating habits grown rapidly worldwide. High in sugar, fat and salt while low intake of vegetables and fruit are the diets that being consumed favourable young generation of world population. This way diet is strongly contributed to widespread of obesity and non-communicable diseases like cardiovascular disease also diabetes, this fact has been released by WHO, 2020. Before this, mostly older adult generation are common patient of these disease, but new adult and younger population are affecting obviously (Ng et al., 2014; WHO, 2022).

This widely global trends also affecting Malaysia in context. National Health and Morbidty Survey shown that Malaysian young adult and adolescent are obese and overweight, while the key factor of contribution that being identified are unhealthy dietary practice. (Institute for Public Health [IPH], 2022). Clear gap between actual eating behaviour and nutritional knowledge being big indicator in this situation, this is because continuous campaign by public health and presence of dietary guidelines are being ignored (Eng et al., 2022).

Vulnerable group or population that being address in this context are represented by generation Z. Being known as digital native, gen Z are majorly visible to social media, online meals advertising and content highly driven by influencer, which always promoting highly processed food and dense the energy (Kelly et al., 2016; Ishak et al., 2021). In the meantime, their choice of food is moulded by peer influence, household norms, convenience and perceived affordability. These group of factors and sometimes influence conflict make it harder for this Generation Z, preserve healthy eating habits, even though they being ware of health risks (Powell et al., 2019)

The Theory of Planned Behaviour (TPB) has been widely applied to explain and predict health-related behaviours, including dietary practices. According to TPB, behaviour is primarily determined by intention, which in turn is influenced by attitude, subjective norms, and perceived behavioural control (Ajzen, 1991). While numerous studies have demonstrated the utility of TPB in predicting healthy eating intentions, emerging evidence suggests that the model may be theoretically incomplete, particularly in contexts where

moral considerations and personal responsibility are salient (Grønhøj et al., 2013; Mallah Boustani & Guiné, 2021).

Specifically, TPB does not explicitly account for internalised moral obligations that may motivate individuals to act independently of social pressure or perceived control. In health-related behaviours such as healthy eating, individuals may be driven not only by rational evaluation or social expectations but also by a personal sense of moral responsibility toward their own health and well-being. This limitation has prompted scholars to propose extensions of TPB through the inclusion of personal norms, defined as internalised feelings of moral obligation that guide behaviour (Schwartz, 1977; Thøgersen & Ölander, 2006).

Empirical evidence indicates that incorporating personal norms enhances the explanatory power of TPB in predicting health-related and pro-social behaviours, including dietary choices (Carfora et al., 2017; Cardoso et al., 2022). However, despite growing international support for this extended framework, empirical studies examining the role of personal norms within an extended TPB model remain limited in the Malaysian context, particularly among Generation Z.

Therefore, the need for many comprehensive examine of the factors that influence healthy eating intention among Generation Z in Malaysia. Implementing extended Theory of Planned Behaviour that incorporated personal norms alongside attitude, subjective norms and perceived behavioural control, this study aims to label this research gap also provide proof that can support more effective healthy promotion strategy targeted at young Malaysians.

1.3 Research Questions

Based on the problem statement, the following research questions were developed:

RQ1: Does attitude toward healthy eating significantly influence intention to consume healthy foods among Generation Z in Malaysia?

RQ2: Do subjective norms significantly influence intention to consume healthy foods among Generation Z in Malaysia?

RQ3: Does perceived behavioural control significantly influence intention to consume healthy foods among Generation Z in Malaysia?

RQ4: Do personal norms significantly influence intention to consume healthy foods among Generation Z in Malaysia?

1.4 Research Objectives

Based on the preceding discussion, this study attempts to achieve the following objectives:

RO1: To examine the influence of attitude toward healthy eating on intention to consume healthy foods among Generation Z in Malaysia.

RO2: To determine the influence of subjective norms on intention to consume healthy foods among Generation Z in Malaysia.

RO3: To investigate the influence of perceived behavioural control on intention to consume healthy foods among Generation Z in Malaysia.

RO4: To examine the influence of personal norms on intention to consume healthy foods among Generation Z in Malaysia.

1.5 Scope of the Study

This study focusing to factors that influence intention to adopt healthy eating among Gen Z in Malaysia focusing in North area (Perak, Penang, Kedah and Perlis). Scope of the study have been set to ensuring the study will be run accordingly and compromise with research objective that being approved.

From population scope, this study will consist respondent among Gen Z, which are individual that aged in range 18 to 28 which born from 1998 to 2006. This population being targeted because Gen Z population are group that being forming eating habit in long time also being exposed to various social influence and modern environment more specific native of technology.

1.6 Significance of the Study

This section will go through the study's contributions from both theoretical and practical significance. This study contributes meaningful value to both theory and practice by advancing understanding of healthy eating intentions among Generation Z in Malaysia. Given the rising prevalence of diet-related health problems among young populations, particularly obesity and non-communicable diseases, this research addresses a timely and relevant issue within the domains of public health, behavioural science, and consumer studies.

By focusing on psychological and normative determinants of healthy eating intention, this study provides empirical evidence that can support more effective interventions aimed at encouraging healthier dietary behaviours among young adults.

1.6.1 Theoretical Significance

This theoretical advance is expected to stimulate future research models of behaviour prediction beyond simple choice; that also include morality and emotion.

From a theoretical perspective, this study extends the Theory of Planned Behaviour by explicitly incorporating personal norms as an additional predictor of healthy eating intention. While TPB has been widely validated across behavioural domains, it has been criticised for its limited ability to capture internalised moral obligations that influence decision-making. By integrating personal norms into the TPB framework, this study addresses a recognised theoretical gap and enhances the model's capacity to explain health-related intentions that are morally and ethically grounded.

This extension is particularly relevant in the context of healthy eating, where decisions often involve considerations of personal responsibility, self-care, and long-term well-being. The inclusion of personal norms allows for a clearer distinction between externally driven social pressure (subjective norms) and internally motivated moral obligation, thereby offering a more nuanced understanding of intention formation.

Furthermore, by empirically testing the extended TPB model among Malaysian Generation Z, this study contributes to the limited body of literature applying advanced behavioural models within non-Western and collectivist cultural contexts. The findings provide empirical support for the theoretical argument that moral self-

regulation plays an important role in shaping health intentions among younger generations whose values are increasingly influenced by health consciousness, sustainability, and social responsibility.

1.6.2 Practical Significance

In practical terms, the findings of this study offer valuable implications for health practitioners, educators, and policymakers involved in nutrition promotion and youth health programmes. By identifying the relative influence of attitude, social norms, perceived behavioural control, and personal moral obligation on healthy eating intention, this research provides evidence-based guidance for designing more effective health promotion strategies targeted at Generation Z.

Understanding the role of personal norms suggests that interventions should move beyond information-based campaigns and incorporate messages that emphasise personal responsibility, self-care, and moral commitment to health. For example, nutrition campaigns may be designed to frame healthy eating as not only beneficial but also as a responsible and value-consistent choice.

Additionally, insights into perceived behavioural control highlight the importance of addressing structural barriers such as affordability, accessibility, and convenience of healthy foods. Policymakers and institutions such as universities and public health agencies can utilise these findings to develop supportive environments and targeted programmes that facilitate healthier food choices among young adults.

Overall, this study provides actionable insights that can inform the development of more holistic and psychologically informed strategies to encourage sustainable healthy eating habits among Malaysian Generation Z.

1.7 Key Terms Definition

1.7.1 Healthy Eating:

Healthy eating is the consumption of balanced foods and a dietary pattern through adequate intakes of energy and nutrients to support health and prevent chronic disease, which involves providing the body with all the essential nutrients in the right amounts, adequate fibre, and clear water. It commonly involves the consumption of fruits, vegetables, whole grains, lean proteins, and a restricted consumption of refined and high-sugar foods (World Health Organization [WHO], 2020; Powell et al., 2019).

1.7.2 Generation Z (Gen Z):

Generation Z is typically the demographic cohort which follows the Millennials, and it further describes them as those born between 1995 and 2012. They are defined by their digital nativeness, high rates of social media use, and greater exposure to globalized food cultures and online advertising (Garai-Fodor, 2020; BritainThinks, 2020).

1.7.3 Theory of Planned Behaviour (TPB):

The TPB is an applied psychological model formulated by Ajzen (1991) that holds that behaviour is determined by intention, which is in turn influenced by attitude on behaviour, subjective norms, and perceived behavioural control.

1.7.4 Attitude:

In the TPB model, attitude is the extent to which an individual has a favourable or unfavourable appraisal of the behaviour in question. It refers to the positive or negative attitude a person has towards healthy eating as part of the research (Ajzen, 1991).

1.7.5 Subjective Norms:

Perceived social pressures which influence such behaviours. They demonstrate the important role of peers, family, and significant others in the formation of the intention to eat healthy (Grønhoj et al., 2013).

1.7.6 Personal Norms:

Personal norms are internalized moral obligations that predict actions beyond what is normatively prescribed by others and what can be regarded as within an individual's level autonomy. They constitute a person's moral obligation towards specific behaviours; for instance, eating healthy for the sake of one's own or society's health (Schwartz, 1977; Thøgersen & Ölander, 2006).

1.7.7 Intention to Consume Healthy Foods:

Refers to conscious plan and readiness of an individual resulting in healthful eating practices. Within the TPB framework, intention is considered the most immediate predictor of actual behaviour (Ajzen, 1991).

1.8 Organization of Chapter in Study

1.8.1 Chapter 1: Introduction

Chapter One introduces the research by presenting the background of the study, problem statement, research objectives, research questions, scope of the study, significance of the research, and definitions of operational definitions.

1.8.2 Chapter 2: Literature Review

Chapter Two reviews relevant literature related to healthy eating behaviour, Generation Z, and the Theory of Planned Behaviour, including its extension with personal norms. The chapter critically examines previous empirical studies and concludes with that implementation regarding hypotheses and this research model.

1.8.3 Chapter 3: Research Methodology

Chapter Three outlines the research methodology employed in this study, including the research design, population and sampling technique, questionnaire design, measurement instruments, data collection procedures, pilot testing, and data analysis techniques.

1.8.4 Chapter 4: Data Analysis and Findings

Chapter Four presents the results of the data analysis, including respondent profiles, descriptive statistics, factor analysis, reliability analysis, and inferential statistical tests. The findings are reported in relation to the research objectives and hypotheses.

1.8.5 Chapter 5: Discussion and Conclusion

Chapter Five discusses the findings in relation to existing literature and theoretical frameworks. It also highlights the theoretical and practical implications of the study, outlines limitations, suggests directions for future research, and concludes the thesis.



CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

Theoretical underpinning, namely the TPB and its extended version with personal norms is briefly reviewed in the literature. This research deals with predictor construct = Intention and the outcome construct includes subjective norms, perceived behavioural control, and attitude also personal norm. Furthermore, gender and age group are included as control variables in order to clarify the associations between these constructs.

Chapter two is one of the key aspects of study as it expounds a detailed definition of independent variable, dependent variable and control variables. It discusses the relationships between these variables, consistent with previous studies worldwide and in Malaysia. This debate substantiates an examination of the proposed variables in this study.

In addition, this section explains the fundamental theory used in our analysis and give the detailed concept of each variable. Finally, it articulates empirical evidences of the previous studies that support the framework in this study especially those which employ TPB in health and consumer behaviour. Theories used and hypotheses development Finally, theories employed was introduced and the construction of hypotheses were presented in order to explain the proposed model.

2.2 Healthy Eating Behaviour: Concepts and Context

2.2.1 Definition of Healthy Eating Habits

Healthy dietary behaviours are commonly described as the consumption of food patterns that contribute to physical wellness, support body processes, and prevent long term illnesses such as obesity, diabetes, and heart disease. Healthy eating is defined by the World Health Organization (2020) as the practice of having a balanced diet that consists of adequate fruits, vegetables and whole grains while having low intake of sugar, salt and saturated fats. Similarly, Willett et al. (2019) in the Lancet: “Sustainable healthy diets are those for which constant with human an nature capital, that is environment, justice between generations and development.”

Healthy eating is frequently discussed in academic literature as a practice that is not solely nutritional but also behavioural, originated from psychological, social and environmental determinants (Aschemann-Witzel & Grunert, 2020). For example, Grunert (2020) claimed that food choices are complex decision processes influenced by health considerations, cultural preferences and marketing cues and while a content analysis by Leme et al. (2021) shows that healthy eating being construed as a lifestyle behaviour, something one needs to get used to and exert self-control over in the long-term.

Healthy eating behaviour is defined in this article as the attitude of individuals who consciously select food consumption behaviours that align with nutritional recommendations and are a means of maintaining or enhancing health. This behavioural experience is consistent with (Ajzen, 1991) Theory of Planned Behaviour (TPB), whereby attitude, perceived control behaviour and social norms influence individual’s decision, as within dietary choices.

2.2.2 Significance of Healthy Eating Among Gen Z

Generation Z, or Gen Z, often referred to as the web-born generation, are people who were born from 1995-2010 and have been raised in a digital world; Global Digital Yearbook (Francis & Hoefel, 2018). Their eating habits are determined by several factors such as peer pressure, body image worries, convenience, and exposure to online content promoting wellness and diet fads (Turner & Lefevre, 2017; Vermeir et al., 2020).

International research reveals that Generation Z has a high understanding that a balanced diet and responsible food choices are important however their behaviour is not fully supported by the beliefs. According to a survey by Mintel (2021), younger consumers say they want to eat healthier, but they also report higher consumption of convenience and processed foods than older generations. Similarly, Kelly et al. (2021) stress that influences of digital media on health behaviours are twofold as the constant exposure through advertising may contribute to an increase in unhealthy snacking and fast-food consumption as well.

In Malaysia, Generation Z has health challenges that require urgent attention. According to the National Health and Morbidity Survey (Institute for Public Health Malaysia, 2020), it is estimated that one in three adolescents was overweight or obese in Malaysia and supports a case for a public health priority. Norazmir et al. (2021) pointed out that Malaysian youth express and acknowledge the benefits of healthy eating but their daily food choices are determined by cost, social situation and access to healthier foods. More recently, Rahman et al. (2022) revealed that, among Malaysian Gen Z students, there was a gap between intention and behaviour, as described by Whitehead

(2009): participants' expressed preferences for healthier diet did not consistently result in changes to actual food consumption habits.

In light of these trends, understanding the psychological and social influences on food consumption behaviours among Gen Z is necessary. As the youngest adult generation, Gen Z is not only a large proportion of the future workforce and consumer population, but may also be at risk for long-term adverse health outcomes if unhealthy eating behaviours persist. Identifying the drivers and inhibitors of their healthy eating behaviour can assist in devising approaches that effectively promote healthier lifestyles (Ng, 2022; Vermeir et al., 2020).

2.3 Empirical Studies on Healthy Eating Behaviour Using the Theory of Planned Behaviour

Empirical studies applying the Theory of Planned Behaviour (TPB) have widely demonstrated its effectiveness in predicting healthy eating intentions across different populations and cultural contexts. Nevertheless, comparative evidence suggests that the relative influence of TPB constructs, attitude, subjective norms, and perceived behavioural control that varies across Western and non-Western settings, indicating the need for contextual and theoretical refinement.

In Western contexts, studies have consistently reported attitude and perceived behavioural control as the strongest predictors of healthy eating intention. For example, Mullan et al. (2013) and Close et al. (2015) found that individuals' positive evaluations of healthy eating and their perceived ability to adhere to dietary guidelines significantly influenced intention among Australian and United States samples. Similarly, European studies such as Carfora et al.

(2017) and Honkanen et al. (2015) reported that favourable attitudes toward healthy foods were central determinants of dietary intention, reflecting an emphasis on personal evaluation and self-regulation in individualistic societies. These findings are further supported by McDermott et al. (2015) and McEachan et al. (2011), whose meta-analyses confirmed the robustness of attitude and perceived behavioural control in predicting health-related intentions.

In contrast, studies conducted in collectivist and Asian contexts reveal a stronger influence of subjective norms. Research in China and India indicates that social approval, family expectations, and peer influence play a significant role in shaping healthy eating and food-related intentions (Yadav & Pathak, 2017; Xu et al., 2021; Yazdanpanah & Forouzani, 2015). These findings suggest that dietary behaviour in such contexts is embedded within social relationships, where conformity to group norms is often more salient than individual preference alone.

Malaysian empirical studies reflect a mixed pattern, highlighting the coexistence of collectivist values and increasing individual autonomy, particularly among Generation Z. While Tan and Yap (2020) found that subjective norms significantly influenced fast-food consumption intentions among Malaysian youths, Ting et al. (2019) reported that attitude and perceived behavioural control were stronger predictors of healthy eating intention. Similarly, Lim (2021) and Abdul Latiff et al. (2021) observed that although Malaysian young adults generally hold positive attitudes toward healthy eating, their intentions are often constrained by affordability, accessibility, and lifestyle factors. National-level evidence from the National Health and Morbidity Survey (Institute for Public Health [IPH], 2020) further supports the presence of an intention–behaviour gap in Malaysia, where structural and environmental barriers limit behavioural enactment.

Across both Western and Malaysian studies, researchers have increasingly acknowledged the limitations of the traditional TPB framework in fully capturing the motivational complexity of healthy eating behaviour. Western studies such as Thøgersen and Ölander (2006), Carfora et al. (2017), and Onwezen et al. (2013) demonstrated that incorporating personal norms, representing internalised moral obligation, significantly enhances the explanatory power of TPB in dietary and health-related behaviours. These findings indicate that healthy eating is not solely driven by rational evaluation or social influence, but also by moral self-regulation.

Beyond Western contexts, Asian studies further support the relevance of personal norms in shaping food-related intentions. For instance, Shen and Saijo (2021) found that moral obligation significantly predicted sustainable food purchasing behaviour in China, while Nguyen et al. (2022) reported that identity and environmental concern influenced healthy food consumption among Southeast Asian young adults. These findings suggest that the influence of personal norms may be culturally moderated and particularly salient in collectivist societies.

Although Malaysian studies incorporating personal norms remain limited, emerging evidence suggests similar trends. Saleki et al. (2019) and Abdullah et al. (2022) found that moral and ethical considerations significantly influenced food-related intentions among Malaysian consumers. More specifically, Kamaruddin and Omar (2023) reported that personal norms significantly predicted healthy eating intention among Malaysian university students, aligning with international findings. This convergence of evidence

supports the relevance of extending TPB with personal norms when examining healthy eating intentions among Malaysian Generation Z.

Conceptually, personal norms are argued to operate by strengthening motivational commitment and enhancing consistency between intention and behaviour (Schwartz, 1977; Verplanken & Holland, 2002). However, the literature also highlights important limitations, as moral motivation alone may be insufficient to overcome structural barriers such as cost, accessibility, and convenience, particularly in developing contexts like Malaysia (Abdul Latiff et al., 2021).

Overall, empirical evidence from both global and Malaysian contexts supports the applicability of TPB in predicting healthy eating intentions while simultaneously revealing its theoretical limitations. The comparative synthesis of findings underscores the need for an extended TPB framework that integrates personal norms to better explain healthy eating intentions across diverse cultural settings, particularly among younger populations in Malaysia.

2.4 Underpinning Theory: Theory of Planned Behaviour and Its Extension

The Theory of Planned Behaviour (TPB), proposed by Ajzen (1991), is one of the most widely applied theoretical frameworks for explaining and predicting human behaviour, particularly in health-related contexts. According to TPB, an individual's behaviour is primarily determined by behavioural intention, which reflects the motivational readiness to perform a given action. Behavioural intention, in turn, is influenced by three core determinants: attitude, subjective norms, and perceived behavioural control.

Attitude refers to an individual's overall evaluation of performing a behaviour, based on beliefs about its outcomes and the desirability of those outcomes. In the context of healthy eating, attitude reflects whether an individual perceives healthy eating as beneficial, enjoyable, and valuable. Subjective norms represent perceived social pressure to perform or not perform a behaviour, arising from the expectations of significant others such as family members, peers, or society. Perceived behavioural control refers to an individual's perception of their ability to perform the behaviour, considering available resources, opportunities, and constraints.

While TPB has demonstrated substantial explanatory power across a wide range of behaviours, scholars have increasingly highlighted its theoretical limitation in capturing behaviours that are motivated by internalised moral obligation rather than rational evaluation or external social pressure. Specifically, TPB conceptualises normative influence primarily as externally imposed expectations (subjective norms), thereby overlooking moral standards that are internally held and self-regulatory in nature.

To address this limitation, researchers have proposed extending TPB by incorporating personal norms, which originate from Schwartz's Norm Activation Theory (Schwartz, 1977). Personal norms refer to an individual's internalised sense of moral obligation or responsibility to perform a behaviour. Unlike subjective norms, which depend on perceived social approval, personal norms are self-directed and may motivate behaviour even in the absence of social pressure or behavioural control.

The inclusion of personal norms is particularly relevant in health-related behaviours such as healthy eating, where decisions may be driven by a

sense of responsibility toward personal well-being, family health, or ethical considerations. By integrating personal norms into TPB, the extended framework offers a more comprehensive explanation of behavioural intention by accounting for rational, social, and moral motivational processes.

In this study, the extended Theory of Planned Behaviour serves as the theoretical foundation for examining healthy eating intention among Malaysian Generation Z, allowing for a more nuanced understanding of how attitudinal, normative, control-related, and moral factors jointly shape intention.

2.5 Conceptualisation and Operational Definitions of Variables

This section presents the conceptualisation and operational definitions of all variables examined in the study. The focus of this section is on explaining how each construct is defined and measured for empirical analysis, rather than providing theoretical or empirical discussion.

2.5.1 Healthy Eating Intention

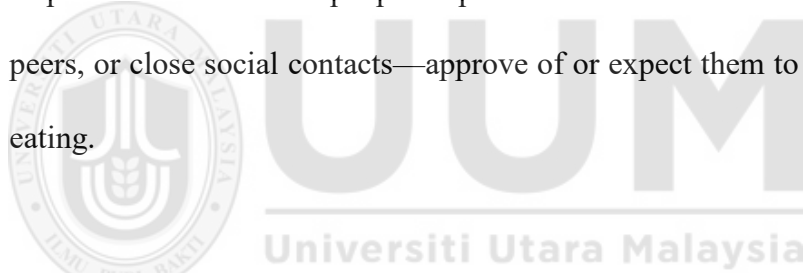
Healthy eating intention refers to an individual's conscious readiness, willingness, and plan to engage in healthy eating behaviour in the future. In this study, healthy eating intention is operationalised through respondents' self-reported likelihood and intention to consume nutritious and balanced food options. Measurement items capture the strength of intention rather than actual eating behaviour.

2.5.2 Attitude toward Healthy Eating

Attitude toward healthy eating is conceptualised as an individual's overall positive or negative evaluation of engaging in healthy eating behaviour. Operationally, this construct is measured using items that assess respondents' beliefs about the benefits, desirability, and enjoyment of consuming healthy food.

2.5.3 Subjective Norms

Subjective norms refer to an individual's perception of social pressure from significant others to engage in healthy eating behaviour. In this study, subjective norms are operationalised by measuring the extent to which respondents believe that people important to them—such as family members, peers, or close social contacts—approve of or expect them to practise healthy eating.



2.5.4 Perceived Behavioural Control

Perceived behavioural control represents an individual's perceived ability to perform healthy eating behaviour, considering factors such as access to healthy food, time availability, affordability, and personal capability. Operationally, this construct is measured through items assessing respondents' confidence and perceived ease or difficulty in maintaining healthy eating practices.

2.5.5 Personal Norms

Personal norms are conceptualised as an individual's internalised sense of moral obligation or personal responsibility to engage in healthy eating behaviour. Unlike subjective norms, which are influenced by perceived social

expectations, personal norms are self-directed and reflect internal standards. In this study, personal norms are operationalised using items that measure respondents' feelings of moral duty, responsibility, and self-expectation to make healthy food choices.

2.5.6 Control Variables: Gender and Age Group

In this study, gender and age group are included as control variables to account for potential demographic influences on healthy eating intention. Gender is operationalised as a categorical variable based on respondents' self-reported gender. Age group is operationalised using predefined Generation Z age categories. These control variables are incorporated to ensure that the relationships between the Theory of Planned Behaviour constructs, personal norms, and healthy eating intention are examined independently of basic demographic variation.

2.6 Hypotheses Development

2.6.1 Attitude and Intention

Attitude is one of the central predictors for behavioural intention according to the Theory of Planned Behaviour (Ajzen, 1991). It is the person's positive or negative evaluation of performing a behaviour and includes cognitive (instrumental) beliefs about outcomes as well as affective reactions (Conner & Armitage, 1998). In the realm of diet behaviour, meta-analytic and review work suggests that attitude is a robust predictor of intention, and therefore indirectly behaviour (McDermott et al., 2015; McEachan et al., 2011). Successful attitudinal changes in empirical interventions (e.g., communicating health

benefits or enhancing perceived enjoyment of healthy foods) often track increased intentions and consequent consumption of healthier items (Carfora et al., 2017; Carfora, Caso, & Conner, 2020).

Theories of the life-cycle have shown, however, that attitudes continue to be relevant for younger generations. Studies among Gen-Z and young adults also demonstrate the influencing impacts of attitudes on intentions to adopt healthy diets across nations (Savelli et al., 2023; Sogari et al., 2023), and Malaysian studies similarly show that positive evaluations of health food predict stronger intentions in youth (Tan & Yap, 2020; Al Mamun et al., 2020). Yet, this attitude towards intention connection can be attenuated by situational constraints (Fazio et al., 1982) such as the lack of financial resources) that constrain translation into behaviour; still at a motivational level, it is reported that attitude consistently has a positive direct effect on intention (McDermott et al., 2015). Therefore, with consideration of the existing cross-national and Malaysian evidence supporting an attitude–intention link when it comes to dietary behaviour, a hypothesis may be suggested:

H1: Attitude toward healthy eating has a significant positive effect on intention to adopt healthy eating habits among Generation Z.

2.6.2 Subjective Norm and Intention

Subjective norms refer to perceived social pressure from relevant others to engage in or not engage in a behaviour and is a core construct of TPB (Ajzen, 1991). Cross-cultural integrations report subjective norms to be salient predictors of intention, although their influence is culturally and behaviourally

specific (McEachan et al., 2011; McDermott et al. 2015). In collectivist cultures and for behaviors that are part of social practices (e.g., eating), the influence of subjective norms is expected to be greater than in individualistic ones (Thøgersen & Ölander, 2006; Randall, 2024).

Empirical evidence from youth and young adults suggests that peer and family norms strongly influence dietary intentions (Huang et al., 2021; Chilón-Troncos et al., 2024). Findings of Malaysian studies have also shown the importance of family meals, parental direction and peer influence on adolescents and university students' food preferences (Shafiee & Salleh, 2022; Tan & Yap, 2020). Some applications of the TPB in health-related settings similarly cite subjective norms as a relevant predictor of intention, especially when social approval or influence is made salient (Liu et al., 2021; Chilón-Troncos et al). Since Malaysian Gen Z are in active social interaction within both the process of socio-cultural socialization and digital mediated peer-groups, and based on empirical evidence indicating that social forces influence dietary intention among similar target populations, the following hypothesis is put forth:

H2: Subjective norms have a significant positive effect on intention to adopt healthy eating habits among Generation Z.

2.6.3 Perceived Behavioural Control and Intention

Perceived behavioural control (PBC) refers to the amount of control an individual perceives to have in order to carry out a behaviour, and encompasses both self-efficacy and perceived external barriers (Ajzen, 1991; Ajzen, 2002).

In health behaviour literature PBC often proves a robust predictor of intention, and may also have a direct impact on behaviour if it is an accurate indicator of actual control (Armitage & Conner, 2001; McEachan et al., 2011). When focusing on dietary behaviour, meta-analyses show that PBC has a moderate to large sized effect on intention (McDermott et al., 2015).

For young adults and Gen Z, PBC is associated with structural matters such as affordability, availability of healthy food choices, cooking skills and time; these factors influence perceived ability to act (Lim et al., 2021; Abdul Latiff et al., 2021). National Malaysian data and field studies reveal barriers of cost and accessibility to healthy foods that contribute to a decline in perceived behavioural control among adolescents (Institute for Public Health, NHMS 2020; Hashim et al., 2021). Recent TPB research in dietary contexts also depict PBC as the main antecedent of intention particularly when environmental restrictions are salient (She, 2024; Aahrafi et al., 2023). Based on these theoretical and empirical underpinnings it is expected that:

H3: Perceived behavioural control has a significant positive effect on intention to adopt healthy eating habits among Generation Z.

2.6.4 Personal Norm and Intention

Personal norms (e.g., described as internalized moral imperatives and feelings of personal obligation) represent an idea that emanates from Schwartz's Norm Activation model, a framework combined with TPB to account for morality- and identity-based determinants of behaviour (Schwartz, 1977; Thøgersen & Ölander, 2006).

Empirical evidence shows that personal norms provide an additional predictive capacity to TPB models in contexts in which moral considerations or identity are salient (Carfora et al., 2017; Onwezen et al., 2013). Meta-analyses and panel studies suggest that personal norms enhance intentions, and moderate the intention–behaviour relationship, through its effect on committed motivation (Thøgersen & Ölander, 2006; research syntheses). Research on consumer food choice and sustainable food consumption indicates that moral obligation, health consciousness or self-identity are important to develop intention to choose healthy and sustainable foods (Carfora et al., 2017; Honkanen et al., 2005).

Recent research in Malaysia and the Southeast Asian context offers tentative support: works on organic food and healthy eating among Malaysian students have yielded significant moral norm/personal norm variables based extended TPB (Saleki et al., 2019; Kamaruddin & Omar, 2023; Abdullah et al., 2022). Further, the greater ethical and sustainability concerns expressed by Gen Z imply that personal norms may be especially applicable to their dietary intentions (Savelli et al., 2023; Nguyen et al., 2022). Thus, in theory and empirical terms the extension of TPB with personal norms for Malaysian Gen Z can be justified. The hypothesis follows:

H4: Personal norms have a significant positive effect on intention to adopt healthy eating habits among Generation Z.

2.7 Conceptual Framework Diagram of Extended TPB and Control Variables

(gender, age)

This The primary theoretical framework used to explain the healthy eating behaviour of Malaysian Generation Z in this study is related to Theory of Planned Behaviour (TPB) as introduced by Ajzen (1991). According to the TPB, people's behaviour is determined by their behavioural intention which in turn depends on three fundamental constructs: attitude, subjective norm and perceived behavioural control (Ajzen, 2020; Fishbein & Ajzen, 2010). Attitude is an individual's positive or negative evaluation of performing a healthy eating, subjective norm indicates perception of social pressure to engage in the behaviour and perceived behavioural control represents the perceived ease/difficulty of performing those habits.

The morality of human behaviour may not be well represented by TPB (Conner & Armitage, 1998; Han, 2015), thus personal norm is included as a further predictor. Based upon Schwartz's (1977) the Norm Activation Model, personal norm is an individual's moral obligation or internalized notion of responsibility to act in favour of health. Empirically, personal norms are found to improve the predictive power of TPB for pro-social and health-related behaviours, such as sustainable consumption and healthy eating (Harland et al., 1999; Onwezen et al., 2013; Kim et al., 2020; Vermeir & Verbeke, 2008).

Moreover, gender and age range are included as control variables to capture the demographic variation of the Gen Z population. Previous studies have suggested that women have a higher health consciousness and more positive dietary attitudes than men (Wardle et al., 2004, Deliens et al., 2014). Additionally, the age of Gen Z can be dominant groups, early Gen Z (1997–2002) and late gen

z (2003–2010), may affect food choices as older individuals have more autonomy to be in charge of their health ask for long-term outcomes (Ronto et al., 2022; Nayan et al., 2023).



The conceptual framework of this study is constructed through a critical synthesis of relevant scholarly works and is anchored in the Theory of Planned Behaviour (TPB). The framework explains how selected antecedent factors influence individuals' attitudes, perceived social expectations, and perceived control, and how these psychological determinants subsequently affect the study's focal outcome.

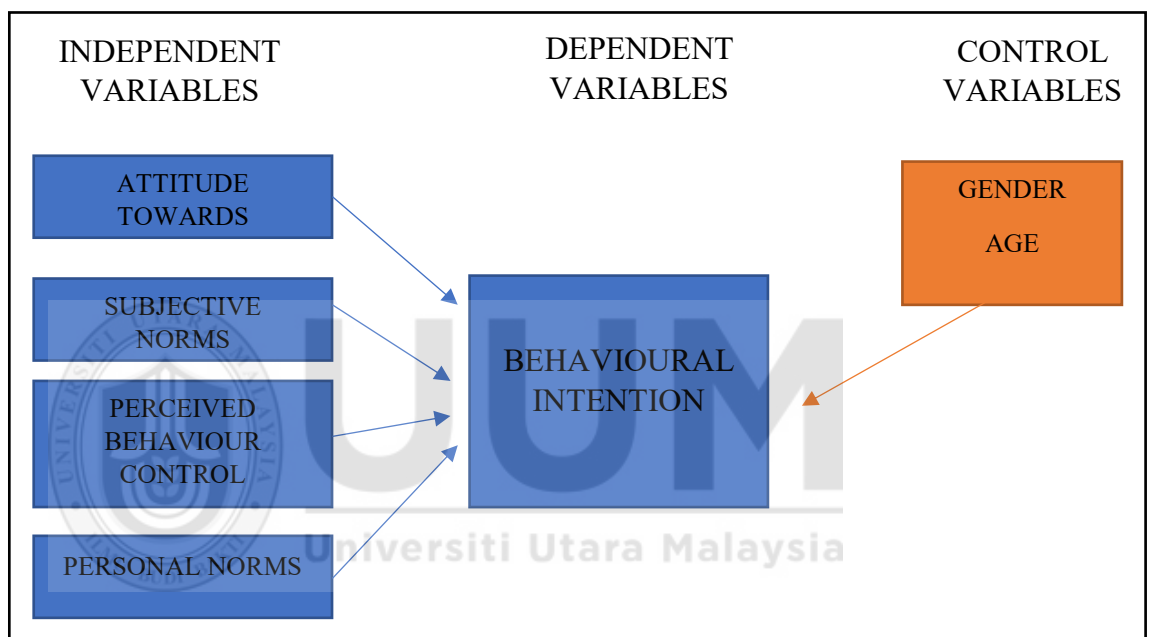


Figure 1: A Proposed Theoretical Model

2.8 Chapter Summary

The literature on healthy eating behaviour among Malaysian Generation Z is discussed in this chapter with a specific focus on the Theory of Planned Behaviour (TPB) and its extension with personal norm as one additional construct. The contingency includes the key variables in the study, including attitude, subjective norm, perceived behavioural control, personal norm and behavioural intention together control tobogganing rated for gender and age range. According to the review, these psychological and moral constructs are described as strong determinants of people's intentions to eat healthily.

Finally, this chapter stresses the role of personal norm as an extension to TPB which makes some contribution to a more comprehensive clarification of the moral and self-regulatory motivations for dietary behaviour. They note that while TPB has been extensively validated in predicting health-related behaviours across the world, only a few studies have examined Malaysian Generation Z demographic factors for the unique affectors of socio-cultural and economy among people living in Malaysia. Therefore, this research attempts to fill the void by advancing theory of planned behaviour (TPB) with personal norm and treating gender and age as control variables in order to have a more holistic view on healthy eating behaviour among Malaysians.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

Chapter 3 consists of eight main sections. The opening section of this chapter present the research framework adopted of the study. The subsequence section demonstrates the hypotheses formulated of study for empirical testing. There are four hypotheses illustrated in this study. Following that, this chapter explain the methodology of this study. The methodology chapter giving a root for answering the research questions underlying in the study. Following part discusses about research design selected by the researcher and following that discusses about the population and sampling. Next section presents the research instruments that have employed in this research. After that, the pilot test of the study elaborated in this chapter and also discussed about reliability and validity of survey instrument. Next section elaborates about the data collection method. Following that, this chapter illustrates the discussion on the data analysis procedure and finally followed by summary of chapter.

3.2 Research Design

A research design is a systematic plan that outlines the methods and procedures for collecting and analysing data, where the design is to ensure all the input or information that being gathered are relevant and compatible to answer the research question (Zikmund, 2003). The research design also guiding the selection of suitable variables, measurement scales, and analytical techniques, this is because hypothesis testing proses can be run systematic and effective.

This study adopts a hypothesis testing and correlational research design to testing the relationships between attitude, subjective norms, perceived behavioural control, and personal norms as independent variables, and intention to consume healthy foods as the dependent variable (Sekaran, 2003). The purpose of this design is to empirically assess the influence of these factors on healthy eating intention among Generation Z in Malaysia, at once can give for understanding that precisely about the intention of adopting healthy eating behaviour. In this study context.

3.3 Population, sample and sampling technique & Unit of Analysis

This section explains the population of the study, the sampling technique employed, the sample size determination, and the unit of analysis used in this research, the important thing to ensure reliable and validity of research findings.

3.3.1 Population and Unit of Analysis

The population of this study comprises Generation Z individuals in Malaysia, this population in range age 18 to 28 years old. This population was selected because Generation Z represents a key demographic group whose dietary behaviours are increasingly influenced by psychological, social, and moral factors. Based on population estimates from the Department of Statistics Malaysia (DOSM), Generation Z constitutes a substantial proportion of the Malaysian population, making this population are relevance and significant to be testing in healthy eating context. Although, official statistics do not explicitly categorise the population by generational cohorts, age-based population data provide a reasonable basis for estimating the size of this group. The focus on Generation Z is appropriate as this cohort is at a critical stage of

forming long-term lifestyle and dietary habits, understanding of intention towards healthy eating in this population are importance to give long reliable interventions for future research. The unit of analysis for this study is the individual Generation Z respondent.

3.3.2 Sample Size and Sampling Technique

Due to practical constraints, it was not feasible to collect data from the entire population, therefore the sampling technique being used to gathering research sample. This study employed convenience sampling, where respondents were selected based on their accessibility and willingness to participate in the survey.

Convenience sampling is commonly applied in social and behavioural research, particularly in studies involving online data collection, this is because it suitable to reach the targeted respondent faster and more effective. In addition, this technique is appropriate when the population is large and geographically dispersed, like Malaysian's Gen Z.

A total of 396 valid responses were collected and used for data analysis. This sample size exceeds the minimum recommended size for quantitative studies and is sufficient for conducting multivariate analyses such as factor analysis and multiple regression. According to Krejcie and Morgan (1970), a sample size of approximately 384 is adequate for large populations; therefore, the sample size achieved in this study is considered acceptable for statistical analysis.

However, it is explicitly acknowledged that the use of convenience sampling introduces certain limitations. As respondents were selected based on accessibility and willingness to participate, the sample may not be fully

representative of the entire Malaysian Generation Z population. Consequently, the findings may be subject to selection bias, and the results cannot be generalised to all Generation Z individuals in Malaysia. The findings should therefore be interpreted as context-specific insights into healthy eating intention rather than population-wide conclusions. Despite this limitation, convenience sampling remains appropriate for exploratory behavioural research where access to a comprehensive sampling frame is constrained, and it allows for the examination of theoretically driven relationships within the extended Theory of Planned Behaviour framework.

3.4 Research Instrument

Data were collected through a self-administered questionnaire that was structured and developed using the extended Theory of Planned Behaviour framework. It was modified with validated instruments from previous studies considering the environment of healthy eating for Generation Z in Malaysia. The questionnaire was designed in English and Malay to facilitate clear understanding. In an introductory section, the authors specified the purpose of the study, assured confidentiality, and informed respondents that participation was voluntary.

This questionnaire has six sections: - Section A: Demographic information (gender and age range) - Section B: Attitude towards healthy eating - Section C: Subjective norms - Section D: Perceived behavioural control - Section E: Personal norms - Section F: Intention to consume healthy foods All items in Sections B to F are measured using a seven-point Likert scale ranging from 1 (Strongly Disagree) to 7 (Strongly Agree).

In this section, we describe the measurement instruments used in the study. All constructs were considered reflective scales and all items were adopted from accepted and validated sources. Small modifications to the wording of these constructs were done to match the context of eating healthily but not to change the construct meaning.

3.4.1 Measurement of Study Variables

The measurement dimensions for attitude, subjective norms, perceived behavioural control, and intention to consume healthy foods were adopted from an established TPB-type tool (Al Mamun, 2020). Items involving personal norms were borrowed and adapted from a moral norm instrument (Article 21). Appendix A offers the complete list of questionnaire items and all constructs were measured on a seven-point Likert scale.

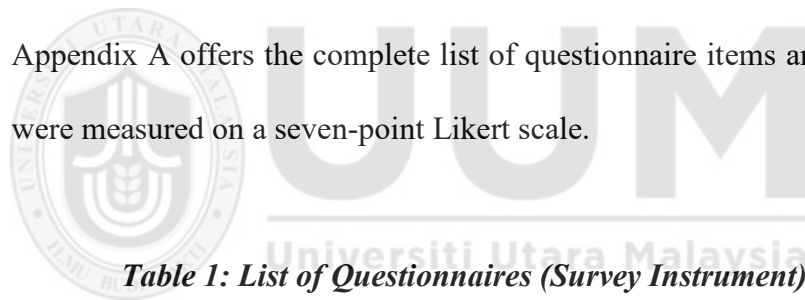


Table 1: List of Questionnaires (Survey Instrument)

Code	(Theory of Planned Behaviour (TPB) Constructs)	Source	Scale
	Items		
AHF1	Consuming healthy foods will improve my overall health.		
AHF2	Consuming healthy foods can prevent and reduce the risk of specific health conditions.		
AHF3	Consuming healthy foods is a preventive measure for certain illness.	Mamun et al. (2020)	7-point Likert
AHF4	Consuming healthy foods per day is not difficult.		
AHF5	Consuming healthy foods is in line with my food style.		

-
- SN1 My friends or colleagues think I should consume healthy foods.
- SN2 My family expects me to consume healthy foods.
- SN3 Most people I value would buy healthy foods.
- SN4 Most friends whose opinions regarding diet are important to me think that I should buy healthy foods.
- SN5 My doctor thinks I should consume healthy foods.
- SN6 The media encouragements make me think the best way one could become healthy is to consume healthy foods.
- PBC1 If I wanted to, I could buy healthy foods instead of non-healthy foods.
- PBC2 I think it is easy for me to buy healthy foods.
- PBC3 I have complete control over whether I consume healthy foods.
- PBC4 Whether I consume healthy foods is entirely up to me.

Code	Personal Norm (PN) Items	Source	Scale
PN1	I feel a moral obligation to consume healthy foods.	Entrena-	7-point
PN2	I would feel guilty if I did not choose healthy foods.	Durán et	Likert
PN3	I believe that consuming healthy foods is the right thing to do.	al. (2021)	
PN4	I feel personally responsible for maintaining a healthy diet.		
Code	Intention to Consume Healthy Eating (HE) Items	Source	Scale
HE1	I want to purchase healthy foods if they are available for purchase.		7-point Likert

HE2	I want to consume healthy foods if they available for purchase.	Entrena- Durán et
HE3	I intend to consume at least two servings of healthy foods per day.	al. (2021)
HE4	I intend to consume at least two servings healthy foods to have a balanced diet	
HE5	I intend to consume at least two servings healthy foods to protects me from being diagnosed with any medical condition	
HE6	I intend to consume at least two servings healthy foods to protects me from harming my health.	

3.4.2 Pre-test and Pilot Test

3.4.2.1 Pre-test

In this study before commencing the pilot study, a pre-test was provided for the clarity, wording, and structure of the questionnaire. This pre-test was carried out to verify that the questions were easy to understand and correctly worded for the research subjects. The pre-test feedback served as the basis for refining the questionnaire, which was modified to clarify the wording of items and to ensure consistency across sections.

3.4.2.2 Pilot test

To assess the reliability of the measurement instruments, a pilot test was administered prior to primary data collection. The pilot was conducted during the previous study on 30 eligible respondents recruited from the target

population. Reliability was explored for internal consistency using Cronbach's alpha. Reliability of all constructs showed satisfactory stability with values above the recommended level 0.70. This paper describes the findings of the reliability of the measurement scales that were employed in the full-scale study using these constructs, where Cronbach's Alpha results show that the attitudes were 0.817, those which were considered subjective norms were 0.903, and it calculated the perceived behavioural control were 0.714, while the personal norms were 0.806 and intention to consume healthy foods were 0.890 respectively. No items were removed from the sample after a pilot test.

Table 2: Pilot Test Result of Reliability Analysis for Pilot Test (N = 30)

Variables	No. of Items	Cronbach's Alpha
Attitude Toward Healthy Eating	5	0.817
Subjective Norm	6	0.903
Perceived Behavioural Control	5	0.714
Personal Norm	4	0.806
Intention Toward Healthy Eating	6	0.890

3.5 Data Collection Strategy

This research employs online survey method was conducted to collect data that was suitable for Generation Z respondents, which are very active on digital tools. The self-administered questionnaire was disseminated via different networks such

as WhatsApp, social media platforms such as Facebook Group, and relevant online groups and networks that matched the characteristics of the target population. The online strategy was chosen because it facilitated quicker implementation, low cost, and enabled the outreach to a geographically dispersed population within a limited time frame. Before taking part, respondents had been informed about the purpose of the study and that participation was voluntary, that their responses would be kept confidential, and that the data collected of them would serve only academic purposes. The survey link was displayed on networks where Generation Z individuals usually participate to boost response rates. Data were collected over a set time-frame until the required sample size was reached. Data were screened and cleaned after collecting, in order to eliminate incomplete, duplicate, or ineligible responses, hence 396 valid questionnaires were produced and analysed.

3.6 Data Analysis Technique

Statistical Package for the Social Sciences (SPSS) version 30. A statistical analysis was performed on the collected data in accordance with the aims of the study and to substantiate the proposed hypotheses. First, descriptive statistics were used to summarize the demographic characteristics of the respondents and to check the distribution of study variables. Secondly, factor analysis was performed to assess the construct validity of the measurement instruments and to ensure that the items loaded correctly on constructs. Reliability analysis (Cronbach's Alpha) was next used in order to assess the internal consistency of each construct.

Next, Pearson correlation analysis was employed to explore associations between the independent variables and intention to eat healthy foods. In addition, multiple regression analysis was performed to examine the influence of attitude,

subjective norms, perceived behavioural control and personal norms on intention towards healthy eating. These methodologies offered a rigorous evaluation of the measurement model as well as the proposed relationships within the extended Theory of Planned Behaviour framework.

As data were collected using a self-administered questionnaire from a single source at one point in time, the potential for common method bias may exist. To reduce this risk, measurement items were adapted from established instruments and subjected to factor analysis to confirm construct distinctiveness. Although the results indicated acceptable construct separation, common method bias cannot be entirely ruled out. This limitation is acknowledged, and future studies may apply additional procedural or statistical remedies, such as temporal separation or marker variables, to further minimise common method variance.

3.7 Chapter Summary

Firstly, the chapter presents the methods were used to carry out this study. As a result, the research methodology discussed research design, data collection methods, sampling design, sampling procedure, sampling frame, population, sample size, data analysis, and data processing. This chapter also discussed the research used to test the independent and dependent variables. by Multiple Regression and Pearson correlation coefficients analysis. In conclusion, all the sections in this chapter were already done, and a discussion of the assessment findings will be included in chapter 4.

CHAPTER FOUR

DATA ANALYSIS AND FINDINGS

4.1 Introduction

This chapter present analysis data and findings of the study that being gathered from set of questionnaires that distributed to the respondent which are Generations Z in Malaysia. And this analysis is purposely to answer all research objective and research question that have been highlighted in Chapter 1.

In this chapter also, the collected data were analysed using Statistical Package for the Social Sciences (SPSS) version 30, dan analysis method that been used consisting descriptive analysis, factor analysis, reliability analysis, correlation analysis, dan multiple regression analysis. Specify, this chapter explained the profile of respondent, review the statistic descriptive patterns for all variable, asses the validity dan reliability of interment also testing the relationship with TPB, Personal Norms and Intention towards healthy eating. The findings presented in this chapter provide empirical evidence to support the proposed extended Theory of Planned Behaviour model used in this study.

4.2 Profile of the Respondents

This section is stating the profile of respondent demographically that being included in this study. A total of 396 valid responses were successfully collected and analysed, dan the missing data or not qualified respondent have been filtered put by data cleaning before running the analysis.

4.2.1 Gender

The gender distribution of participants shows that 223 respondents (56.3%) are female respondents compared to 173 respondents (43.7%) who are male respondents, indicating a slightly higher participation rate among female respondents. Such distribution corroborates common patterns of participation identified in the field of online survey-based studies, especially in relation to health and lifestyle behaviours among Generation Z, and the gender composition of the sample is thus deemed adequate and illustrative for the purposes of this study.

Table 3 presents the gender distribution of respondents.

4.2.2 Age Group

In terms of age, the majority of respondents were aged 21–24 years (38.6%), followed by those aged 18–20 years (31.1%) and 25–28 years (30.3%). This distribution confirms that the respondents fall well within the defined Generation Z age range and adequately represent the target population of young adults in Malaysia.

The age distribution of respondents is summarised in Table 3.

4.2.3 Highest Education Level

Regarding educational background, respondents with the most were Bachelor's degree holders (36.1%), followed by Diploma holders (24.5%), SPM holders (19.7%), and STPM/Matriculation/Foundation qualifications (15.4%). This suggests that the majority of participants have (at least) secondary or tertiary

school education, demonstrating their ability to comprehend the items and concepts of the questionnaires for healthy eating.

Information about respondents' level of education is presented in Table 3.

4.2.4 Employment Status

In terms of occupation, college or university students were the largest group (42.4%), followed by full-time employees (29.8% of respondents), part-time workers (13.4%) and self-employed (8.6%) in the second and third groups, respectively. This would seem to be in line with Generation Z's characteristics, many of whom are either in the postsecondary process or early stage of their career.

Table 3 indicates the distribution rate of employment.

4.2.5 Monthly Income

Most respondents had a monthly income below RM1000 (47.2%), followed by RM1001-RM2000 (20.7%) and RM2001-RM3000 (15.9%). This income distribution is anticipated, since a large number of the respondents were students. Financial stressors may have an impact on respondents' motivation to eat healthily.

Table 3 shows the income profile of respondents.

Table 3: Demographic Profile Respondents (N = 396)

Variable	Category	Frequency	Percentage (%)	
Gender	Female	223	56.3	
	Male	173	43.7	
	Total	396	100.0	
Age	18–20 years old	123	31.1	
	21–24 years old	153	38.6	
	25–28 years old	120	30.3	
	Total	396	100.0	
Highest Education Level	Bachelor's Degree	143	36.1	
	Diploma	97	24.5	
	Master's Degree	15	3.8	
	PhD	1	0.3	
	SKM Level 3	1	0.3	
	SPM	78	19.7	
	STPM / Matriculation / Foundation	61	15.4	
	Total	396	100.0	
	Employment Status	College student	168	42.4
		Full-time employment	118	29.8
Part-time employment		53	13.4	

Variable	Category	Frequency	Percentage (%)
	Self-employed	34	8.6
	Unemployed	23	5.8
	Total	396	100.0
Monthly Income	Less than RM1000	187	47.2
	RM1001 – RM2000	82	20.7
	RM2001 – RM3000	63	15.9
	RM3001 – RM4000	42	10.6
	RM4001 – RM5000	16	4.0
	Above RM5001	6	1.5
	Total	396	100.0

Table 4: Descriptive Statistic od Respondent's Demographic Profiles (N = 396)

Demographic Variables	Valid (N)	Missing	Mean	Std. Deviation	Minimum	Maximum
Gender	396	0	1.44	0.497	1	2
Age	396	0	1.99	0.788	1	3
Highest Education Level	396	0	2.73	1.492	1	7

Employment Status	396	0	2.15	1.203	1	5
Monthly Income	396	0	2.42	1.218	1	6

4.3 Descriptive Statistics of Variables of Study

This chapter reports the descriptive statistics for the most relevant variables studied in the study: Attitude (AT), Subjective Norms (SN), Perceived Behavioural Control (PBC), Personal Norms (PN) and Intention Towards Healthy Eating (HE). In general, all constructs displayed relatively high mean scores (greater than 5.6) on a 7-point Likert scale indicative of a general positive attitude toward healthful eating among participants. More specifically, mean scores showed that Attitude (M = 6.01), Subjective Norms (M = 5.63), Perceived Behavioural Control (M = 5.61), Personal Norms (M = 5.78) and Intention Towards Healthy Eating (M = 5.90). These findings might indicate that the respondents are generally positive toward healthy eating, experience social encouragement, feel capable of eating healthily and feel moral responsibility to eat well, which are supported by stronger intentions to consume healthy foods. *The descriptive statistics for all variables in the study are provided in Table 4.*

4.4 Factor Analysis

Construct validity of measurement instruments and validity of the questionnaire items that measure the constructs intended were checked with factor analysis. The Kaiser–Meyer–Olkin (KMO) measure of sampling adequacy produced a value of 0.944, higher than the minimum threshold of 0.60 suggested. Bartlett’s Test of Sphericity was also significant ($p < 0.001$). These findings suggest that the

variables are amenable to factor analysis and that there is adequate correlation to warrant further evaluation.

KMO and Bartlett's Test results are summarized in Table 5.

4.4.1 Factor Analysis on Dependent Variable

As for the dependent variable, Intention Towards Healthy Eating, all variables that measured it (HE1–HE6) carried factor loadings (in accordance with the correlation reliability estimates) of greater than 0.64, which indicates a strong linkage between item and construct. This demonstrates that the items indeed measure a single underlying construct and intention variable is unidimensional and relevant to further inferential analyses. *The variable with factor loadings dependent on this variable is indicated in Table 5.*

Table 5: Results of Factor Analysis on Dependent Variable (Intention Towards Healthy Eating)

Items	Factor Loading
HE1	0.725
HE2	0.755
HE3	0.740
HE4	0.721
HE5	0.677
HE6	0.688

Statistic	Value
Eigenvalue	2.644
Percentage of Variance Explained (%)	44.07
KMO Measure of Sampling Adequacy	0.944
Bartlett's Test of Sphericity (χ^2)	6173.443
Sig.	0.000

4.4.2 Factor Analysis on Independent Variables

For the independent variables, the measurement items of Attitude, Subjective Norms, Perceived Behavioural Control and Personal Norms exhibited satisfactory factor loadings also, with most values over 0.50. The rotated component matrix confirms the theory of an extended Theory of Planned Behaviour method used in this investigation. *Table 6 reports factor loadings for the independent variables*

Table 6: Results of Factor Analysis on Independent Variables

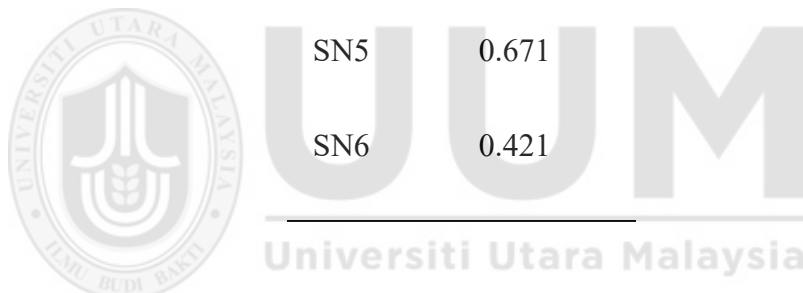
Attitude (AT)

Items	Factor Loading
AT1	0.684
AT2	0.744
AT3	0.777

AT4	0.613
AT5	0.593

Subjective Norms (SN)

Items	Factor Loading
SN1	0.673
SN2	0.665
SN3	0.587
SN4	0.713
SN5	0.671
SN6	0.421



Perceived Behavioural Control (PBC)

Items	Factor Loading
BC1	0.564
BC2	0.578
BC3	0.530
BC4	0.601
BC5	0.485

Personal Norms (PN)

Items	Factor Loading
PN1	0.524
PN2	0.772
PN3	0.639
PN4	0.510

Statistic	Value
Total Variance Explained (%)	61.01
KMO	0.944
Bartlett's Test of Sphericity	6173.443
Sig.	0.000

4.5 Reliability Analysis

Internal consistency of each construct was evaluated using Cronbach's Alpha for reliability analysis. Cronbach's Alpha achieved significant values for all variable analysis to the acceptable standard of 0.70, indicating good reliability. The Cronbach's Alpha values were as follows: Attitude ($\alpha = 0.785$), Subjective Norms ($\alpha = 0.863$), Perceived Behavioural Control ($\alpha = 0.788$), Personal Norms ($\alpha = 0.828$) and Intention Towards Healthy Eating ($\alpha = 0.894$). These results confirmed that measurement scales in their various forms are accurate, consistent and suitable for further inference.

Summary statistics of reliability are shown in Table 7.

Table 7: Results of Reliability Analysis

Variables	Mean	Std. Deviation	Number of Items	Cronbach's Alpha
Attitude	6.01	0.88	5	0.785
Subjective Norms	5.63	1.07	6	0.863
Perceived Behavioral Control	5.61	1.04	5	0.788
Personal Norms	5.78	1.02	4	0.828
Intention Towards Healthy Eating	5.90	0.95	6	0.894
Overall Scale	—	—	26	0.950

4.6 Inferential Statistics

4.6.1 Pearson Correlation

Using Pearson correlation analysis, we explored the associations of the independent variables with intention to eat well that emerged to explore the relationship of the predictor variables with the intention to eat healthily. It is concluded that Attitude, Subjective Norms, Perceived Behavioural Control, and Personal Norms have positive relationships with Intention to eat healthy that are statistically significant towards Healthy Eating ($p < 0.01$). These results indicate that positive attitudes, sociological impact, individual control and moral responsibility had a significant positive correlation with the intentions to

practise healthy eating behaviors for Gen Z respondents. *The correlation matrix is shown in Table 8.*

Table 8: Correlations Between Independent Variable and Dependent Variable (N = 396)

Variables	AT	SN	PBC	PN	HE
Attitude (AT)	1				
Subjective Norms (SN)	.702**	1			
Perceived Behavioral Control (PBC)	.734**	.710**	1		
Personal Norms (PN)	.685**	.642**	.653**	1	
Intention Towards Healthy Eating (HE)	.717**	.684**	.677**	.669**	1

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

4.6.2 Multiple Regression Analysis

To find out the relative effect of each independent variable on intention towards healthy eating, a multiple regression analysis was performed. Multiple regression analysis was conducted to examine the influence of attitude, subjective norms, perceived behavioural control, and personal norms on healthy eating intention among Malaysian Generation Z respondents.

The model was significant ($F = 158.513, p < 0.001$) and included 61.9% of the variance in intention ($R^2 = 0.619$). All independent variables were significant predictors of intention, attributing Attitude ($\beta = 0.290$) as the strongest predictor followed by Subjective Norms ($\beta = 0.224$), Personal Norms

($\beta = 0.222$) and Perceived Behavioural Control ($\beta = 0.160$). The conclusions of this analysis support the hypothesis that psychological and moral factors are important mediating factors when determining healthy eating intentions among Generation Z.

The regression model was statistically significant, indicating that the set of predictor variables collectively explains a meaningful proportion of variance in healthy eating intention. This suggests that the extended Theory of Planned Behaviour provides an appropriate framework for examining healthy eating intention within the study context. Attitude was found to be a significant predictor of healthy eating intention. This finding indicates that respondents who hold more positive evaluations toward healthy eating are more likely to intend to practise healthy eating behaviour. The result supports the core assumption of the Theory of Planned Behaviour that favourable behavioural evaluations strengthen intention formation. Among the predictors included in the model, attitude demonstrates a relatively strong influence, highlighting the importance of personal evaluation and belief in shaping healthy eating intention among Malaysian Generation Z.

Subjective norms were also found to be a significant predictor of healthy eating intention. This suggests that perceived social expectations from important referent groups, such as family members and peers, continue to play a role in shaping dietary intentions. However, the magnitude of the effect is comparatively weaker than that of attitude, indicating that while social influence remains relevant, healthy eating intention among Generation Z may be driven more strongly by personal evaluation than by external social pressure. Perceived behavioural control was found to have a significant but

comparatively weaker influence on healthy eating intention. This finding suggests that respondents' perceptions of their ability to practise healthy eating—such as access to healthy food, time availability, and affordability—do influence intention, but to a lesser extent than motivational factors. The result implies that although perceived control matters, psychological motivation may play a more dominant role in shaping intention within this population.

Personal norms emerged as a significant predictor of healthy eating intention, providing important empirical support for the extension of the Theory of Planned Behaviour. This finding indicates that internalised moral obligation and personal responsibility contribute meaningfully to individuals' motivation to engage in healthy eating behaviour. The significance of personal norms suggests that healthy eating intention among Malaysian Generation Z is influenced not only by rational evaluation and social expectations, but also by moral self-regulation. This result directly addresses the theoretical limitation of the original TPB framework by demonstrating the added value of incorporating personal norms.

Overall, the regression results indicate that the extended Theory of Planned Behaviour explains a substantial proportion of variance in healthy eating intention among Malaysian Generation Z. While attitude remains the most influential predictor, the significance of personal norms highlights the importance of moral considerations in dietary decision-making. These findings suggest that healthy eating intention is shaped by a combination of rational, social, control-related, and moral factors, thereby supporting the use of an

extended TPB framework in this study. *The multiple regression analysis is shown in Table 9.*

Table 9: Multiple Regression Analysis Results

R	R Square	Adjusted R Square	Std. Error of Estimate	F	Sig.
0.786	0.619	0.615	0.589	158.513	0.000

Predictor	Beta	t	Sig.
Attitude	0.290	5.551	0.000
Subjective Norms	0.224	4.567	0.000
Perceived Behavioural Control	0.160	3.112	0.002
Personal Norms	0.222	4.827	0.000

4.7 Conclusion and Summary

In conclusion, the research findings and research goals outlined in this chapter were well represented and addressed in this chapter. Overall, this study presents compelling empirical evidence for the expanded Theory of Planned Behaviour model and demonstrates how attitude, social influence, perceived behavioural control and personal norms all play an important role in determining Gen Z respondents' intention to eat healthily. Table 10 presents the hypothesis testing results derived from the multiple regression analysis, while the corresponding

SPSS output is provided in Appendix B. This chapter presents a summary of the results that are the foundation for the discussion and implications in the next chapter.

Table 10: Summary of All Hypotheses

Hypothesis	Hypothesis Statement	Remarks
H1	Attitude has a positive relationship with intention towards healthy eating	Supported
H2	Subjective norms have a positive relationship with intention towards healthy eating	Supported
H3	Perceived behavioural control has a positive relationship with intention towards healthy eating	Supported
H4	Personal norms have a positive relationship with intention towards healthy eating	Supported

CHAPTER FIVE

DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This study comprises the result of research that research objective being listed in Chapter 1 also presenting it in Chapter 4. This discussion focuses to relationship between independent variable towards healthy eating, personal norms with dependable variables. This chapter also includes discussion of limitation, implications also future research recommendation. And lastly, it concludes with conclusion of overall study.

5.2 Discussion

This section is discussing about the finding according to research objectives that stated in Chapter 1 and being testing empirically in Chapter 4. Based on the multiple regression analysis, the proposed research model explained a substantial proportion of variance in healthy eating intention, showing that research model is firm, and reliable for the study.

Results of analysis showed that all variables statistically significant predictors to intention of healthy eating. These results provide strong empirical support for the applicability of the extended Theory of Planned Behaviour in context of Malaysian's Gen Z.

The following subsections discuss each relationship in detail:

5.2.1 Attitude Toward Healthy Eating and Intention

Study findings showed that attitude towards healthy eating behaviour are significant and positive relationship with intention to adopt healthy eating habits. Based on the regression results in Chapter 4, attitude emerged as one of the strongest predictors, showing that crucial role or shaping the behaviour.

This showing that gen z has positive judgement about healthy eating, such as believing it improves health and well-being, tend to showing the strong intention to adopting healthy eating. This finding is consistent with the Theory of Planned Behaviour which posits that favourable attitudes lead to stronger behavioural intentions.

5.2.2 Subjective Norms and Intention

Subjective norms also have significance towards intention of healthy eating based on the statistical analysis conducted in this study. This indicates that perceived social pressure from family members, peers and important others playing vital roles in shaping intention of generation Z.

As generation that highly socially connected, Generation Z tend to having social force or influences when making lifestyle-related decisions. For this instance, moral support from social aspect will increased the tends of them to practise it.

5.2.3 Perceived Behavioural Control and Intention

Perceived behavioural control was found to have a significant positive relationship with intention to consume healthy foods among Generation Z respondents, this showing that confidence level of us and Perceived

behavioural control playing crucial role in the sharpening the intention. This result supports the Theory of Planned Behaviour, which suggests that individuals are more likely to intend to perform a behaviour when they perceive it as manageable and within their control (Ajzen, 1991)

In this study, respondents who believed that they had the ability and resources to practise healthy eating were more inclined to form stronger intentions, even have to face dengan challenge like time and cost. This finding is consistent with previous studies that identified perceived behavioural control as a significant predictor of healthy eating intention among young adults (Close et al., 2015; Mallah Boustani & Guiné, 2021).

5.2.4 Personal Norms and Intention

Personal norms also were founded that significantly determine the intent to consume healthy foods, showing that moral obligation playing crucial aspects in the intention making. This finding supports TPB expansion incorporating moral considerations into the model.

Respondents who felt a personal obligation to maintain healthy eating habits demonstrated stronger intentions to consume healthy foods, where value and self-believed influences the decision of their behaviour. (Thøgersen, 2006) and (Cardoso, 2022) emphasized that result of this study is in line with prior research that emphasised the role of personal norms in health-related behaviours.

This study examined the determinants of healthy eating intention among Malaysian Generation Z using the extended Theory of Planned Behaviour. Overall, the findings

confirm that attitude, subjective norms, perceived behavioural control, and personal norms significantly influence healthy eating intention. However, beyond confirming these relationships, the findings also reveal important limitations in explaining how intention is translated into actual behaviour.

Although personal norms were found to significantly predict healthy eating intention, their effect was weaker compared to attitude, suggesting that moral obligation alone may be insufficient to overcome structural constraints such as food cost, availability, and convenience. This indicates that while individuals may feel a personal responsibility to eat healthily, such moral motivation does not necessarily translate into action when external barriers remain present.

Similarly, the comparatively weaker influence of perceived behavioural control suggests the existence of an intention-behaviour gap, where individuals possess the motivation to eat healthily but face practical constraints that limit behavioural enactment. These constraints may include limited access to affordable healthy food options, time pressures due to academic or work commitments, and the widespread availability of convenient but unhealthy food alternatives.

Importantly, the findings do not explain actual healthy eating behaviour, as the study focuses on intention rather than behavioural outcomes. This highlights a key limitation of the current model and suggests that additional contextual and environmental factors beyond psychological determinants may be required to fully explain dietary behaviour among Malaysian Generation Z.

Taken together, the results indicate that while the extended Theory of Planned Behaviour provides meaningful insight into healthy eating intention, it does not fully capture the mechanisms through which intention is converted into sustained healthy eating behaviour. This reinforces the importance of interpreting the findings within

their theoretical and contextual boundaries rather than assuming direct behavioural outcomes.

5.3 Implication of the Study

The findings of this study generate meaningful implications for both theory and practice. By empirically validating the extended Theory of Planned Behaviour (TPB) in the context of healthy eating among Generation Z in Malaysia, this study contributes to the advancement of behavioural research and offers practical insights for health-related stakeholders.

5.3.1 Theoretical Implication

From theoretical view, this study contributes to literature by giving supporting towards application of the extended Theory of Planned Behaviour healthy eating diet by Malaysian's Gen Z context. The inclusion of personal norms strengthens the explanatory power of the TPB model dan make it highly of understanding about insider factors that influence the intention.

This study showing that intention of behaviour are not only influences by rational factor and social but also by moral considerations, surely this expanding the scope of theory application in healthy sector also the consumer behaviours

5.3.2 Practical Implication

The findings of this study suggest that practical interventions aimed at promoting healthy eating among Malaysian Generation Z should move beyond general awareness-raising and address both motivational and structural factors.

Rather than relying solely on broad health promotion messages, digital health campaigns should be designed to reinforce positive attitudes toward healthy eating by emphasising realistic, affordable, and time-efficient dietary choices. Social media platforms commonly used by Generation Z, such as Instagram and TikTok, may be leveraged to disseminate short, practical content on meal planning, budget-friendly healthy recipes, and time-saving food preparation strategies.

At the institutional level, universities and colleges can play an active role by integrating healthy food initiatives into campus environments. This may include increasing the availability of affordable healthy meal options, implementing nutrition-focused student programmes, and incorporating healthy eating messages into student orientation and wellness activities.

From a policy perspective, public health agencies may consider interventions that reduce structural barriers to healthy eating, such as subsidies for healthy food options or partnerships with food vendors to improve accessibility. These approaches acknowledge that while moral responsibility and positive attitudes are important, behavioural change is more likely when individuals are supported by enabling environments.

5.4 Limitations of the Study

Despite this study have been undergone as systematics as it can be, several limitations have been identified and acknowledge to evaluate outcome of the research. The observational framework, casual relationships cannot be firmly establishing within the variables. Other than that, usage of personal questionnaire may introduce some biases response dan sampling technique limit the generalisability finding to overall population of Gen Z in Malaysia. The constraints

fail to undermine this study's value but rather emphasizes possibilities to refinement and extension in future study.

5.5 Recommendation for Further Study

Further study is recommended with the aim of use longitudinal research designs to investigate or value of TPB from time to time. Future studies may also good to compromise additional variables such as digital media influence, anything that online medium of usage, nutritional knowledge also emotional factors to strengthens the model of research. Usage of qualitative approach like interview also can provide heavy and useful insight towards motivation and challenge of retrain for having healthy eating among Generation Z. The population of sample also should be broad not only north area focus only.

5.6 Conclusion

As for the conclusion, this study has succeeded to identified crucial factors that influences intention and healthy eating behaviour among Malaysian's Gen Z. The findings confirm that attitude, subjective norms, perceived behavioural control dan personal norms playing vital roles in shaping intention of adoption healthy eating behaviour. This study not only contribute to academic field but also provides practical and powerful guidance to development of strategies to promotes healthy lifestyles and diet to be more proven and sharper for younger generation.

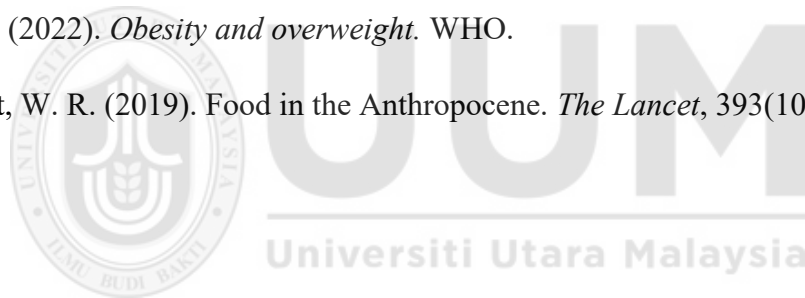
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APPENDIX A: SET OF QUESTIONNAIRES





**SCHOOL OF BUSINESS MANAGEMENT
MASTER OF SCIENCE (MANAGEMENT)**

**An Empirical Analysis of The Extended Theory of Planned Behaviour
Incorporating Personal Norms In Predicting Malaysian Generation Z's Adoption
Of Healthy Eating Habits**

*(Analisis Empirikal Teori Perancangan Tingkah Laku Yang Diperluas Dengan
Mengintegrasikan Norma Peribadi Dalam Meramalkan Amalan Pemakanan Sihat
Dalam Kalangan Generasi Z Malaysia)*

Dear respondents,

I am Nur Fatin binti Mohamad Atan, a Master of Science (Management) student from Universiti Utara Malaysia (UUM). I am conducting a survey on my master dissertation and humbly seek your kind cooperation to complete the questionnaire of my study. This study is required in completing my master program and it is about “An Empirical Analysis Of The Extended Theory Of Planned Behaviour Incorporating Personal Norms In Predicting Malaysian Generation Z's Adoption Of Healthy Eating Habits.”

This questionnaire will take approximately 5–10 minutes to complete. There are no right or wrong answers, please respond honestly based on your personal experiences. All information collected will be treated as **STRICTLY CONFIDENTIAL** and will only be used for academic and statistical purposes. Your identity will not be recorded or disclosed.

If you have any inquiries about the study, please feel free to contact me at:
Email: n.fatinnfa@gmail.com

Thank you very much for taking the time to complete this survey. Your participation is greatly appreciated, as your feedback will directly contribute to the generation of new knowledge. Each fully completed survey will be eligible for one entry into the lucky draw. The lucky draw winner will be announced once the required number of responses has been obtained, and the selected respondent will be contacted by the researcher for further notification.

Responden yang dihormati,

Saya Nur Fatin binti Mohamad Atan, pelajar Sarjana Sains (Pengurusan) dari Universiti Utara Malaysia (UUM). Saya sedang menjalankan satu kajian bagi tujuan disertasi sarjana dan dengan rendah hati memohon kerjasama anda untuk melengkapkan soal selidik ini. Kajian ini merupakan sebahagian daripada keperluan untuk menamatkan pengajian sarjana saya dan berkaitan dengan tajuk “Analisis Empirikal Teori Perancangan Tingkah Laku yang Diperluas dengan Mengintegrasikan Norma Peribadi dalam Meramalkan Amalan Pemakanan Sihat dalam Kalangan Generasi Z Malaysia.”

Soal selidik ini mengambil masa lebih kurang 5–10 minit untuk diselesaikan. Tiada jawapan yang betul atau salah—sila jawab dengan jujur berdasarkan pengalaman anda sendiri. Semua maklumat yang dikumpulkan akan dirahsiakan sepenuhnya (SULIT) dan hanya digunakan untuk tujuan akademik serta analisis statistik sahaja. Identiti anda tidak akan direkodkan atau didedahkan.

Sekiranya anda mempunyai sebarang pertanyaan mengenai kajian ini, sila hubungi saya di:

Emel: n.fatinnfa@gmail.com

Terima kasih atas kesudian anda meluangkan masa untuk menjawab soal selidik ini. Penyertaan anda amat dihargai kerana maklum balas anda akan menyumbang secara langsung kepada penjaan ilmu baharu. Setiap soal selidik yang lengkap sepenuhnya akan layak menerima satu penyertaan ke dalam cabutan bertuah. Pemenang cabutan bertuah akan diumumkan setelah jumlah respons yang diperlukan diperolehi, dan responden yang terpilih akan dihubungi oleh penyelidik untuk makluman lanjut.

Universiti Utara Malaysia

Yours sincerely,

Nur Fatin binti Mohamad Atan

Master of Science (Management)

School of Business Management College of Business

Universiti Utara Malaysia (UUM)

Section A: Screening Questions (Soalan Tapisan)

1) Were you born between 1997 and 2012 (Generation Z)? (*Adakah anda lahir antara tahun 1997 hingga 2012 (Generasi Z)?*)

- Yes (Ya)
- No (Tidak) → Thank you. This study is only for Generation Z respondents. *Terima kasih. Kajian ini hanya untuk responden Generasi Z.*

2) Are you a Malaysian citizen? (*Adakah anda warganegara Malaysia?*)

- Yes (Ya)
- No (Tidak) → Thank you. This study is only for Malaysian citizens. (*Terima kasih. Kajian ini hanya untuk rakyat Malaysia.*)

3) Are you currently residing (working/studying) in the Northern region? (*Adakah anda menetap (bekerja/belajar) di kawasan Utara?*)

- Yes (Ya)
- No (Tidak)



Section B: Demographic Questions (*Soalan Demografi*)

For each question, please select which appropriate answer or fill in the detail in the space provided.

(Untuk setiap soalan, pilih jawapan yang sesuai atau isikan butiran di ruang yang disediakan.)

1. Gender (Jantina)

- Male (Lelaki)**
- Female (Perempuan)**

2. Age (Umur)

- 18 - 20 years old (18 hingga 20 tahun)**
- 21 - 24 years old (21 hingga 24 tahun)**
- 25 - 28 years old (25 hingga 28 tahun)**
- Highest Education Level / Tahap Pendidikan Tertinggi**
- SPM**
- STPM / Matriculation / Foundation**
- Diploma**
- Bachelor's Degree (Ijazah Sarjana Muda)**
- Master's Degree (Ijazah Sarjana)**
- Other:**

3. Employment Status / Status Pekerjaan

- College Student (Pelajar Kolej)**
- Full-time Employment (Bekerja Sepenuh Masa)**
- Part-time Employment (Bekerja Separuh Masa)**
- Self-employed (Bekerja Sendiri)**
- Unemployed (Tidak Bekerja)**

4. Monthly Income / Allowance (Pendapatan Bulanan / Elaun)

- Less Than RM1000 (Kurang daripada RM1000)**
- RM1001 – RM2000 (RM1001 hingga RM2000)**

- RM2001 – RM3000 (RM2001 hingga RM3000)
- RM3001 – RM4000 (RM3001 hingga RM4000)
- RM4001 – RM5000 (RM4001 hingga RM5000)
- Above RM5001 (Lebih daripada RM5001)

Section C: Question for TPB (Attitude Towards Healthy Eating)

Please indicate your response to the following statements according to the scale below.

(Sila nyatakan jawapan anda terhadap pernyataan berikut mengikut skala di bawah.)

Strongly Disagree (Sangat Tidak Bersetuju)	Disagree (Tidak Bersetuju)	Somewhat Disagree (Sedikit Tidak Bersetuju)	Neutral (Berkecuali)	Somewhat Agree (Sedikit Setuju)	Agree (Setuju)	Strongly Agree (Sangat Setuju)
1	2	3	4	5	6	7

1. Consuming healthy foods will improve my overall health. (Mengambil makanan sihat akan meningkatkan kesihatan saya secara menyeluruh.)	1	2	3	4	5	6	7
2. Consuming healthy foods can prevent and reduce the risk of specific health conditions.							
3. Consuming healthy foods is a preventive measure for certain illness. (Mengambil makanan sihat merupakan langkah pencegahan bagi penyakit tertentu.)							
4. Consuming healthy foods per day is not difficult.							

(Mengambil makanan sihat setiap hari tidaklah sukar.)							
5. Consuming healthy foods is in line with my food style. (Mengambil makanan sihat adalah selaras dengan gaya pemakanan saya.)							

Section D: Question for TPB (Subjective Norms)

Please indicate your response to the following statements according to the scale below.

(Sila nyatakan jawapan anda terhadap pernyataan berikut mengikut skala di bawah.)

Strongly Disagree (Sangat Tidak Bersetuju)	Disagree (Tidak Bersetuju)	Somewhat Disagree (Sedikit Tidak Bersetuju)	Neutral (Berkecuali)	Somewhat Agree (Sedikit Setuju)	Agree (Setuju)	Strongly Agree (Sangat Setuju)
1	2	3	4	5	6	7

1. My friends or colleagues think I should consume healthy foods. (Rakan atau rakan sekerja saya berpendapat bahawa saya patut mengambil makanan sihat.)	1	2	3	4	5	6	7
2. My family expects me to consume healthy foods. (Keluarga saya mengharapkan saya untuk mengambil makanan sihat.)							
3. Most people I value would buy healthy foods.							

(Kebanyakan individu yang saya hargai akan membeli makanan sihat.)							
4. Most friends whose opinions regarding diet are important to me think that I should buy healthy foods. (Kebanyakan rakan yang pandangannya tentang diet penting bagi saya berpendapat bahawa saya patut membeli makanan sihat.)							
5. My doctor thinks I should consume healthy foods. (Doktor saya berpendapat bahawa saya patut mengambil makanan sihat.)							
6. The media encouragements make me think the best way one could become healthy is to consume healthy foods. (Galakan daripada media membuatkan saya berpendapat bahawa cara terbaik untuk menjadi sihat adalah dengan mengambil makanan sihat.)							

Section E: Question for TPB (Perceived Behaviour Control)

Please indicate your response to the following statements according to the scale below.

(Sila nyatakan jawapan anda terhadap pernyataan berikut mengikut skala di bawah.)

Strongly Disagree (Sangat Tidak Bersetuju)	Disagree (Tidak Bersetuju)	Somewhat Disagree (Sedikit Tidak Bersetuju)	Neutral (Berkecuali)	Somewhat Agree (Sedikit Setuju)	Agree (Setuju)	Strongly Agree (Sangat Setuju)
--	--------------------------------------	---	--------------------------------	---	--------------------------	--

1	2	3	4	5	6	7
---	---	---	---	---	---	---

<p>1. If I wanted to, I could buy healthy foods instead of non- healthy foods.</p> <p>(Jika saya mahu, saya boleh membeli makanan sihat sebagai ganti makanan tidak sihat.)</p>	1	2	3	4	5	6	7
<p>2. I think it's easy for me to buy healthy foods.</p> <p>(Saya fikir adalah mudah untuk saya membeli makanan sihat.)</p>							
<p>3. It's mostly up to me whether or not to buy healthy foods.</p> <p>(Keputusan untuk membeli atau tidak membeli makanan sihat adalah bergantung kepada saya sepenuhnya.)</p>							
<p>4. I have resources, time and opportunities to buy healthy foods.</p> <p>(Saya mempunyai sumber, masa dan peluang untuk membeli makanan sihat.)</p>							
<p>5. I am confident that if I want, I can buy healthy foods at place of conventional unhealthy foods.</p> <p>(Saya yakin bahawa jika saya mahu, saya boleh membeli makanan sihat di tempat yang biasanya menyediakan makanan tidak sihat.)</p>							

Section F: Question for Personals Norms

Please indicate your response to the following statements according to the scale below.

(Sila nyatakan jawapan anda terhadap pernyataan berikut mengikut skala di bawah.)

Strongly Disagree (Sangat Tidak Bersetuju)	Disagree (Tidak Bersetuju)	Somewhat Disagree (Sedikit Tidak Bersetuju)	Neutral (Berkecuali)	Somewhat Agree (Sedikit Setuju)	Agree (Setuju)	Strongly Agree (Sangat Setuju)
1	2	3	4	5	6	7

1. I feel a personal obligation to eat healthily. (Saya berasa mempunyai kewajipan peribadi untuk makan secara sihat.)	1	2	3	4	5	6	7
2. I would feel guilty if I did not try to eat healthily. (Saya akan berasa bersalah jika saya tidak berusaha untuk makan secara sihat.)							
3. I feel morally responsible for maintaining a healthy diet. (Saya berasa bertanggungjawab dari segi moral untuk mengekalkan pemakanan yang sihat.)							
4. I would feel bad about myself if I ignored healthy eating recommendations. (Saya akan berasa tidak baik terhadap diri sendiri jika saya mengabaikan saranan pemakanan sihat.)							

Section G: Questions for Intention to Consume Healthy Food

Please indicate your response to the following statements according to the scale below.

(Sila nyatakan jawapan anda terhadap pernyataan berikut mengikut skala di bawah.)

Strongly Disagree (Sangat Tidak Bersetuju)	Disagree (Tidak Bersetuju)	Somewhat Disagree (Sedikit Tidak Bersetuju)	Neutral (Berkecuali)	Somewhat Agree (Sedikit Setuju)	Agree (Setuju)	Strongly Agree (Sangat Setuju)
1	2	3	4	5	6	7

<p>1. I want to purchase healthy foods if they are available for purchase. (Saya ingin membeli makanan sihat jika ia tersedia untuk dibeli.)</p>	1	2	3	4	5	6	7
<p>2. I want to consume healthy foods if they are available for purchase. (Saya ingin mengambil makanan sihat jika ia tersedia untuk dibeli.)</p>							
<p>3. I intend to consume at least two servings of healthy foods per day. (Saya berhasrat untuk mengambil sekurang-kurangnya dua hidangan makanan sihat setiap hari.)</p>							
<p>4. I intend to consume at least two servings healthy foods to have a balanced diet. (Saya berhasrat untuk mengambil sekurang-kurangnya dua hidangan makanan sihat bagi mendapatkan diet yang seimbang.)</p>							

<p>5. I intend to consume at least two servings healthy foods to protects me from being diagnosed with any medical condition.</p> <p>(Saya berhasrat untuk mengambil sekurang-kurangnya dua hidangan makanan sihat untuk melindungi diri daripada didiagnosis dengan sebarang keadaan kesihatan.)</p>							
<p>6. I intend to consume at least two servings healthy foods to protects me from harming my health.</p> <p>(Saya berhasrat untuk mengambil sekurang-kurangnya dua hidangan makanan sihat untuk melindungi diri daripada menjejaskan kesihatan saya.)</p>							

Thank you for your kind participation!

Please choose your preferred method of contact if you are selected for the lucky draw:

Email: xx.xx@gmail.com (example)

WhatsApp: 017-0001122 (example)

(Please write your chosen option and the relevant contact information in the space below.)

Sila pilih kaedah hubungan yang anda inginkan sekiranya anda terpilih untuk cabutan bertuah:

Emel: xx.xx@gmail.com (contoh)

WhatsApp: 017-0001122 (contoh)

(Sila tuliskan pilihan anda dan maklumat tersebut di ruang bawah.)

APPENDIX B: SPSS STATISTIC OUTPUTS



FREQUENCIES VARIABLES=DG1 DG2 DG3 DG4 DG5
 /ORDER=ANALYSIS.

Frequencies

		Statistics				
		Gender	Age	Highest education level	Employment status	Monthly income
N	Valid	396	396	396	396	396
	Missing	0	0	0	0	0

Frequency Table

		Gender			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	223	56.3	56.3	56.3
	Male	173	43.7	43.7	100.0
	Total	396	100.0	100.0	

		Age			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18 - 20 years old	123	31.1	31.1	31.1
	21 - 24 years old	153	38.6	38.6	69.7
	25 - 28 years old	120	30.3	30.3	100.0
	Total	396	100.0	100.0	

Highest education level

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Bachelor's Degree	143	36.1	36.1	36.1
	Diploma	97	24.5	24.5	60.6
	Master's Degree	15	3.8	3.8	64.4
	PhD	1	0.3	0.3	64.6
	SKM Level 3	1	0.3	0.3	64.9
	SPM	78	19.7	19.7	84.6
	STPM / Matriculation / Foundation	61	15.4	15.4	100.0
	Total	396	100.0	100.0	

Employment status

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	College student	168	42.4	42.4	42.4
	Full-time employment	118	29.8	29.8	72.2
	Part-time employment	53	13.4	13.4	85.6
	Self-employed	34	8.6	8.6	94.2
	Unemployed	23	5.8	5.8	100.0
	Total	396	100.0	100.0	

Monthly income

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Above RM5001	6	1.5	1.5	1.5
	Less than RM1000	187	47.2	47.2	48.7
	RM1001 – RM2000	82	20.7	20.7	69.4
	RM2001 – RM3000	63	15.9	15.9	85.4
	RM3001 – RM4000	42	10.6	10.6	96.0
	RM4001 – RM5000	16	4.0	4.0	100.0
	Total	396	100.0	100.0	

FREQUENCIES VARIABLES=score.AT score.SN score.BC score.PN score.HE
 /STATISTICS=STDDEV VARIANCE MINIMUM MAXIMUM MEAN MEDIAN MODE SKEWNESS SESKEW KURTOSIS SEKURT
 /ORDER=ANALYSIS .

Frequencies

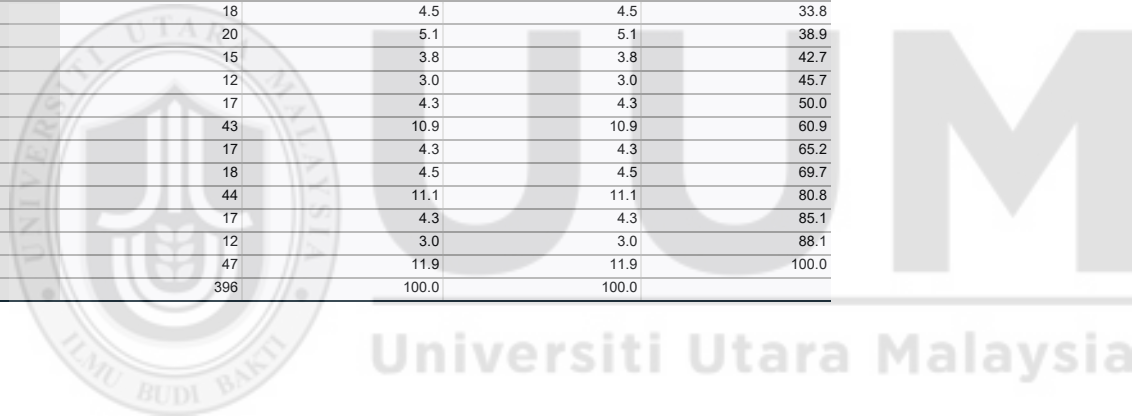
		Statistics				
		Attitude	Subjective Norms	Perceived Behavioral Control	Personal Norms	Intention Towards Healthy Eating
N	Valid	396	396	396	396	396
	Missing	0	0	0	0	0
Mean		6.0066	5.6334	5.6076	5.7828	5.9015
Median		6.2000	5.9167	5.8000	6.0000	6.0000
Mode		7.00	7.00	7.00	7.00	7.00
Std. Deviation		0.87973	1.06831	1.03706	1.02339	0.94808
Variance		0.774	1.141	1.075	1.047	0.899
Skewness		-1.481	-0.764	-0.841	-1.000	-1.085
Std. Error of Skewness		0.123	0.123	0.123	0.123	0.123
Kurtosis		3.623	0.332	0.747	1.264	1.792
Std. Error of Kurtosis		0.245	0.245	0.245	0.245	0.245
Minimum		1.00	1.00	1.00	1.00	1.00
Maximum		7.00	7.00	7.00	7.00	7.00

Frequency Table

		Attitude			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	1	0.3	0.3	0.3
	2.80	2	0.5	0.5	0.8
	3.00	2	0.5	0.5	1.3
	3.20	1	0.3	0.3	1.5
	3.40	3	0.8	0.8	2.3
	3.60	1	0.3	0.3	2.5
	3.80	2	0.5	0.5	3.0
	4.00	3	0.8	0.8	3.8
	4.20	3	0.8	0.8	4.5
	4.40	6	1.5	1.5	6.1
	4.60	6	1.5	1.5	7.6
	4.80	7	1.8	1.8	9.3
	5.00	15	3.8	3.8	13.1
	5.20	18	4.5	4.5	17.7
	5.40	16	4.0	4.0	21.7
	5.60	28	7.1	7.1	28.8
	5.80	30	7.6	7.6	36.4
	6.00	41	10.4	10.4	46.7
	6.20	43	10.9	10.9	57.6
	6.40	40	10.1	10.1	67.7
6.60	48	12.1	12.1	79.8	
6.80	10	2.5	2.5	82.3	
7.00	70	17.7	17.7	100.0	
Total		396	100.0	100.0	

Subjective Norms

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	1	0.3	0.3	0.3
	2.00	1	0.3	0.3	0.5
	2.33	1	0.3	0.3	0.8
	3.00	1	0.3	0.3	1.0
	3.17	3	0.8	0.8	1.8
	3.33	5	1.3	1.3	3.0
	3.50	1	0.3	0.3	3.3
	3.67	9	2.3	2.3	5.6
	3.83	5	1.3	1.3	6.8
	4.00	11	2.8	2.8	9.6
	4.17	8	2.0	2.0	11.6
	4.33	16	4.0	4.0	15.7
	4.50	10	2.5	2.5	18.2
	4.67	15	3.8	3.8	22.0
	4.83	15	3.8	3.8	25.8
	5.00	14	3.5	3.5	29.3
	5.17	18	4.5	4.5	33.8
	5.33	20	5.1	5.1	38.9
	5.50	15	3.8	3.8	42.7
	5.67	12	3.0	3.0	45.7
	5.83	17	4.3	4.3	50.0
	6.00	43	10.9	10.9	60.9
	6.17	17	4.3	4.3	65.2
	6.33	18	4.5	4.5	69.7
	6.50	44	11.1	11.1	80.8
	6.67	17	4.3	4.3	85.1
	6.83	12	3.0	3.0	88.1
7.00	47	11.9	11.9	100.0	
Total		396	100.0	100.0	



Perceived Behavioral Control

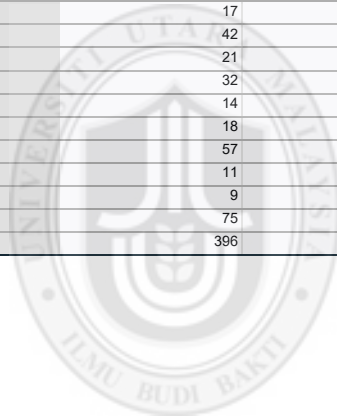
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	1	0.3	0.3	0.3
	2.00	1	0.3	0.3	0.5
	2.20	1	0.3	0.3	0.8
	2.60	1	0.3	0.3	1.0
	2.80	1	0.3	0.3	1.3
	3.00	4	1.0	1.0	2.3
	3.20	1	0.3	0.3	2.5
	3.40	1	0.3	0.3	2.8
	3.60	4	1.0	1.0	3.8
	3.80	7	1.8	1.8	5.6
	4.00	11	2.8	2.8	8.3
	4.20	12	3.0	3.0	11.4
	4.40	21	5.3	5.3	16.7
	4.60	22	5.6	5.6	22.2
	4.80	8	2.0	2.0	24.2
	5.00	19	4.8	4.8	29.0
	5.20	21	5.3	5.3	34.3
	5.40	22	5.6	5.6	39.9
	5.60	17	4.3	4.3	44.2
	5.80	40	10.1	10.1	54.3
	6.00	34	8.6	8.6	62.9
	6.20	27	6.8	6.8	69.7
	6.40	37	9.3	9.3	79.0
	6.60	35	8.8	8.8	87.9
	6.80	7	1.8	1.8	89.6
	7.00	41	10.4	10.4	100.0
	Total		396	100.0	100.0

Personal Norms

		Frequency	Percent	Valid Percent	Cumulative Percent	
Valid	1.00	1	0.3	0.3	0.3	
	2.00	1	0.3	0.3	0.5	
	2.75	3	0.8	0.8	1.3	
	3.00	1	0.3	0.3	1.5	
	3.25	5	1.3	1.3	2.8	
	3.50	5	1.3	1.3	4.0	
	3.75	3	0.8	0.8	4.8	
	4.00	8	2.0	2.0	6.8	
	4.25	11	2.8	2.8	9.6	
	4.50	15	3.8	3.8	13.4	
	4.75	16	4.0	4.0	17.4	
	5.00	24	6.1	6.1	23.5	
	5.25	23	5.8	5.8	29.3	
	5.50	34	8.6	8.6	37.9	
	5.75	39	9.8	9.8	47.7	
	6.00	47	11.9	11.9	59.6	
	6.25	18	4.5	4.5	64.1	
	6.50	56	14.1	14.1	78.3	
	6.75	16	4.0	4.0	82.3	
	7.00	70	17.7	17.7	100.0	
	Total		396	100.0	100.0	

Intention Towards Healthy Eating

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	1	0.3	0.3	0.3
	2.17	1	0.3	0.3	0.5
	3.17	2	0.5	0.5	1.0
	3.33	1	0.3	0.3	1.3
	3.50	2	0.5	0.5	1.8
	3.67	2	0.5	0.5	2.3
	3.83	3	0.8	0.8	3.0
	4.00	8	2.0	2.0	5.1
	4.17	9	2.3	2.3	7.3
	4.33	8	2.0	2.0	9.3
	4.50	1	0.3	0.3	9.6
	4.67	8	2.0	2.0	11.6
	4.83	12	3.0	3.0	14.6
	5.00	15	3.8	3.8	18.4
	5.17	8	2.0	2.0	20.5
	5.33	19	4.8	4.8	25.3
	5.50	17	4.3	4.3	29.5
	5.67	42	10.6	10.6	40.2
	5.83	21	5.3	5.3	45.5
	6.00	32	8.1	8.1	53.5
	6.17	14	3.5	3.5	57.1
	6.33	18	4.5	4.5	61.6
	6.50	57	14.4	14.4	76.0
6.67	11	2.8	2.8	78.8	
6.83	9	2.3	2.3	81.1	
7.00	75	18.9	18.9	100.0	
Total		396	100.0	100.0	



UUM
Universiti Utara Malaysia

FREQUENCIES VARIABLES=AT1 AT2 AT3 AT4 AT5
 /STATISTICS=STDDEV VARIANCE MINIMUM MAXIMUM MEAN MEDIAN MODE SKEWNESS SESKEW KURTOSIS SEKURT
 /ORDER=ANALYSIS.

Frequencies

		Statistics				
		AT1	AT2	AT3	AT4	AT5
N	Valid	396	396	396	396	396
	Missing	0	0	0	0	0
Mean		6.2904	6.1793	6.1187	5.6566	5.7879
Median		7.0000	7.0000	6.0000	6.0000	6.0000
Mode		7.00	7.00	7.00	7.00	7.00
Std. Deviation		1.07162	1.14546	1.09246	1.41179	1.24695
Variance		1.148	1.312	1.193	1.993	1.555
Skewness		-1.914	-2.011	-1.560	-1.209	-0.939
Std. Error of Skewness		0.123	0.123	0.123	0.123	0.123
Kurtosis		4.154	5.074	3.366	1.198	0.488
Std. Error of Kurtosis		0.245	0.245	0.245	0.245	0.245
Minimum		1.00	1.00	1.00	1.00	1.00
Maximum		7.00	7.00	7.00	7.00	7.00

Frequency Table

AT1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	2	0.5	0.5	0.5
	Disagree	1	0.3	0.3	0.8
	Somewhat disagree	10	2.5	2.5	3.3
	Neutral	16	4.0	4.0	7.3
	Somewhat agree	38	9.6	9.6	16.9
	Agree	100	25.3	25.3	42.2
	Strongly agree	229	57.8	57.8	100.0
	Total	396	100.0	100.0	

AT2

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	5	1.3	1.3	1.3
	Disagree	2	0.5	0.5	1.8
	Somewhat disagree	6	1.5	1.5	3.3
	Neutral	19	4.8	4.8	8.1
	Somewhat agree	42	10.6	10.6	18.7
	Agree	120	30.3	30.3	49.0
	Strongly agree	202	51.0	51.0	100.0
	Total	396	100.0	100.0	

AT3

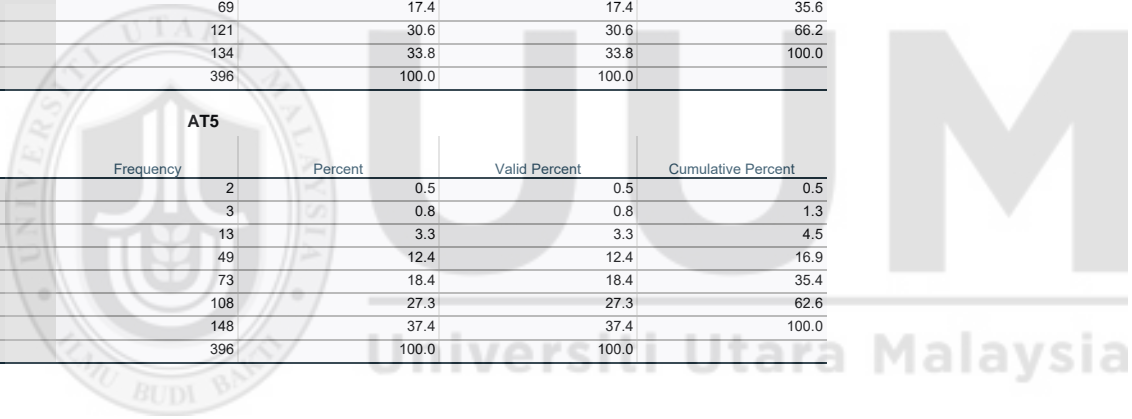
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	3	0.8	0.8	0.8
	Disagree	1	0.3	0.3	1.0
	Somewhat disagree	7	1.8	1.8	2.8
	Neutral	15	3.8	3.8	6.6
	Somewhat agree	73	18.4	18.4	25.0
	Agree	107	27.0	27.0	52.0
	Strongly agree	190	48.0	48.0	100.0
	Total	396	100.0	100.0	

AT4

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	8	2.0	2.0	2.0
	Disagree	5	1.3	1.3	3.3
	Somewhat disagree	23	5.8	5.8	9.1
	Neutral	36	9.1	9.1	18.2
	Somewhat agree	69	17.4	17.4	35.6
	Agree	121	30.6	30.6	66.2
	Strongly agree	134	33.8	33.8	100.0
	Total	396	100.0	100.0	

AT5

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	2	0.5	0.5	0.5
	Disagree	3	0.8	0.8	1.3
	Somewhat disagree	13	3.3	3.3	4.5
	Neutral	49	12.4	12.4	16.9
	Somewhat agree	73	18.4	18.4	35.4
	Agree	108	27.3	27.3	62.6
	Strongly agree	148	37.4	37.4	100.0
	Total	396	100.0	100.0	



```

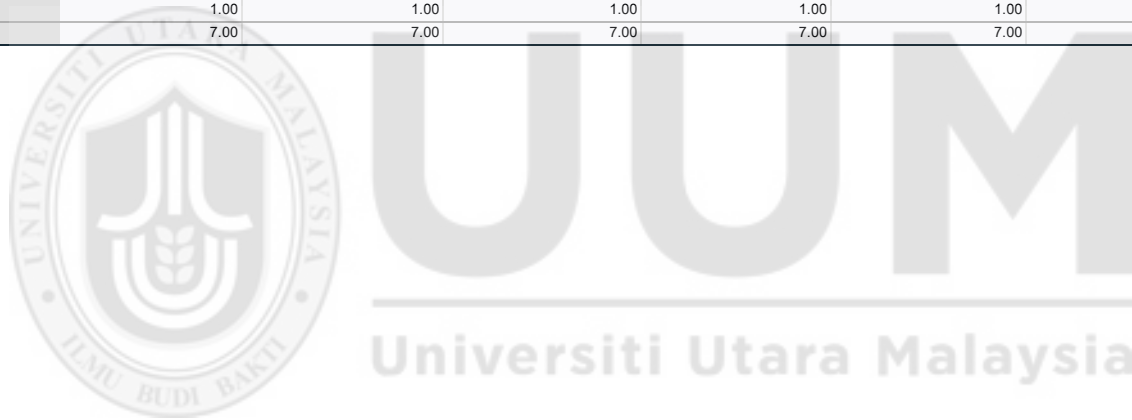
FREQUENCIES VARIABLES=SN1 SN2 SN3 SN4 SN5 SN6
/STATISTICS=STDDEV VARIANCE MINIMUM MAXIMUM MEAN MEDIAN MODE SKEWNESS SESKEW KURTOSIS SEKURT
/ORDER=ANALYSIS.

```

Frequencies

		Statistics					
		SN1	SN2	SN3	SN4	SN5	SN6
N	Valid	396	396	396	396	396	396
	Missing	0	0	0	0	0	0
Mean		5.5505	5.7096	5.3914	5.5657	5.7045	5.8788
Median		6.0000	6.0000	6.0000	6.0000	6.0000	6.0000
Mode		7.00	7.00	5.00 ^a	7.00	7.00	7.00
Std. Deviation		1.45131	1.42634	1.38923	1.39010	1.38567	1.27506
Variance		2.106	2.034	1.930	1.932	1.920	1.626
Skewness		-0.937	-1.099	-0.742	-0.850	-1.049	-1.274
Std. Error of Skewness		0.123	0.123	0.123	0.123	0.123	0.123
Kurtosis		0.293	0.467	0.078	0.073	0.439	1.497
Std. Error of Kurtosis		0.245	0.245	0.245	0.245	0.245	0.245
Minimum		1.00	1.00	1.00	1.00	1.00	1.00
Maximum		7.00	7.00	7.00	7.00	7.00	7.00

a. Multiple modes exist. The smallest value is shown



Frequency Table

SN1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	6	1.5	1.5	1.5
	Disagree	6	1.5	1.5	3.0
	Somewhat disagree	32	8.1	8.1	11.1
	Neutral	43	10.9	10.9	22.0
	Somewhat agree	74	18.7	18.7	40.7
	Agree	103	26.0	26.0	66.7
	Strongly agree	132	33.3	33.3	100.0
	Total	396	100.0	100.0	

SN2

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	4	1.0	1.0	1.0
	Disagree	5	1.3	1.3	2.3
	Somewhat disagree	38	9.6	9.6	11.9
	Neutral	26	6.6	6.6	18.4
	Somewhat agree	60	15.2	15.2	33.6
	Agree	112	28.3	28.3	61.9
	Strongly agree	151	38.1	38.1	100.0
	Total	396	100.0	100.0	

SN3

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	4	1.0	1.0	1.0
	Disagree	8	2.0	2.0	3.0
	Somewhat disagree	33	8.3	8.3	11.4
	Neutral	45	11.4	11.4	22.7
	Somewhat agree	102	25.8	25.8	48.5
	Agree	102	25.8	25.8	74.2
	Strongly agree	102	25.8	25.8	100.0
	Total	396	100.0	100.0	

SN4

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	3	0.8	0.8	0.8
	Disagree	7	1.8	1.8	2.5
	Somewhat disagree	28	7.1	7.1	9.6
	Neutral	50	12.6	12.6	22.2
	Somewhat agree	72	18.2	18.2	40.4
	Agree	109	27.5	27.5	67.9
	Strongly agree	127	32.1	32.1	100.0
	Total	396	100.0	100.0	

SN5

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	3	0.8	0.8	0.8
	Disagree	6	1.5	1.5	2.3
	Somewhat disagree	31	7.8	7.8	10.1
	Neutral	33	8.3	8.3	18.4
	Somewhat agree	65	16.4	16.4	34.8
	Agree	112	28.3	28.3	63.1
	Strongly agree	146	36.9	36.9	100.0
	Total	396	100.0	100.0	

SN6

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	4	1.0	1.0	1.0
	Disagree	2	0.5	0.5	1.5
	Somewhat disagree	18	4.5	4.5	6.1
	Neutral	32	8.1	8.1	14.1
	Somewhat agree	64	16.2	16.2	30.3
	Agree	114	28.8	28.8	59.1
	Strongly agree	162	40.9	40.9	100.0
	Total	396	100.0	100.0	

FREQUENCIES VARIABLES=BC1 BC2 BC3 BC4 BC5
 /STATISTICS=STDDEV VARIANCE MINIMUM MAXIMUM MEAN MEDIAN MODE SKEWNESS SESKEW KURTOSIS SEKURT
 /ORDER=ANALYSIS.

Frequencies

Statistics

		BC1	BC2	BC3	BC4	BC5
N	Valid	396	396	396	396	396
	Missing	0	0	0	0	0
Mean		5.8485	5.4394	5.9369	5.5025	5.3106
Median		6.0000	6.0000	6.0000	6.0000	6.0000
Mode		7.00	6.00	7.00	7.00	6.00
Std. Deviation		1.39339	1.45441	1.25024	1.37702	1.55311
Variance		1.942	2.115	1.563	1.896	2.412
Skewness		-1.432	-0.944	-1.271	-0.874	-0.858
Std. Error of Skewness		0.123	0.123	0.123	0.123	0.123
Kurtosis		1.665	0.377	1.368	0.445	0.020
Std. Error of Kurtosis		0.245	0.245	0.245	0.245	0.245
Minimum		1.00	1.00	1.00	1.00	1.00
Maximum		7.00	7.00	7.00	7.00	7.00

Frequency Table

BC1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	7	1.8	1.8	1.8
	Disagree	3	0.8	0.8	2.5
	Somewhat disagree	26	6.6	6.6	9.1
	Neutral	28	7.1	7.1	16.2
	Somewhat agree	43	10.9	10.9	27.0
	Agree	125	31.6	31.6	58.6
	Strongly agree	164	41.4	41.4	100.0
	Total	396	100.0	100.0	

BC2

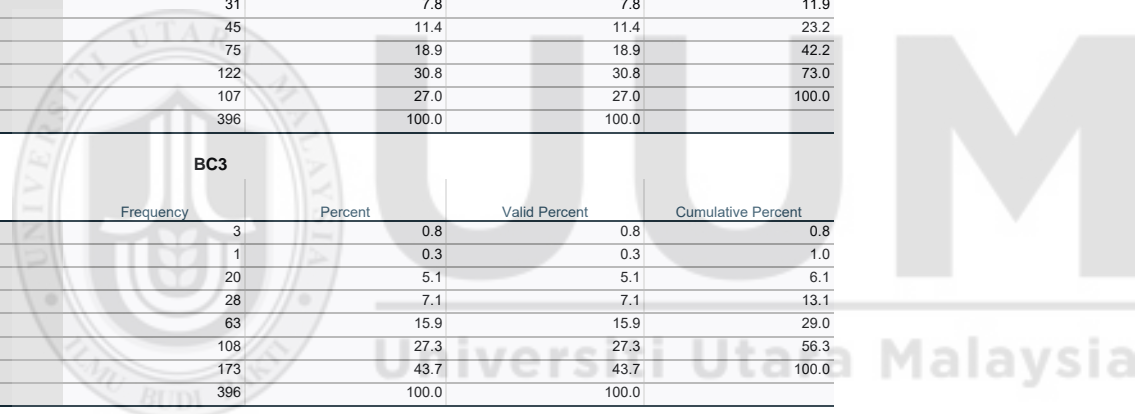
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	7	1.8	1.8	1.8
	Disagree	9	2.3	2.3	4.0
	Somewhat disagree	31	7.8	7.8	11.9
	Neutral	45	11.4	11.4	23.2
	Somewhat agree	75	18.9	18.9	42.2
	Agree	122	30.8	30.8	73.0
	Strongly agree	107	27.0	27.0	100.0
	Total	396	100.0	100.0	

BC3

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	3	0.8	0.8	0.8
	Disagree	1	0.3	0.3	1.0
	Somewhat disagree	20	5.1	5.1	6.1
	Neutral	28	7.1	7.1	13.1
	Somewhat agree	63	15.9	15.9	29.0
	Agree	108	27.3	27.3	56.3
	Strongly agree	173	43.7	43.7	100.0
	Total	396	100.0	100.0	

BC4

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	6	1.5	1.5	1.5
	Disagree	2	0.5	0.5	2.0
	Somewhat disagree	33	8.3	8.3	10.4
	Neutral	39	9.8	9.8	20.2
	Somewhat agree	97	24.5	24.5	44.7
	Agree	104	26.3	26.3	71.0
	Strongly agree	115	29.0	29.0	100.0
	Total	396	100.0	100.0	



BC5

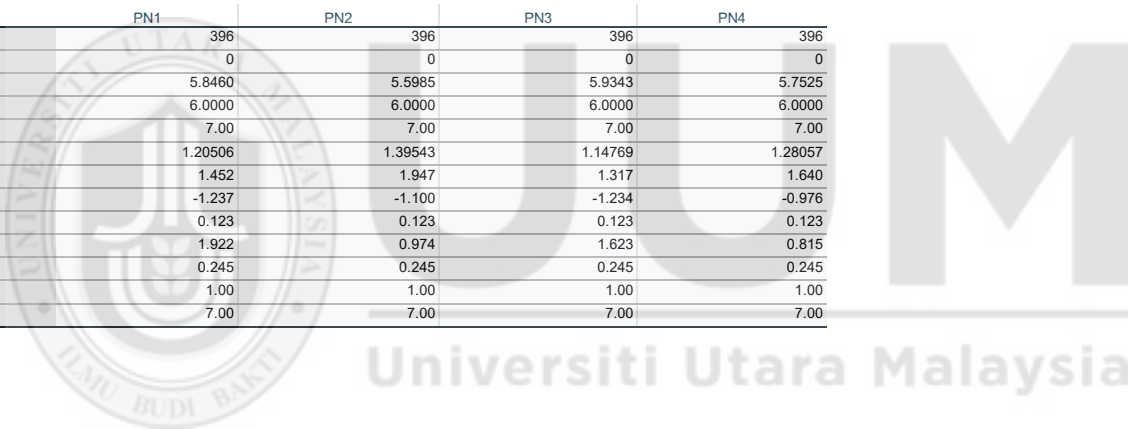
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	10	2.5	2.5	2.5
	Disagree	11	2.8	2.8	5.3
	Somewhat disagree	39	9.8	9.8	15.2
	Neutral	49	12.4	12.4	27.5
	Somewhat agree	66	16.7	16.7	44.2
	Agree	119	30.1	30.1	74.2
	Strongly agree	102	25.8	25.8	100.0
	Total	396	100.0	100.0	

FREQUENCIES VARIABLES=PN1 PN2 PN3 PN4
 /STATISTICS=STDDEV VARIANCE MINIMUM MAXIMUM MEAN MEDIAN MODE SKEWNESS SESKEW KURTOSIS SEKURT
 /ORDER=ANALYSIS .

Frequencies

Statistics

		PN1	PN2	PN3	PN4
N	Valid	396	396	396	396
	Missing	0	0	0	0
Mean		5.8460	5.5985	5.9343	5.7525
Median		6.0000	6.0000	6.0000	6.0000
Mode		7.00	7.00	7.00	7.00
Std. Deviation		1.20506	1.39543	1.14769	1.28057
Variance		1.452	1.947	1.317	1.640
Skewness		-1.237	-1.100	-1.234	-0.976
Std. Error of Skewness		0.123	0.123	0.123	0.123
Kurtosis		1.922	0.974	1.623	0.815
Std. Error of Kurtosis		0.245	0.245	0.245	0.245
Minimum		1.00	1.00	1.00	1.00
Maximum		7.00	7.00	7.00	7.00



Frequency Table

PN1

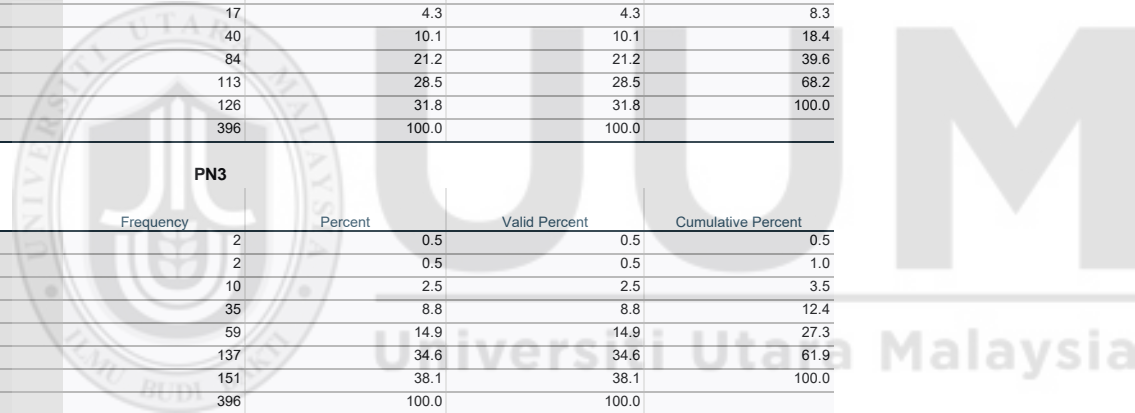
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	4	1.0	1.0	1.0
	Disagree	3	0.8	0.8	1.8
	Somewhat disagree	7	1.8	1.8	3.5
	Neutral	38	9.6	9.6	13.1
	Somewhat agree	76	19.2	19.2	32.3
	Agree	124	31.3	31.3	63.6
	Strongly agree	144	36.4	36.4	100.0
	Total	396	100.0	100.0	

PN2

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	6	1.5	1.5	1.5
	Disagree	10	2.5	2.5	4.0
	Somewhat disagree	17	4.3	4.3	8.3
	Neutral	40	10.1	10.1	18.4
	Somewhat agree	84	21.2	21.2	39.6
	Agree	113	28.5	28.5	68.2
	Strongly agree	126	31.8	31.8	100.0
	Total	396	100.0	100.0	

PN3

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	2	0.5	0.5	0.5
	Disagree	2	0.5	0.5	1.0
	Somewhat disagree	10	2.5	2.5	3.5
	Neutral	35	8.8	8.8	12.4
	Somewhat agree	59	14.9	14.9	27.3
	Agree	137	34.6	34.6	61.9
	Strongly agree	151	38.1	38.1	100.0
	Total	396	100.0	100.0	



PN4

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	4	1.0	1.0	1.0
	Disagree	2	0.5	0.5	1.5
	Somewhat disagree	13	3.3	3.3	4.8
	Neutral	47	11.9	11.9	16.7
	Somewhat agree	86	21.7	21.7	38.4
	Agree	95	24.0	24.0	62.4
	Strongly agree	149	37.6	37.6	100.0
	Total	396	100.0	100.0	

FREQUENCIES VARIABLES=HE1 HE2 HE3 HE4 HE5 HE6
 /STATISTICS=STDDEV VARIANCE MINIMUM MAXIMUM MEAN MEDIAN MODE SKEWNESS SESKEW KURTOSIS SEKURT
 /ORDER=ANALYSIS .

Frequencies

		Statistics					
		HE1	HE2	HE3	HE4	HE5	HE6
N	Valid	396	396	396	396	396	396
	Missing	0	0	0	0	0	0
Mean		5.9293	6.0177	5.8131	5.8561	5.8586	5.9343
Median		6.0000	6.0000	6.0000	6.0000	6.0000	6.0000
Mode		7.00	7.00	7.00	6.00	7.00	7.00
Std. Deviation		1.18002	1.10107	1.27107	1.15703	1.20975	1.10269
Variance		1.392	1.212	1.616	1.339	1.463	1.216
Skewness		-1.210	-1.282	-1.080	-1.175	-1.270	-1.111
Std. Error of Skewness		0.123	0.123	0.123	0.123	0.123	0.123
Kurtosis		1.737	1.863	0.828	1.674	2.052	1.553
Std. Error of Kurtosis		0.245	0.245	0.245	0.245	0.245	0.245
Minimum		1.00	1.00	1.00	1.00	1.00	1.00
Maximum		7.00	7.00	7.00	7.00	7.00	7.00

Frequency Table

		HE1			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	3	0.8	0.8	0.8
	Disagree	2	0.5	0.5	1.3
	Somewhat disagree	9	2.3	2.3	3.5
	Neutral	29	7.3	7.3	10.9
	Somewhat agree	84	21.2	21.2	32.1
	Agree	105	26.5	26.5	58.6
	Strongly agree	164	41.4	41.4	100.0
	Total	396	100.0	100.0	

HE2

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	1	0.3	0.3	0.3
	Disagree	4	1.0	1.0	1.3
	Somewhat disagree	5	1.3	1.3	2.5
	Neutral	29	7.3	7.3	9.8
	Somewhat agree	64	16.2	16.2	26.0
	Agree	128	32.3	32.3	58.3
	Strongly agree	165	41.7	41.7	100.0
	Total	396	100.0	100.0	

HE3

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	2	0.5	0.5	0.5
	Disagree	5	1.3	1.3	1.8
	Somewhat disagree	17	4.3	4.3	6.1
	Neutral	35	8.8	8.8	14.9
	Somewhat agree	76	19.2	19.2	34.1
	Agree	108	27.3	27.3	61.4
	Strongly agree	153	38.6	38.6	100.0
	Total	396	100.0	100.0	

HE4

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	3	0.8	0.8	0.8
	Disagree	1	0.3	0.3	1.0
	Somewhat disagree	10	2.5	2.5	3.5
	Neutral	38	9.6	9.6	13.1
	Somewhat agree	68	17.2	17.2	30.3
	Agree	140	35.4	35.4	65.7
	Strongly agree	136	34.3	34.3	100.0
	Total	396	100.0	100.0	

HE5

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	4	1.0	1.0	1.0
	Disagree	4	1.0	1.0	2.0
	Somewhat disagree	6	1.5	1.5	3.5
	Neutral	35	8.8	8.8	12.4
	Somewhat agree	80	20.2	20.2	32.6
	Agree	119	30.1	30.1	62.6
	Strongly agree	148	37.4	37.4	100.0
	Total	396	100.0	100.0	

HE6

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	2	0.5	0.5	0.5
	Disagree	1	0.3	0.3	0.8
	Somewhat disagree	7	1.8	1.8	2.5
	Neutral	31	7.8	7.8	10.4
	Somewhat agree	79	19.9	19.9	30.3
	Agree	126	31.8	31.8	62.1
	Strongly agree	150	37.9	37.9	100.0
	Total	396	100.0	100.0	



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RELIABILITY

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/VARIABLES=AT1 AT2 AT3 AT4 AT5 SN1 SN2 SN3 SN4 SN5 SN6 BC1 BC2 BC3 BC4 BC5 PN1 PN2 PN3 PN4 HE1
HE2 HE3 HE4 HE5 HE6
/SCALE('OVERALL') ALL
/MODEL=ALPHA
/STATISTICS=DESCRIPTIVE SCALE
/SUMMARY=TOTAL.
    
```

Reliability

Scale: OVERALL

Case Processing Summary

		N	%
Cases	Valid	396	100.0
	Excluded ^a	0	0.0
	Total	396	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
0.950	26

Item Statistics

	Mean	Std. Deviation	N
AT1	6.2904	1.07162	396
AT2	6.1793	1.14546	396
AT3	6.1187	1.09246	396
AT4	5.6566	1.41179	396
AT5	5.7879	1.24695	396
SN1	5.5505	1.45131	396
SN2	5.7096	1.42634	396
SN3	5.3914	1.38923	396
SN4	5.5657	1.39010	396
SN5	5.7045	1.38567	396
SN6	5.8788	1.27506	396
BC1	5.8485	1.39339	396
BC2	5.4394	1.45441	396
BC3	5.9369	1.25024	396
BC4	5.5025	1.37702	396
BC5	5.3106	1.55311	396
PN1	5.8460	1.20506	396
PN2	5.5985	1.39543	396
PN3	5.9343	1.14769	396
PN4	5.7525	1.28057	396
HE1	5.9293	1.18002	396
HE2	6.0177	1.10107	396
HE3	5.8131	1.27107	396
HE4	5.8561	1.15703	396
HE5	5.8586	1.20975	396
HE6	5.9343	1.10269	396

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
AT1	144.1212	470.107	0.612	0.948
AT2	144.2323	470.265	0.566	0.949
AT3	144.2929	469.646	0.609	0.948
AT4	144.7551	460.646	0.611	0.948
AT5	144.6237	462.691	0.661	0.948
SN1	144.8611	455.315	0.682	0.947
SN2	144.7020	460.762	0.603	0.948
SN3	145.0202	459.898	0.635	0.948
SN4	144.8460	456.966	0.686	0.947
SN5	144.7071	459.899	0.637	0.948
SN6	144.5328	464.326	0.614	0.948
BC1	144.5631	458.864	0.651	0.948
BC2	144.9722	454.776	0.690	0.947
BC3	144.4747	467.951	0.558	0.949
BC4	144.9091	458.812	0.661	0.948
BC5	145.1010	465.813	0.469	0.950
PN1	144.5657	462.272	0.694	0.947
PN2	144.8131	463.119	0.576	0.949
PN3	144.4773	465.592	0.662	0.948
PN4	144.6591	463.375	0.629	0.948
HE1	144.4823	463.653	0.682	0.948
HE2	144.3939	464.442	0.717	0.947
HE3	144.5985	459.664	0.705	0.947
HE4	144.5556	464.242	0.684	0.948
HE5	144.5530	465.139	0.634	0.948
HE6	144.4773	467.622	0.647	0.948

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
150.4116	499.691	22.35377	26

```
RELIABILITY
/VARIABLES=AT1 AT2 AT3 AT4 AT5
/SCALE('ATTITUDE') ALL
/MODEL=ALPHA
/STATISTICS=DESCRIPTIVE SCALE
/SUMMARY=TOTAL.
```

Reliability

Scale: ATTITUDE

Case Processing Summary

		N	%
Cases	Valid	396	100.0
	Excluded ^a	0	0.0
	Total	396	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
0.785	5

Item Statistics

	Mean	Std. Deviation	N
AT1	6.2904	1.07162	396
AT2	6.1793	1.14546	396
AT3	6.1187	1.09246	396
AT4	5.6566	1.41179	396
AT5	5.7879	1.24695	396

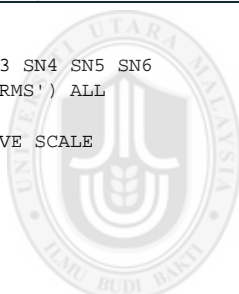
Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
AT1	23.7424	13.275	0.631	0.725
AT2	23.8535	13.108	0.594	0.734
AT3	23.9141	13.431	0.590	0.737
AT4	24.3763	12.914	0.438	0.796
AT5	24.2449	12.520	0.598	0.732

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
30.0328	19.348	4.39867	5

```
RELIABILITY
/VARIABLES=SN1 SN2 SN3 SN4 SN5 SN6
/SCALE('SUBJECTIVE NORMS') ALL
/MODEL=ALPHA
/STATISTICS=DESCRIPTIVE SCALE
/SUMMARY=TOTAL.
```



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Reliability

Scale: SUBJECTIVE NORMS

Case Processing Summary

Cases		N	%
		Valid	396
	Excluded ^a	0	0.0
	Total	396	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
0.863	6

Item Statistics

	Mean	Std. Deviation	N
SN1	5.5505	1.45131	396
SN2	5.7096	1.42634	396
SN3	5.3914	1.38923	396
SN4	5.5657	1.39010	396
SN5	5.7045	1.38567	396
SN6	5.8788	1.27506	396

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
SN1	28.2500	28.244	0.696	0.832
SN2	28.0909	29.389	0.625	0.845
SN3	28.4091	29.766	0.619	0.846
SN4	28.2348	28.089	0.751	0.822
SN5	28.0960	28.968	0.684	0.835
SN6	27.9217	31.439	0.561	0.855

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
33.8005	41.087	6.40989	6

```
RELIABILITY
/VARIABLES=BC1 BC2 BC3 BC4 BC5
/SCALE('PERCEIVED BEHAVIORAL CONTROL') ALL
/MODEL=ALPHA
/STATISTICS=DESCRIPTIVE SCALE
/SUMMARY=TOTAL.
```

Reliability

Scale: PERCEIVED BEHAVIORAL CONTROL

Case Processing Summary

Cases		N	%
		Valid	396
	Excluded ^a	0	0.0
	Total	396	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
0.788	5

Item Statistics

	Mean	Std. Deviation	N
BC1	5.8485	1.39339	396
BC2	5.4394	1.45441	396
BC3	5.9369	1.25024	396
BC4	5.5025	1.37702	396
BC5	5.3106	1.55311	396

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
BC1	22.1894	18.159	0.571	0.747
BC2	22.5985	17.167	0.631	0.727
BC3	22.1010	19.423	0.536	0.759
BC4	22.5354	17.541	0.646	0.723
BC5	22.7273	18.300	0.465	0.786

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
28.0379	26.887	5.18528	5

```

RELIABILITY
/VARIABLES=PN1 PN2 PN3 PN4
/SCALE('PERSONAL NORMS') ALL
/MODEL=ALPHA
/STATISTICS=DESCRIPTIVE SCALE
/SUMMARY=TOTAL.

```

Reliability

Scale: PERSONAL NORMS

Case Processing Summary

		N	%
Cases	Valid	396	100.0
	Excluded ^a	0	0.0
	Total	396	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
0.828	4

Item Statistics

	Mean	Std. Deviation	N
PN1	5.8460	1.20506	396
PN2	5.5985	1.39543	396
PN3	5.9343	1.14769	396
PN4	5.7525	1.28057	396

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
PN1	17.2854	10.427	0.627	0.794
PN2	17.5328	9.105	0.677	0.774
PN3	17.1970	10.265	0.704	0.764
PN4	17.3788	10.074	0.620	0.798

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
23.1313	16.757	4.09358	4

```

RELIABILITY
/VARIABLES=HE1 HE2 HE3 HE4 HE5 HE6
/SCALE('INTENTION TOWARDS HEALTHY EATING') ALL
/MODEL=ALPHA
/STATISTICS=DESCRIPTIVE SCALE
/SUMMARY=TOTAL.

```

Reliability

Scale: INTENTION TOWARDS HEALTHY EATING

Case Processing Summary

		N	%
Cases	Valid	396	100.0
	Excluded ^a	0	0.0
	Total	396	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
0.894	6

Item Statistics

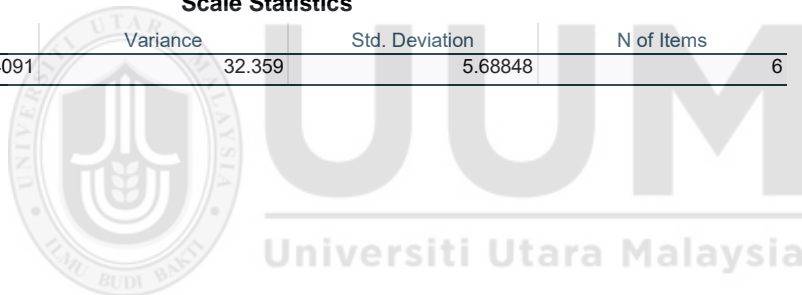
	Mean	Std. Deviation	N
HE1	5.9293	1.18002	396
HE2	6.0177	1.10107	396
HE3	5.8131	1.27107	396
HE4	5.8561	1.15703	396
HE5	5.8586	1.20975	396
HE6	5.9343	1.10269	396

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
HE1	29.4798	23.217	0.681	0.881
HE2	29.3914	23.439	0.723	0.875
HE3	29.5960	22.150	0.718	0.876
HE4	29.5530	22.800	0.744	0.872
HE5	29.5505	22.486	0.733	0.873
HE6	29.4747	23.582	0.706	0.878

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
35.4091	32.359	5.68848	6



```

FACTOR
/VARIABLES AT1 AT2 AT3 AT4 AT5 SN1 SN2 SN3 SN4 SN5 SN6 BC1 BC2 BC3 BC4 BC5 PN1 PN2 PN3 PN4 HE1
HE2 HE3 HE4 HE5 HE6
/MISSING LISTWISE
/ANALYSIS AT1 AT2 AT3 AT4 AT5 SN1 SN2 SN3 SN4 SN5 SN6 BC1 BC2 BC3 BC4 BC5 PN1 PN2 PN3 PN4 HE1 HE2
HE3 HE4 HE5 HE6
/PRINT INITIAL KMO EXTRACTION ROTATION
/FORMAT BLANK(.40)
/PLOT EIGEN ROTATION
/CRITERIA MINEIGEN(1) ITERATE(25)
/EXTRACTION PC
/CRITERIA KAISER ITERATE(25)
/ROTATION VARIMAX
/METHOD=CORRELATION.

```

Factor Analysis

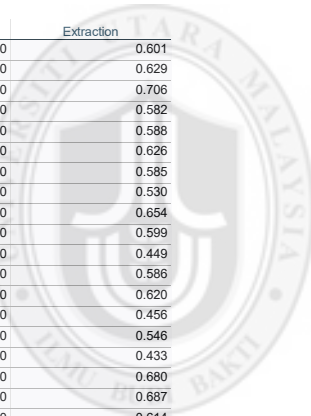
KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.944
Bartlett's Test of Sphericity	Approx. Chi-Square	6173.443
	df	325
	Sig.	0.000

Communalities

	Initial	Extraction
AT1	1.000	0.601
AT2	1.000	0.629
AT3	1.000	0.706
AT4	1.000	0.582
AT5	1.000	0.588
SN1	1.000	0.626
SN2	1.000	0.585
SN3	1.000	0.530
SN4	1.000	0.654
SN5	1.000	0.599
SN6	1.000	0.449
BC1	1.000	0.586
BC2	1.000	0.620
BC3	1.000	0.456
BC4	1.000	0.546
BC5	1.000	0.433
PN1	1.000	0.680
PN2	1.000	0.687
PN3	1.000	0.614
PN4	1.000	0.543
HE1	1.000	0.674
HE2	1.000	0.643
HE3	1.000	0.669
HE4	1.000	0.743
HE5	1.000	0.776
HE6	1.000	0.644

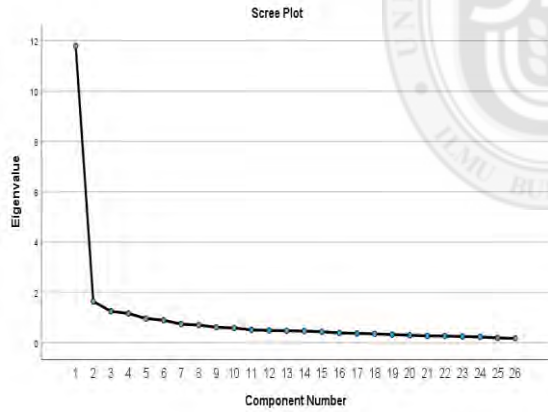
Extraction Method: Principal Component Analysis.



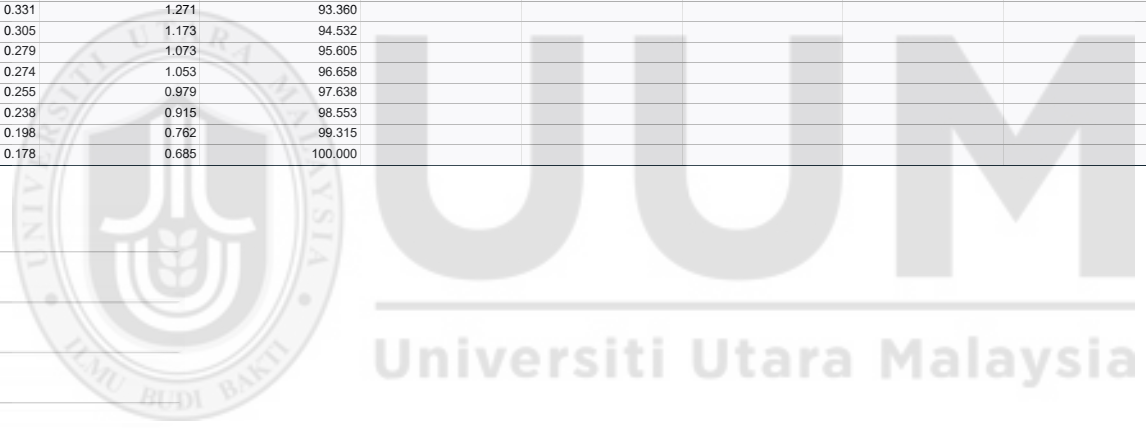
Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings				Rotation Sums of Squared Loadings			
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %		
1	11.789	45.344	45.344	11.789	45.344	45.344	4.711	18.120	18.120		
2	1.649	6.341	51.685	1.649	6.341	51.685	4.076	15.678	33.799		
3	1.255	4.825	56.510	1.255	4.825	56.510	3.558	13.684	47.483		
4	1.170	4.500	61.010	1.170	4.500	61.010	3.517	13.527	61.010		
5	0.968	3.725	64.735								
6	0.901	3.464	68.199								
7	0.746	2.870	71.069								
8	0.708	2.723	73.792								
9	0.619	2.382	76.175								
10	0.593	2.280	78.454								
11	0.517	1.990	80.444								
12	0.496	1.907	82.351								
13	0.482	1.852	84.203								
14	0.471	1.811	86.014								
15	0.443	1.703	87.717								
16	0.397	1.529	89.246								
17	0.381	1.464	90.709								
18	0.359	1.379	92.088								
19	0.331	1.271	93.360								
20	0.305	1.173	94.532								
21	0.279	1.073	95.605								
22	0.274	1.053	96.658								
23	0.255	0.979	97.638								
24	0.238	0.915	98.553								
25	0.198	0.762	99.315								
26	0.178	0.685	100.000								

Extraction Method: Principal Component Analysis.



Component Matrix*



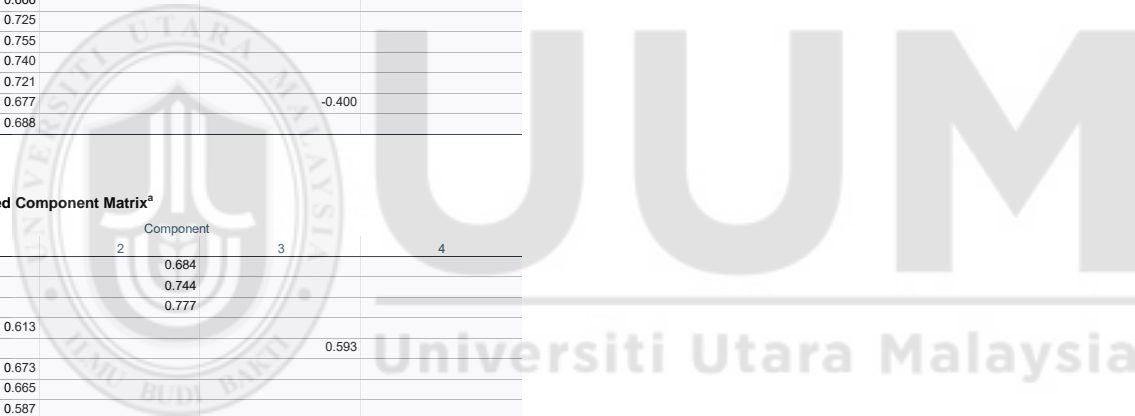
	Component			
	1	2	3	4
AT1	0.655			
AT2	0.608	-0.410		
AT3	0.652	-0.475		
AT4	0.636	0.419		
AT5	0.691			
SN1	0.710			
SN2	0.634			
SN3	0.659			
SN4	0.713			
SN5	0.667			
SN6	0.648			
BC1	0.689			
BC2	0.712			
BC3	0.593			
BC4	0.686			
BC5	0.496			
PN1	0.726			
PN2	0.611		0.486	
PN3	0.695			
PN4	0.666			
HE1	0.725			
HE2	0.755			
HE3	0.740			
HE4	0.721			
HE5	0.677		-0.400	
HE6	0.688			

Extraction Method: Principal Component Analysis.
a. 4 components extracted.

Rotated Component Matrix^a

	Component			
	1	2	3	4
AT1		0.684		
AT2		0.744		
AT3		0.777		
AT4	0.613			
AT5			0.593	
SN1	0.673			
SN2	0.665			
SN3	0.587			
SN4	0.713			
SN5	0.671			
SN6	0.417	0.421		
BC1		0.564	0.430	
BC2	0.578		0.463	
BC3		0.530		
BC4	0.601			
BC5	0.435		0.485	
PN1		0.524	0.570	
PN2			0.772	
PN3			0.639	
PN4			0.510	0.419
HE1		0.558		0.516
HE2		0.404		0.559
HE3				0.618
HE4				0.733
HE5				0.804
HE6				0.661

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 7 iterations.

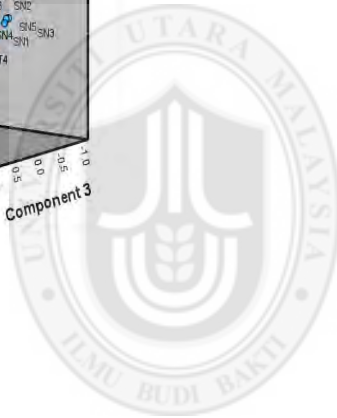
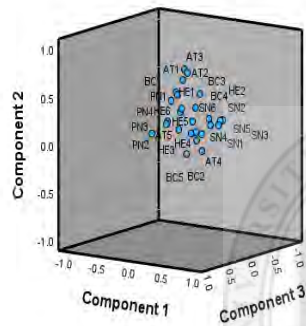


Component Transformation Matrix

Component	1	2	3	4
1	0.561	0.502	0.467	0.465
2	0.638	-0.697	0.222	-0.240
3	-0.333	0.121	0.782	-0.513
4	0.410	0.497	-0.349	-0.680

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

Component Plot in Rotated Space



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CORRELATIONS

```

/VARIABLES=score.AT score.SN score.BC score.PN score.HE
/PRINT=TWOTAIL NOSIG FULL
/STATISTICS DESCRIPTIVES
/MISSING=PAIRWISE.
    
```

Correlations

Descriptive Statistics

	Mean	Std. Deviation	N
Attitude	6.0066	0.87973	396
Subjective Norms	5.6334	1.06831	396
Perceived Behavioral Control	5.6076	1.03706	396
Personal Norms	5.7828	1.02339	396
Intention Towards Healthy Eating	5.9015	0.94808	396

Correlations

		Attitude	Subjective Norms	Perceived Behavioral Control	Personal Norms	Intention Towards Healthy Eating
Attitude	Pearson Correlation	1	.702**	.734**	.685**	.717**
	Sig. (2-tailed)		0.000	0.000	0.000	0.000
	N	396	396	396	396	396
Subjective Norms	Pearson Correlation	.702**	1	.710**	.642**	.684**
	Sig. (2-tailed)	0.000		0.000	0.000	0.000
	N	396	396	396	396	396
Perceived Behavioral Control	Pearson Correlation	.734**	.710**	1	.653**	.677**
	Sig. (2-tailed)	0.000	0.000		0.000	0.000
	N	396	396	396	396	396
Personal Norms	Pearson Correlation	.685**	.642**	.653**	1	.669**
	Sig. (2-tailed)	0.000	0.000	0.000		0.000
	N	396	396	396	396	396
Intention Towards Healthy Eating	Pearson Correlation	.717**	.684**	.677**	.669**	1
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	
	N	396	396	396	396	396

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

NONPAR CORR

```

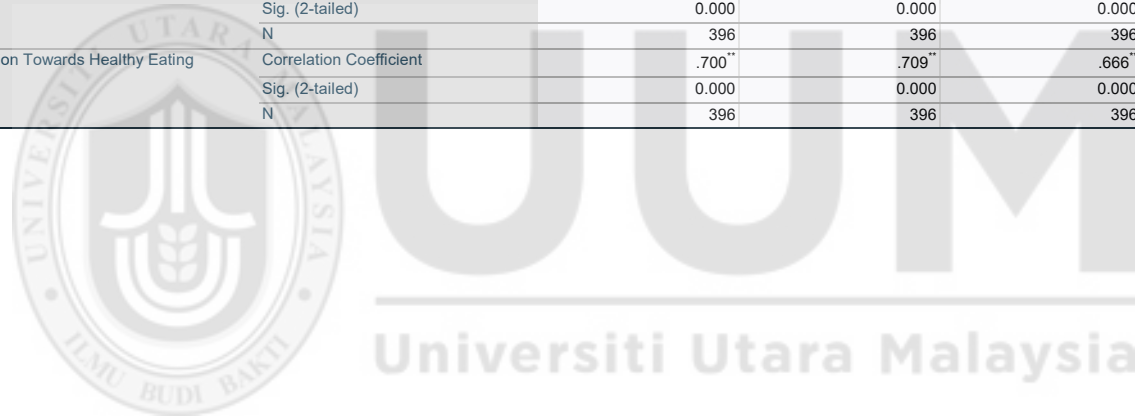
/VARIABLES=score.AT score.SN score.BC score.PN score.HE
/PRINT=SPEARMAN TWOTAIL NOSIG FULL
/MISSING=PAIRWISE.
    
```

Nonparametric Correlations

Correlations

			Attitude	Subjective Norms	Perceived Behavioral Control	Personal Norms	Intention Towards Healthy Eating
Spearman's rho	Attitude	Correlation Coefficient	1.000	.726**	.722**	.646**	.700**
		Sig. (2-tailed)		0.000	0.000	0.000	0.000
		N	396	396	396	396	396
	Subjective Norms	Correlation Coefficient	.726**	1.000	.722**	.645**	.709**
		Sig. (2-tailed)	0.000		0.000	0.000	0.000
		N	396	396	396	396	396
	Perceived Behavioral Control	Correlation Coefficient	.722**	.722**	1.000	.634**	.666**
		Sig. (2-tailed)	0.000	0.000		0.000	0.000
		N	396	396	396	396	396
	Personal Norms	Correlation Coefficient	.646**	.645**	.634**	1.000	.669**
		Sig. (2-tailed)	0.000	0.000	0.000		0.000
		N	396	396	396	396	396
	Intention Towards Healthy Eating	Correlation Coefficient	.700**	.709**	.666**	.669**	1.000
		Sig. (2-tailed)	0.000	0.000	0.000	0.000	
		N	396	396	396	396	396

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



```

REGRESSION
/MISSING LISTWISE
/STATISTICS COEFF OUTS CI(95) R ANOVA COLLIN TOL CHANGE
/CRITERIA=PIN(.05) POUT(.10) TOLERANCE(.0001)
/NOORIGIN
/DEPENDENT score.HE
/METHOD=ENTER score.AT score.SN score.BC score.PN
/SCATTERPLOT=(*ZRESID ,*ZPRED)
/RESIDUALS DURBIN HISTOGRAM(ZRESID) NORMPROB(ZRESID) .

```

Regression

Variables Entered/Removed^a

Model	Variables Entered	Variables Removed	Method
1	Personal Norms, Subjective Norms, Perceived Behavioral Control, Attitude ^b		Enter

a. Dependent Variable: Intention Towards Healthy Eating

b. All requested variables entered.

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					
					R Square Change	F Change	df1	df2	Sig. F Change	Durbin-Watson
1	.786 ^a	0.619	0.615	0.58853	0.619	158.513	4	391	0.000	1.904

a. Predictors: (Constant), Personal Norms, Subjective Norms, Perceived Behavioral Control, Attitude

b. Dependent Variable: Intention Towards Healthy Eating

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	219.617	4	54.904	158.513	<.001 ^b
	Residual	135.431	391	0.346		
	Total	355.048	395			

a. Dependent Variable: Intention Towards Healthy Eating

b. Predictors: (Constant), Personal Norms, Subjective Norms, Perceived Behavioral Control, Attitude

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
1	(Constant)	0.892	0.208		4.280	0.000	0.482	1.301		
	Attitude	0.313	0.056	0.290	5.551	0.000	0.202	0.424	0.357	2.803
	Subjective Norms	0.199	0.044	0.224	4.567	0.000	0.113	0.284	0.405	2.468
	Perceived Behavioral Control	0.146	0.047	0.160	3.112	0.002	0.054	0.238	0.370	2.704
	Personal Norms	0.206	0.043	0.222	4.827	0.000	0.122	0.290	0.460	2.176

a. Dependent Variable: Intention Towards Healthy Eating

Collinearity Diagnostics^a

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions					
				(Constant)	Attitude	Subjective Norms	Perceived Behavioral Control	Personal Norms	
1	1	4.953	1.000	0.00	0.00	0.00	0.00	0.00	
	2	0.020	15.880	0.72	0.00	0.12	0.07	0.01	
	3	0.012	20.700	0.05	0.00	0.24	0.05	0.87	
	4	0.010	22.478	0.00	0.01	0.60	0.67	0.04	
	5	0.006	28.918	0.22	0.99	0.04	0.21	0.08	

a. Dependent Variable: Intention Towards Healthy Eating

Residuals Statistics^a

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	1.7554	6.9383	5.9015	0.74565	396
Residual	-2.63211	3.13057	0.00000	0.58555	396
Std. Predicted Value	-5.560	1.390	0.000	1.000	396
Std. Residual	-4.472	5.319	0.000	0.995	396

a. Dependent Variable: Intention Towards Healthy Eating

Charts

