

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

**THE CONSUMPTION BEHAVIOUR OF PROTEIN SUPPLEMENTS
WITHOUT *ḤALĀL* LOGO AMONG BRUNEIANS**

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20MC1077

**A DISSERTATION SUBMITTED IN FULFILMENT OF THE
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SUPERVISION

**THE CONSUMPTION BEHAVIOUR OF PROTEIN SUPPLEMENTS
WITHOUT *HALĀL* LOGO AMONG BRUNEIANS**

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SUPPLEMENTS WITHOUT HALĀL LOGO AMONG
BRUNEIANS**

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بارك الله لكم وجزاكم الله خيرا كثيرا
آمين يا رب العالمي

ABSTRACT

THE CONSUMPTION BEHAVIOUR OF PROTEIN SUPPLEMENTS WITHOUT HALĀL LOGO AMONG BRUNEIANS

The primary objective of this study is to investigate the factors affecting the Bruneians' decision in choosing their protein supplements especially the protein powder which has no Halāl logo, to explore the level of awareness of dubious ingredients used in the protein powder and to investigate the effective media to educate the consumer. The quantitative data was collected from a purposive sample of 56 respondents of protein powder consumers in Brunei using a self-administered online questionnaire. Due to certain limitation, data was eventually collected using snowball method. Statistical Package for Social Science (SPSS) version 26 was used as a measurement method to analyze the data collected in this study. The findings of this research showed that in the absence of *Halāl* logo, the respondents would ensure that their supplement is alcohol free and free from any known dubious and non-permissible ingredients. However, it is also revealed that the awareness among Bruneian consumers is somewhat aware of the knowledge of the dubious and the non-permissible ingredients which proven that the consumers still need the awareness programme to equip themselves with the information. Therefore, further findings of this research found that the effective medium to reach out to these consumers is through videos on Instagram and YouTube. Lastly, to maximize optimal exposure, it is recommended that awareness programme to be made in collaboration with the physical competitions' organizers.

Keywords: Protein powder, consumption behavior, Bruneian users, Halāl logo.

ABSTRAK

TINGKAHLAKU PEGGUNA SUPLEMEN PROTEIN TANPA LOGO HALĀL LOGO DI KALANGAN ORANG BRUNEI

Objektif utama bagi kajian ini ialah untuk menganalisa faktor-faktor yang mempengaruhi keputusan yang diambil oleh orang Brunei dalam memilih suplemen protein mereka yang tidak mempunyai logo Halāl tertera, untuk menerokai tahap kesedaran tentang bahan yang syubhah dan haram yang digunakan di dalam serbuk Protein dan untuk menyiasat media yang paling berkesan dalam mendidik pengguna-pengguna di Brunei. Sebanyak 56 data kuantitatif telah dikumpul daripada sample bertujuan yang terdiri di kalangan pengguna-pengguna serbuk protein di Brunei dan didapati melalui pengagihan soalan kajiselidik atas talian. Atas sebab had dan batas tertentu, data kemudian diperolehi menggunakan kaedah *snowball*. Pakej Statistik untuk sains social atau lebih dikenali sebagai *SPSS* versi ke-26 telah digunakan sebagai kaedah pengukuran bagi menganalisa data yang telah dikumpul dalam kajian ini. Hasil daripada analisa kajian ini menunjukkan bahawa dalam ketiadaan logo Halal, para responden akan memastikan suplemen mereka bebas daripada kandungan *Alcohol* dan tidak mengandungi bahan yang syubhah dan Haram. Walaubagaimanapun, kajian ini juga mendedahkan bahawa tahap kesedaran di kalangan pengguna di Brunei hanyalah berada di tahap 'agak sedar' terhadap pengetahuan bahan-bahan syubhah dan haram yang mana membuktikan bahawa pengguna-pengguna masih memerlukan apa jua bentuk program kesedaran yang mendidik mereka dengan pengetahuan tersebut. Oleh itu, penemuan selanjutnya dalam kajian ini mendapati bahawa perantara atau platform paling berkesan dalam menyebarkan dan menyampaikan kepada para pengguna ialah melalui pendidikan dalam bentuk video di Instagram dan YouTube. Akhir sekali, untuk pendedahan dan penyampaian yang maksimum dan optimum, ianya disarankan untuk mengendalikan program kesedaran dengan Kerjasama pihak penganjur yang menganjurkan pertandingan atau persaingan yang mencabar fizikal.

Kata Kunci: Serbuk Protein, tingkah laku pengguna, Pengguna Brunei, logo Halāl

ملخص البحث

السلوك في استخدام المكملات بروتين دون شعار حلال حول البروناويين

الهدف الرئيسي في هذا البحث هو تحليل العوامل التي تؤثر على قرارات البروناويين في اختيار المكملات بروتين خصوصا البروتين المسحوق الذي لا يوجد فيه شعار حلال، واستكشاف المستوى المشكوك في المكونات البروتين التي يستخدم فيه وتحقيق الاعلام الفعال في تربية المستهلك. وبالنسبة للبيانات الكمية من ٥٦ المستجيبين البروناويين عينات في استخدامهم البروتين المسحوق التي جمعت من سؤال البحث . في الحقيقة، جمعت البيانات بطريقة "سنوبول" بعد بعض الحصر. وكان الحزمة ومما بحث. الاصدار ٢٦ قياسا لتحليل ما بحث (SPSS) الإحصائية للعلوم الاجتماعية في هذا البحث يوجد بعض من شعار حلال التي يغيب عليها. لابد من المستجيبين يؤكد ما في المكملات كحولا وما شيء مترددا من المكونات. ومع ذلك الآن، أن البروناويون في المستوى 'بعض الوعي' أو 'فاقد للوعي' أن شيء مترددا الذي يوجد في المكونات بروتين والمهم عليهم أن يعرف المعلومات فيه. لذلك، يعرف المستهلكين عنه من المنصتين انستجرام ويوتيوب. والآخر، لتعظيم التعرض الأمثل. يوصى بعمل برنامج توعية بالتعاون مع منظمي المسابقات المادية.

كلمة رئيسية : مسحوق بروتين ، سلوك الاستهلاك، المستهلك البروناويون، شعار

حلال

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ABBREVIATIONS

COVID-19	Corona Virus 2019
UNISSA	Universiti Islam Sultan Sharif Ali
CGS	Centre for Graduate Studies
SPSS	Statistical Package for Social Sciences
HACCP	Hazard Analysis Critical Control Point
GMP	Good manufacturing practice
ISO	International Organization for Standardization
BND	Brunei Dollar
BKMH	Bahagian Kawalan Makanan <i>Halāl</i>
n.d.	No date

TRANSLITERATION

Arabic	Roman	Transliteration
حلال	Halal	<i>Ḥalāl</i>
شريعة	Shariah	<i>Sharī'ah</i>
القرآن	Al-Quran	<i>al-Qur'ān</i>
عقل	Aql	<i>'aql</i>
نفس	Nafs	<i>nafs</i>
مال	Mal	<i>māl</i>
حرام	Haram / non-permissible	<i>Ḥarām</i>
حلالا طيبا	Halalan Thayyiban	<i>Ḥalālan Ṭayyiban</i>
سورة	Surah	<i>surah</i>
البقرة	Al-Baqarah	<i>Al-Baqarah</i>
الإسراء	Al-Isra	<i>Al-Isrā</i>
صحيح	Sahih	<i>ṣaḥīḥ</i>
مقاصد	Maqasid Shariah	<i>maqāṣid al-sharī'a</i>
إسلام	Islam	<i>'Islām</i>

CHAPTER ONE: INTRODUCTION

1.1 Introduction

This Chapter would provide basic ideas and background of the study which inspire the author to explore and continue on with the research title. This chapter also state the problems in context of this research, research questions, research objectives, research framework, research significance, research scope and definitions of terms and brief explanation of the terms used in this research context. This chapter will be closed with summary of all the chapters' introduction.

1.2 Background of the study

During the early phase of COVID-19, the whole world had to put travelling to a stop in order to flatten the curve of the infection cases around the globe and regionally. As a result, airports internationally and the immigration borders were in lockdown since March 2020 onwards. Most local the public facilities and recreation spaces in Brunei were also closed down temporarily in the efforts to support the medical team in fighting the Pandemic disease and lessen their workloads. Now, despite entering the Endemic phase after the second wave lockdown in December 2021, the restrictions to travel internationally for leisure are still there (as of April 2022) even though the neighbouring country is within a 2-hour drive.

These new norms have left Bruneians with alternative outings - such as activities vacation domestically to explore Brunei's natural treasures, outdoor yoga, jogging and hiking on new trails. People are becoming more health conscious and strive for activities which promote and improve their health and well-being. Along with the new trend of focusing on the physical fitness, there had also been a projection increase in the

consumption of protein powder globally among Millennials¹, including among Bruneians.

1.3 Problem Statement

However, to assist their physical and fitness growth some may consume protein supplements in the form of powder where contains chemical jargons. Some of these jargons are alien to most Malays except those who have academic background in this area. Especially now, where the nation is working towards a *Halāl* hub. The perquisite of this, is of course to become firstly aware, then educated and finally practicing Muslim in the area not just religious rituals but also in every aspect of living especially consumption. There is a sensitive requirement that should be fulfilled as Muslim consumers in the selection of our consumption or purchasing habits of this substance.

In addition, there has been more online businesses which import these protein powders into Brunei from various non-Muslim countries and cannot be entirely controlled by the local *Halāl* certification body due to the pact of World Trade Organization. This pact aimed to overcome the barriers in small domestic markets.² Not to mention that most of these products do not have *Halāl* logo on their packaging. This has raised concern, as a consumer personally, which brand should one consume and how

¹ Grand View Research. (2020). *Protein Supplements Market Size, Share & Trends Analysis Report By Product (Protein Powders, Protein Bars), By Source, By Distribution Channel, By Application, By Region, And Segment Forecasts, 2020 – 2027: Regional Insights*. (Report No. GVR-1-68038-694-3). Retrieved December 29, 2020, from <https://www.grandviewresearch.com/industry-analysis/protein-supplements-market>

² World Trade Organization. (2001, May 30) *Trade Policy Reviews: first press release, secretariat and government summaries: Brunei Darussalam: May 2001*. World Trade Organization. https://www.wto.org/english/tratop_e/tpr_e/tp164_e.htm

do those who have no knowledge in dubious and non-permissible ingredients could be made aware of this issue.

1.4 Research Questions

The following research questions are designed to investigate the consumption behaviour of the protein supplements without *Halāl* Logo among Bruneians:

- (i) What affect the consumption behaviour of Bruneian in selecting their protein powder in the absence of *Halāl* logo?
- (ii) What is the level of awareness of Bruneian consumers of the dubious and/or the non-permissible ingredients?
- (iii) How to create awareness about the existing *Halāl* certified protein powder?

1.5 Research Objectives

The objectives of this research are:

1. To investigate the factors that affect Bruneian consumption behaviour in their selection of protein powder without *Halāl* Logo.
2. To explore the level of awareness among the Bruneian consumers on the non-permissible substances and ingredients in their protein powder.
3. To explore the effective medium in creating awareness about the existing *Halāl* certified protein powder to both Muslims and Non-muslims.

1.6 Research Hypotheses

Hypothesis 1.1: The consumers would buy Protein Powder without *Halāl* Logo after ensuring the ingredients.

Hypothesis 1.2: The consumers would buy Protein Powder without *Halāl* Logo after ensuring the ethical logos are visible on the packaging.

Hypothesis 2.1: The consumers would do depth research of the ingredients and content before purchasing.

Hypothesis 2.2: The consumers would do a quick google search before deciding an option on site.

Hypothesis 3.1: The most effective media to create awareness is on Tiktok

Hypothesis 3.2: The second most effective media is on Instagram

Hypothesis 3.3: The third most effective media is Reddit.

Hypothesis 3.4: The second most ineffective media is the Google articles.

Hypothesis 3.5: The most ineffective media is Newspaper article.

1.7 Research Framework

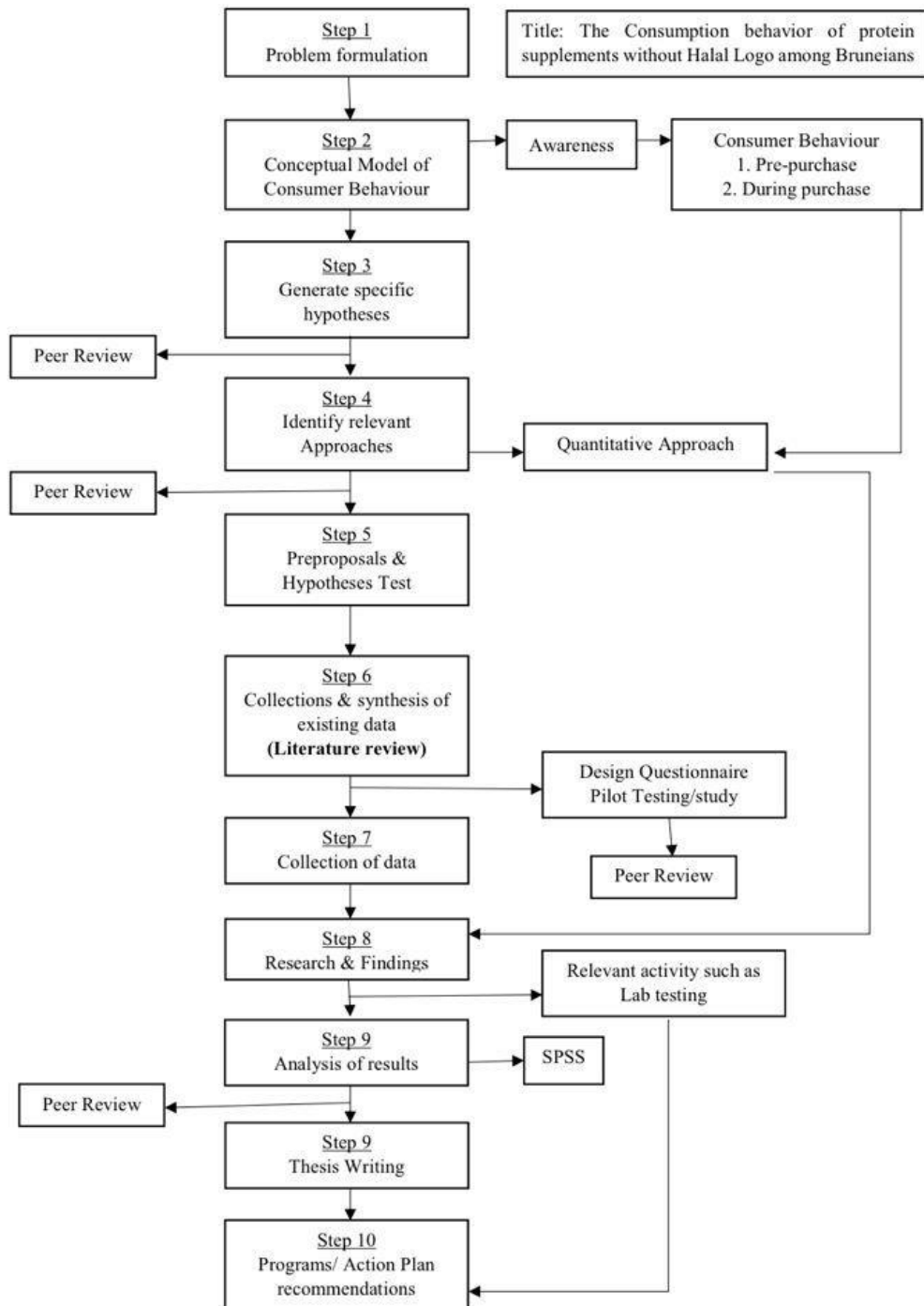


Figure 1.1 Research Framework

1.8 Research Significance

This section discusses the significance of this research to society, the government and the future researchers and consumers. The findings would benefit the public mainly by protecting the integrity and the values of the religion where it urges and encourages its followers to protect their *Jism* (physical health), ‘*aql* (intellectual), *māl* (property), *Deen* (the purity of the religion) and the upcoming future generations (lineage).

In addition, also to execute, accomplish and realize His Majesty’s dream which was stated during the 2016’s *Titah* during the UNISSA convocation ceremony, His Majesty had hoped to make Brunei as Global *Ḥalāl* Hub³. This study would help spread the awareness among the consumers who are the largest auditors of products and further assist the certifying body to analyze and be more aware of the imported products and eventually ensuring the country’s consumption as an exemplary *Ḥalāl* Hub with practicing citizens.

This research would also provide future researchers the foundation to make awareness program in order to promote the consumption of *Ḥalāl* certified Protein powder in suitable local media to reach out maximum number of people. The findings would benefit *Ḥalāl* activists to use effective media to educate and create awareness among current consumers and the future potential consumers.

³ Prime Minister’s Office. (2016, October 22). *Titah KDYMM sempena Haflut Takharruj ke-6 UNISSA*. <https://www.pmo.gov.bn/Lists/TITAH/NewDispform.aspx?ID=258>

1.9 Research Scope

The main scope of this study is on the consumption behaviour of protein supplement especially protein powder which have no Halāl Logo among Bruneians. The study will include and will not discriminate against non-Muslims as Halāl and Tayyib products are meant for all human kinds and not limited to Muslims only.

1.10 Terms definitions

The term **Consumption**⁴ in this context would be the act and process of buying goods or the quantity of some products that are being used/consumed. Since the product in this research is the protein supplements in powder form which needs to be diluted for drinking, this is also called consumption. Consumption here refers to buying and/or drinking the protein shakes.

The term **Behaviour**⁵, according to Cambridge English dictionary, means the way a person or an animal or a substance behaves in a particular situation or under particular conditions or in a stimulus. In this research context, it is focused on the reaction of the people in Brunei - how they make decisions - in the situation where Halāl Logo is not found on the product. This term is integrated with consumption.

The term Protein supplement⁶ is defined as substances that are added to complete protein deficiency which are essential to living cells in order to function properly, for growth and for tissue repair. Protein may be present naturally in food for instance meat, egg and fish. However, in this research context, they are in a form of powder substance. This information is constructed from the author's understanding from definitions of the

⁴ Market Business News. (n.d.). What is consumption? Definition and examples. *Market Business News*. <https://marketbusinessnews.com/financial-glossary/consumption/>

⁵ Cambridge University Press. (n.d.). Behaviour. In *Cambridge Business English Dictionary*. Retrieved February 18, 2022, from <https://dictionary.cambridge.org/dictionary/english/behaviour>

⁶ Millodot, M. (2009). Protein. In *Dictionary of Optometry and Visual Science: Clinical and Experimental Optometry, 7th edition*. Butterworth-Heinemann Elsevier.

words individually. The definition of Protein from encyclopedia of Medicine (2008) and from the Dictionary of Optometry and visual science (2009) while the definition of Supplement from The American Heritage, online English dictionary.

The term **Ḥalāl Logo** which consists of 2 different words which – Ḥalāl means permissible and lawful and Logo means symbol or mark which indicate a certain branding which carries the identity of the product. However, when the two integrate it refers to the graphic symbol used to indicate that the product is certified permissible for Muslims consumption as the products have met the requirements set in *Sharī'ah* (Wan Rusni et al., 2016). This term is different and not to be confused with Ḥalāl branding.⁷

The term **Awareness**⁸ means knowledge and understanding that something is happening or exists which promote a depth insight of the problem to encourage practices that brings solution to the problem. Simply put, the state of being conscious of something and to bring awareness means to spread the knowledge of a particular problem

1.11 Chapters Summary

Chapter 1: Introduction

This summary consists of the introduction of all the upcoming chapters which are titled as Chapter 2: Literature Review; Chapter 3: Methodology; Chapter 4: Findings and Discussions and lastly, Chapter 5: Conclusions. All chapters with their own respective subheadings and elaborations.

⁷ Rusni Wan Ismail, Mohhidin Othman, Russly Abdul Rahman, Nitty Hirawaty, & Kamarulzaman Suhaimi Ab. Rahman. (2016). Halal Malaysia Logo or Brand: The Hidden Gap. *Procedia Economic and Finance*, 37, 254-261. [https://doi.org/10.1016/S2212-5671\(16\)30122-8](https://doi.org/10.1016/S2212-5671(16)30122-8)

⁸ Merriam-Webster. (n.d.). Awareness. In *Merriam-Webster.com dictionary*. Retrieved February 18, 2022, from <https://www.merriam-webster.com/dictionary/awareness>

Chapter 2: Literature review

This chapter contains the literature review in which this research is based on. There would be an elaboration of Ḥalālān Thayyiban concept which is derived from al-Baqarah verses, the theoretical model of consumption behavior which includes the concept of consumption behaviour and factors affecting the purchase decision, the values of Maqasid *Sharī'ah* and of the ethical consumerism, the lists of the non-permissible and dubious ingredients used and will be asked in the questionnaire, and finally, the use of social media among Millennials and the different views of Millennials age range.

Chapter 3: Methodology

This chapter contains the research designs stating the research sample, ethical procedures taken by the researcher. There would also be a brief description of the Research Instruments, followed by the explanation of the Validity and Reliability of the Research Instruments done during the pilot testing. Then, the technicality of data collection and the data analysis tools used in this study.

Chapter 4: Findings and discussion

This chapter will consist of the data collected from the questionnaire. Each question will be analyzed and will be compared with the suitable variables to answer the research questions. Then, finally will be critically analyzed and discussed in relation to the literature reviews.

Chapter 5: Conclusions

This chapter would consist of the summary the main findings, also indicate the implications of the research and finally, would be concluded with some recommendations for future studies. Before giving closing remarks, the researcher would share few of the significant limitations during carrying out this study.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter contains the literature review in which this research is based on. There would be an elaboration of Ḥalālān Thayyiban concept which is derived from al-Baqarah verses, the theoretical model of consumption behavior which includes the concept of consumption behaviour and factors affecting the purchase decision, the values of Maqasid *Sharī'ah* and of the ethical consumerism, the lists of the non-permissible and dubious ingredients used and will be asked in the questionnaire, and finally, the use of social media among Millennials and the different views of Millennials age range.

2.2 Ḥalālān Thayyiban

Surah Baqarah Chapter 2 Verse 168:

“O mankind, eat from whatever is on earth [that is] lawful and good and do not follow the footsteps of Satan. Indeed, he is to you a clear enemy.” Translation from Sahih International⁹.

This verse starts with O mankind which indicate that Ḥalālān Thayyiban (Lawful and good) are not exclusive for Muslims. Non-Muslims are also mankind and this verse may apply to them as well¹⁰ hence, this study does not focus solely on Muslim consumers only. This, hopefully, will indirectly create awareness among non-Muslims

⁹ *The Noble Quran*. (2009). AlQuranEnglish.com. <https://www.alquranenglish.com/quran-surah-al-baqarah-168-qs-2-168-in-arabic-and-english-translation>

¹⁰Ikomatussuniah, Reevany Bustami and Abdul Rahman Abdul Latip. (2021) *Social Constructs Halalan Thayyiban Food Law: A Social Scientific Study into the Insight of Muslim and Non-Muslim in Banten Indonesia*. *Intellectual Discourse*, 29(1), 53-70. https://www.researchgate.net/publication/352508036_Social_Constructs_Halalan_Thayyiban_Food_Law_A_Social_Scientific_Study_into_the_Insight_of_Muslim_and_Non-Muslim_in_Banten_Indonesia

that Ḥalāl and ethical food are similar and that they are just one of the procedures to ensure and control the quality of products. The quality of ethical products focus majority on safety while Ḥalālān Thayyiban focus on are the hygiene, safety and the wholeness of the food products. These concepts will be further explained in the sub topic of Ethical consumer and Maqasid *Sharī'ah* concepts.

Ḥalālān Thayyiban¹¹ according to the above translation means Lawful and good. **Lawful** in a way that the food products meet all the *Sharī'ah* requirements. It should most importantly does not contain any Haram elements such as alcohol, any derivatives of pork and does not contain any derivatives from Human body. While **Good** has broad definition, it is as broad as it means. Food for Muslims consumption has to be prepared in hygienic environment without contaminations from Haram elements or harmful substances. It has to be free from any types of cruelty or abuse from the production site. The production of end products does not harm any parties who involved in the making and transporting the goods. Every aspect of mind, body and soul are considered. This is not an easy task to do however, good Muslims strive only to please Allah.

2.3 Consumption Behaviour

The term Consumption Behaviour in this research scope would cover the act of buying and the process of choosing the quality of some products that are being consumed. In this research, the focus is on the protein supplements in powder form which needs to be diluted for drinking. Hence, the type of consumption focused here

¹¹ Zeiad Amjad Aghwan. (2021). The Concept of Halalan Thayyiban. *Introduction to the Science of Halalan Thayyiban*. pp. 7-11. Bandar Seri Begawan: UNISSA Press.

refers to buying and drinking of the protein shakes. In this research context, it is also focused on the reaction of the people in Brunei - how they make decisions - in the situation where Halāl Logo is not found on the product.

2.3.1 The Concept of consumption behaviour

This concept is the core idea of this research and most questions designed are based on these following literature reviews. Human behaviour or the psychology of an individual are a very broad topic therefore this section would extract from previous studies and would be elaborated in the context of this research.

According to a study by Reynold and Olson¹² (as cited in Jarva, 2021)¹³, there are 5 stages in decision making which are the awareness, research, consideration, decision and evaluation. The sequence begins when consumers recognize the existence of products and then they would do research regarding the products' information. Followed by putting everything into considerations and make decisions whether to make purchase or not. After purchase, consumers would evaluate their purchase by repeating their purchase or trying out other different products. However, in this research the questionnaire would only focus on the first four stages where when the consumers were about to purchase, what affect their decision if Halāl Logo were not on the packaging labels.

¹² Reynolds, T. & Olson, J. (2001). *Understanding the Consumer Decision Making Process: The Means-End Approach to Marketing and Advertising Strategy*. Psychology Press.

¹³ Jarva, E. (2021). *The consumption and attitudes of protein supplement among young adults in Finland*. [Bachelor's Thesis, Satakunta University of Applied Science]. https://www.theseus.fi/bitstream/handle/10024/511453/Jarva_Elisa.pdf?sequence=2&isAllowed=y

2.3.2 Factors Affecting Consumption Behaviour

The same study also stated that there are 4 factors affecting consumer behavior in decision making, the factors are cultural, social, personal, and psychological factors. Reynold and Olson (2001, as cited in Jarva, 2021) elaborated that cultural factors involve the **individuals' perception and upbringing** around their family and social values in the society where they live in.¹⁴ Thus, perception varies between nationalities, religions and geographic regions. For example, Muslims living in a majority Muslim country might be more carefree in purchasing food and supplement products as compared to Muslims living as minority in non-Muslim country, they would be more vigilant and cautious in selecting food and supplement products due to the difference in the production environment which may cause contaminations and affect the products' purity.

While social factors include the social status of the individual, **their level of income, their preferences towards brands** as a result from hierarchical recommendations. Hierarchical recommendations may come from respected friends, bosses or influencers' opinions. This explains why most surveys ask for consumers' origin of knowing certain products. Personal factors involve occupation, age, lifestyles, life stage and economic situation of the individual. This theory of 4 factors affecting decision making supports the need to acquire such information in Demographic section and Activity frequency section of the questionnaire for primary data collection.

An important aspect of personal factors is the **uniqueness of individuals** or one's personality. According to Kotler & Armstrong¹⁵ (as cited in Jarva, 2021), there

¹⁴ Millwood, A. (22.7.2021). Understanding the Consumer Decision Making Process. <https://www.yotpo.com/resources/consumer-decision-making-process-ugc>

¹⁵ Kotler, P., & Armstrong, G. (2018). *Principles of marketing* (17th ed.). Pearson Prentice Hall.

are 5 brands personality traits which are Sincerity who is pragmatic, honest and cheerful, there is excitement traits who is dauntless, spirited and imaginative. There is competence trait who is trustworthy, intelligent and successful, there is sophistication trait who is elegant and charming and finally, there is ruggedness trait who is described as outdoor person and tough. These traits do not necessarily exist as its own, they may be in pairs or mix of 3 or 4 traits which enhance the uniqueness of an individual. These traits would affect consumer in decision making and they are dynamic and usually vary depending on time, place and products.

Lastly, psychological factor which affect the consumers' decision-making is motives¹⁶. This may come from a strong drive to satisfy needs. It could be the needs for self-development, for esteem, for social, safety or psychological. Some may buy products if they satisfy one of the consumers' needs mentioned. In this case, consumers would buy protein shakes for consumption if the shake fulfill consumers' criteria and focus of safety needs and ensure the shake would not harm them in terms of content, allergy and quality ingredients. They might not care whether the price of the products is higher than average. If the consumers are driven to satisfy their self-development needs, they may tend to focus on protein levels more than the brands, for instance.

¹⁶ Reynolds, T. & Olson, J. (2001). *Understanding the Consumer Decision Making Process: The Means-End Approach to Marketing and Advertising Strategy*. Psychology Press.

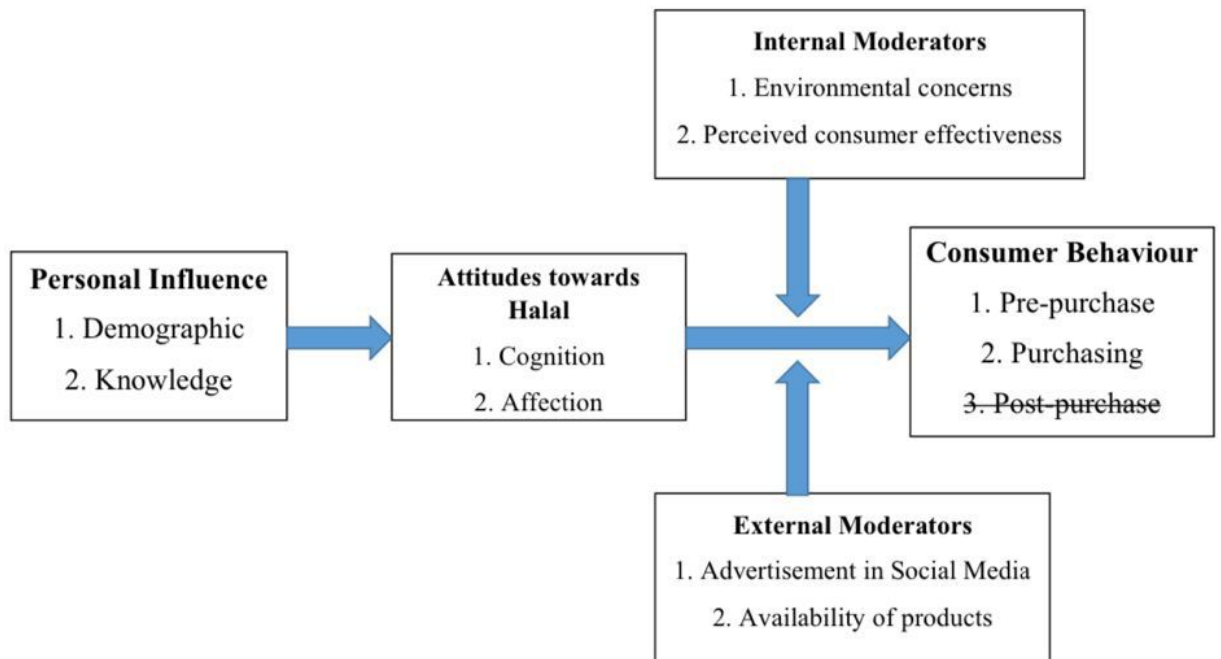


Figure 2.1 Theoretical model of consumer behaviour¹⁷

Figure 2.1 is based on the theory of planned behavior whereby in this research context, the demographic profile which includes education background are the independent variables while the preferences (as listed in the internal and external moderators in the figure) are the dependent variables.

As for the reference for designing the questionnaire, a consumer behavior survey from national health and nutrition examination survey or NHANES in short (edition 2019-2020)¹⁸ were used to cross check the formats. The questionnaire for this research is found in Appendix B of this Dissertation.

¹⁷ Menozzi, D., Sogari, G., & Mora, C. (2015). Explaining Vegetable Consumption among Young Adults: An Application of the Theory of Planned Behaviour. *National Library of Medicine*, 7(9): 7633–7650. <https://doi.org/10.3390/nu7095357>

¹⁸National Health and Nutrition Examination Survey. (2019, January). Flexible Consumer Behavior Survey (FCBS) Module 2019-2020. In *National Health and Nutrition Examination Survey*. USA Government. Retrieved June 27, 2021 from <https://wwwn.cdc.gov/nchs/data/nhanes/2019-2020/questionnaires/FCBS-CBQ-K-508.pdf>

2.4 The Concepts of Ethical consumers and Maqasid *Sharī'ah*

Ethical consumerism has similar values as what Maqasid *Sharī'ah* have for ensuring Ḥalālān Thayyiban products and services. Ethical consumers highlight on moral issues concerning human rights, animal rights and welfare, environmentalism and health wellbeing and/or consumer protection. While Ḥalālān Thayyiban is based on Maqasid *Sharī'ah* which values the believer's state of physical health, intellectual, property, spiritual or the purity of the religion and the family lineage.

2.4.1 Concept of Ethical consumers

Ethical consumers¹⁹ are those who are highly aware to moral and ethical concerns when choosing and purchasing products and services. Ethical concerns which are related to environmental considerations, animal welfare, human rights aspect in labour standards and self-interests and/or health concerns for the consumption of organic food for consumption. There are consumers who are very involved in the products' origin and their processes and the services' quality because that is their right as consumers. It turns the consumers' attention towards the company's policy in providing best quality products and services.

This type of consumerism encourages innovative approach which makes the market more diverse and dynamic. For example, companies such as Virgin would focus on their customer service and fair pricing because they are customer-oriented and these

¹⁹ Cowe, R. & Williams, S. (2000). *Who are the ethical consumers?* The Cooperative Bank. Retrieved February 18, 2022, from <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.458.5207&rep=rep1&type=pdf>

will reflect their image as ethical and responsible. Another way of ethical consumerism is by boycotting product which is against the consumers' moral beliefs. For example, Nestlé has been boycotted several times by several groups. The first boycott was when they were believed to have had practiced marketing regarding breast milk manufacture in the developing countries which brought up some concerns among consumers²⁰ due to be against the consumer protection. The boycott was later then discontinued after WHO introduced a code which recommend its member to regulate the marketing of breast milk substitutes, feeding bottles and teats. Consumers' loyalty and their breach of trust can be a trigger for ethical innovations. As a result, the ethical market is now spread across many different sectors.

A rising plant-based products is also anticipated to increase among vegans, vegetarians, and *Halāl* consumers to accommodate different drives where vegans and vegetarian prefers plant-based, animal –free and sometimes gluten-free food because they are against cruelty in animals or maybe allergic to dairy and egg proteins. These options made it easier for Muslims who live in a majority non-Muslim society to find *Halāl* food. Plant-based products consists of proteins derived from various sources, such as soy, peas, hemp, wheat, rice, quinoa, canola, cranberry, pumpkin, potato, flax and oat²¹.

²⁰ Nestlé. (n.d.). Why was a Nestlé boycott launched? [answers]. *Nestlé*. <https://www.nestle.com/ask-nestle/our-company/answers/nestle-boycott>

²¹ Grand View Research. (2020). *Protein Supplements Market Size, Share & Trends Analysis Report By Product (Protein Powders, Protein Bars), By Source, By Distribution Channel, By Application, By Region, And Segment Forecasts, 2020 – 2027: Regional Insights*. (Report No. GVR-1-68038-694-3). Retrieved on December 29, 2021 from <https://www.grandviewresearch.com/industryanalysis/protein-supplements-market>

2.4.2 Concept of Maqasid *Sharī'ah*

Maqasid *Sharī'ah* is the goals intended by Islamic law for the benefits to mankind and these goals are primarily to preserve and protect the religion, life, lineage, intellect and property of man. For example, the 5 pillars of Islam are made as compulsory obligations as protection of religion in oneself and marriage and the prohibition of adultery are made to protect the lineage. In this case, to be cautious with what we consumed is in order to protect our life and intellect. For we are what we eat. *Halālan* is the borderline where Muslim absolutely cannot pass over while the *Thayyiban* aspects help us to stay within our lawful border.

Surah Al-Israa Chapter 17 verse 32:

“And do not approach sexual intercourse. Indeed, it is ever an immorality and is evil as a way.” Translation from Sahih International.

This verse warns everyone to not just abandon adultery but also to avoid all the things which would lead to the action. In this case, not just alcohol and pork that are forbidden but all their derivatives and any harmful substances which may cause deterioration to our health and mind. Another perspective of being cautious of what we consume which would protect our property or wealth is when we only buy products produced by Muslims. Though Muslim producers are not a majority, they are also small scale and local entrepreneurs. As opposed to large scale manufacturers, they are usually owned by non-Muslims and franchised where we can find and easily accessed. For example, again involving Nestle products being boycotted by Muslims when found out that their support the economy of Israel, the occupied Palestine.²²

²² Khan, A. (2014, October 18). Muslims boycott: Nestle sales down by 3%. *The Siasat Daily*. <https://archive.siasat.com/news/muslims-boycott-nestle-sales-down-3-653218/>

2.4.3 The similarity between both of the concepts

Ethical Consumerism has traditionally focused on customer rights, quality, safety of products and services while Maqasid *Sharī'ah* aims to preserve and protect the religion, life, lineage, intellect and property of mankind. Thus, Maqasid *Sharī'ah* is the concept adopted in *Halāl* and *Thayyiban* values which make ethical products and *Halāl* products share a percentage of common values. Their similarities include the process of extracting and preparing of raw material in humane and ethical ways, the manufacturing to be in hygienic and cruel-free environment and most importantly an end result of safe products.

These products are labelled with logos which the public familiar with. Ethical consumers would look for vegan or vegetarian or cruel-free or HACCP logos while *Halāl* products consumers would look for *Halāl* or Kosher logo. In order to acquire such logos, inspections are carried out to validate their safe practices and correct methods to minimize contaminations as much as possible. Both concepts have the public as the largest auditors because the consumers are the ones who would be particular in its final products and this increases the chance of loyalty to brands and repetition of buying.

2.5 Projection increase use among millennial users

“A significant rise in gym subscriptions, especially in **Asia Pacific** along with rising awareness regarding health and fitness among **millennials**, primarily backed by their robust disposable income is anticipated to further drive the demand for protein supplements. Along with physical activity, millennials prefer including **protein powder**

in the diet. This trend is expected to positively influence market growth over the forecast period.” (Grand Review Research, 2020)²³.

The extract above supports the statement from the introduction where there has been an increase in the consumption of protein powder among millennials in Asia Pacific including Brunei due to the increase in their disposable income. It is also projected to be increasing further in the future.

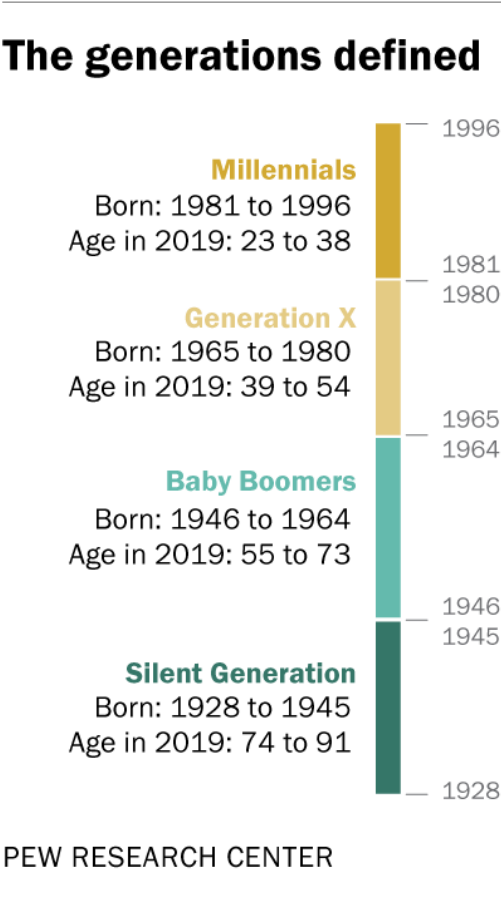


Figure 2.2 Millennial age group (Fry, 2020).

²³ Grand View Research. (2020). *Protein Supplements Market Size, Share & Trends Analysis Report By Product (Protein Powders, Protein Bars), By Source, By Distribution Channel, By Application, By Region, And Segment Forecasts, 2020 – 2027: Regional Insights*. (Report No. GVR-1-68038-694-3). Retrieved on December 29, 2021 from <https://www.grandviewresearch.com/industryanalysis/protein-supplements-market>

There are many opinions on the range ages of the millennials. However, the author chose to use Fry (2020)²⁴ as this is close to the range that the author believes the Millennials are in. It is not mentioned as one of the hypotheses of this research but the result from data collection would later be compared to this age range whether or not majority of the consumers are within the range age of 24 to 39 years old.

2.6 Social Media use among Millennials

There have been many studies carried out on influential media among young adults and teenagers. It is undeniably true that TikTok has its features which attract interaction among not just millennials but also to Centennials²⁵, Gen Y and Gen Z. One study highlights the power and importance of marketing in Video platforms such as TikTok and YouTube²⁶. This helps author and future researcher and Ḥalāl activists to properly choose media for effective exposure. The findings from data collection would prove whether or not this also applicable in Brunei situations.

2.7 Non-permissible and critical ingredients in Protein powder

According to Harvard Health Letter (2018), the recommended daily protein intake for women is 46 grams per day and 56 grams for men²⁷, it also added that protein

²⁴ Fry, R. (2020, April 28). Millennials overtake Baby Boomers as America's largest generation. *Pew Research Centre*. <https://www.pewresearch.org/fact-tank/2020/04/28/millennials-overtake-baby-boomers-as-americas-largest-generation/>

²⁵ Cuesta-Valiño, P., Gutiérrez-Rodríguez, P., & Durán-Álamo, P. (2021). Why Do People Return to Video Platforms? Millennials and Centennials on TikTok. *Media and Communication*, 10(1). <https://doi.org/10.17645/mac.v10i1.4737>

²⁶ Vancottem, A. (2021). *A study of influencer marketing on Instagram, TikTok and YouTube: The effects of parasocial interactions, openness, perceived interactivity, persuasion knowledge and correspondence bias* [Master Thesis, Université Catholique de Louvain]. Prom: STEILS, Nadia. <http://hdl.handle.net/2078.1/thesis:31419>

²⁷ Harvard Health Publishing. (2018, April 10). The hidden dangers of protein powders: They may contain added sugar, calories, or even toxic chemicals. *Harvard Health Publishing*. <https://www.health.harvard.edu/staying-healthy/the-hidden-dangers-of-protein-powders>

powders may be helpful if a person is challenged to eat due to frailty of old age or, when your body is recovering from serious conditions and/or surgical incisions which require additional protein to aid with the healing process. In addition to that, according to Leonard (2018), another function of the protein powder is a popular nutritional and essential macronutrient supplement which helps with the building of muscle, repairing the tissue and may also help in losing weight and toning the body²⁸. This is relevant whereby when the respondents would choose protein content as their main priority when selecting their protein powder. This would be one of the information acquired within the consumers.

2.7.1 Critical Ingredients

According to Islam Hashtag (2016), these are the non-Ḥalāl ingredients in Protein Supplements: Cholic Acid, Maltitol, L-Cystine, L-Cysteine, Lanoline, Lac - Shellac, Edible bone phosphate, Gelatin, Cochineal Extract or Carmine²⁹. This is supported by information found in the Ḥalāl Expertise official website, which added that what made the mentioned ingredients dubious were the source of the raw materials. When such enzymes and substances are extracted from non-slaughtered animals, this make them dubious due to the rulings of only slaughtered animals are lawful for human consumption. The author also added, there are alternative ingredients that can be found synthetically produced and/or plant-based which are compliant with Kosher and Ḥalāl

²⁸ Leonard, J. (2018, September 18). Health benefits of protein powder: What are the benefits of protein powder? *Medical News Today*. <https://www.medicalnewstoday.com/articles/323093>

²⁹ Islam Hashtag. (2016, August 26). Halal Whey Protein for Muslim Bodybuilders. *Islamhashtag.com*. <https://islamhashtag.com/halal-whey-protein/>

laws. There are also few other ingredients which are listed³⁰ in the questionnaire as an effort to expose such information for the consumers' and many not listed due to its specified uses for other than in protein powder.

2.8 Related past study

The most recent and relevant study to this research is titled 'The consumption and attitudes of protein supplements among young adults in Finland' by Elisa Jarva³¹ in 2021. Jarva divided her results into 6 aspects namely the background, consumption habits, reason for consumption, brand preferences, factors affecting purchase decision and finally, the product attribute.

Her respondents were 55.1% women and 44.9% men from the ages of 18 to 29 years old and over half were from 22-25 years old. As for the consumption habits, her study showed protein shakes and drinks are the most popular among young Finns (64.8%). While protein powder is placed third most popular (59.1%). Her respondents bought their protein supplements from grocery stores (73.3%), online stores (46.7%) and from the fitness/wellness store (20%). The reason for consumption, her data stated that 93.2% of young Finns consumed protein supplements for exercises whether before, during or after exercising. 51.1% also reported using them as meal replacement and 33.7% as part of their daily diets.

³⁰ Houssaine. (2018, April 19). A list of Haram and Doubtful Ingredients in Supplements. *Tek Nutrition*. <https://teknutrition.com/a-list-of-haram-and-doubtful-ingredients-in-supplements/>

³¹ Jarva, E. (2021). *The consumption and attitudes of protein supplement among young adults in Finland*. [Bachelor's Thesis, Satakunta University of Applied Science]. https://www.theseus.fi/bitstream/handle/10024/511453/Jarva_Elisa.pdf?sequence=2&isAllowed=y

Her respondents preferred foreign brands as compared to a local one because of the accessibility of the brands online and in stores. Her result showed that 26.7 % and 20% of the respondents rated the familiarity of the brands as ‘important’ and ‘extremely important’ respectively using 5 Likert scale. This, Jarva added, may be from the implications of social validation of peer pressure and consumers trusts. Consumers tend to repeat brands they have used before and readily available easily (32.2%). Her result also showed that influencer or celebrity participation in advertisement does not influence their purchase decision.

As for product attributes, the flavour (rated as average of 4.5 out of 5 scale of importance) of the supplements play an important factor affecting their purchase, along with price (4.0 out of 5) and the attractiveness of the packaging (average 2.9 out of 5). 46.7% of her respondents rated protein content as important and extremely important and as high as 58,9% rated low-calorie as neutral and not important at all. Jarva added most of her respondents were trying to gain/recovery muscles instead of losing weight. Finally, her respondents did not mind to the artificial sweetener contents.

The differences between Jarva’s and this dissertation is the element of *Halāl* logo being questioned as part of factors affecting consumption decision and the element of social media to use for effective awareness program to educate the users as a tentative follow-up study and practicality.

2.9 Chapter Summary

In summary, Ḥalālān Thayyiban means Lawful and permissible according to *Sharī'ah* and good physically and biologically for the consumption of all human kinds, not limited to Muslims only. Even though consumption carry the meaning of buying, using and re-evaluating products, this research only focuses on the first part only because it involves in the decision making before and during buying and/or drinking protein powder. Ethical protein powder may be and may not be Ḥalāl however, both concepts of Ethical and Ḥalāl are in line and have common beliefs in most part during the production processes.

Since there has been a projection increase use of protein powder among Millennials including Bruneians, it is important that the consumers are aware of the critical ingredients which need to be avoided. Hence, this research would distribute questionnaire to collect data while simultaneously try to spread awareness and investigate which media effective to use before moving on to larger scale awareness program. But, moving onto the next chapter would explain the methodology of this research.

CHAPTER THREE: DESIGN AND METHODOLOGY

3.1 Introduction

This chapter contains the research designs stating the research sample, ethical procedures taken by the researcher. There would also be a brief description of the Research Instruments, followed by the explanation of the Validity and Reliability of the Research Instruments done during the pilot testing. Then, the technicality of data collection and the data analysis tools used in this study.

3.2 Research Designs

This dissertation adopts the Quantitative approach as a method of research using both closed and open-ended questionnaires to investigate the factors affecting Bruneian consumption behavior in their selection of Protein powder in the absence *Halāl* Logo. Secondly, to explore the level of awareness among the Bruneian consumers on the non-permissible substances and ingredients in their protein powder. Last but not least, to explore the effective medium in creating awareness about the existing *Halāl* certified protein powder to both Muslims and Non-muslims. The questionnaires designed would answer the following research questions:

- (i) What affect the consumption behaviour of Bruneian in selecting their protein powder in the absence of *Halāl* logo?
- (ii) What is the level of awareness of Bruneian consumers of the dubious and/or the non-permissible ingredients?
- (iii) How to create awareness about the existing *Halāl* certified protein powder?

The questionnaire was created in Google Form and were substantiated with a similar consumption behavior questionnaire, NHANES 2019-2020³². Though the data for consumption behavior are usually collected through a semi-structured interviews or administered questionnaires, this dissertation however would carry a self-administered questionnaire that can be answered digitally and online. The questionnaire's link ³³ would show up when respondents scan the QR code distributed to gyms. This is to encourage participation as respondents could scan and answer later.

The collected data would then be tested first in its pilot test period by calculating the Cronbach's Alpha in Excel. The final data would then be analyzed using Statistical Package for Social Sciences (SPSS) which is a tool commonly used for quantitative research. The results would then be represented and illustrated using bar graphs, pie charts and brief explanation and numerical data would be provided in the Chapter 3.

3.3 Research Sample

The study population would be a purposive sampling 50 Bruneians, specifically those who consume protein or whey powder or any recovery protein drinks in powder form. The samples would be collected from a number of gymnasiums in all 4 different districts tentatively.

With the gym managements' consents, every gym would display the QR code (**APPENDIX E**) and distribute the questionnaire by offering to male and female consumers. In order to reach the target population, the researcher also distributed the

³²National Health and Nutrition Examination Survey. (2019, January). Flexible Consumer Behavior Survey (FCBS) Module 2019-2020. In *National Health and Nutrition Examination Survey*. USA Government. Retrieved June 27, 2021 from <https://wwwn.cdc.gov/nchs/data/nhanes/2019-2020/questionnaires/FCBS-CBQ-K-508.pdf>

³³ <https://forms.gle/zGd48CciKYYjZEm4A>

questionnaire through WhatsApp and applied the snowball effect through course mates and known sellers.

3.4 Procedures and Ethical considerations

The primary data collection would be carried out by distributing online questionnaires to local gyms. Local gyms are initially contacted through WhatsApp and email for verbal unofficial consent. Followed by the application of Official letters from UNISSA's Centre for Graduate Studies office. Along with UNISSA's official letter attached also the cover letter (**APPENDIX C**) and consent forms (**APPENDIX D**) explaining the objectives of the research, target respondents and period of data collection. All of the letters are attached in Appendices section at the very end of this dissertation.

3.5 Research Instruments

Research instruments used are primary data collected from online questionnaire distributed to the gyms and through the social media of Instagram and WhatsApp. This research adopts quantitative approach which involves descriptively statistical analysis for instance, frequency, percentage, mean score and standard deviations. This analysis would be carried out in Excel and SPSS.

The questionnaire was distributed in two versions using Malay³⁴ and English³⁵ languages so that the local respondents have the choice to answer in their preferred language. There are 6 sections in the questionnaire (**APPENDIX B**) which cover demographic, gym routine, Halālan Thayyiban knowledge, Consumption behavior,

³⁴ Questionnaires Malay Version - <https://forms.gle/XRzei3CM71bnzcRx8>

³⁵ Questionnaires English Version - <https://forms.gle/zGd48CciKYYjZEm4A>

dubious ingredients and social media use. Data from the demographic section would be the independent variables while the other sections which cover on gym routine, Ḥalālān Thayyiban knowledge, consumption behavior and dubious ingredients would be the dependent variables. The first 4 sections would answer the first Research Question, Section 5 would answer the second research question and section 6 would help in answering the research question number three.

The questions use “Tick-box” for multiple answers, a “Yes or No” type of question to ease during coding the responses for analysis. The questionnaire used a mixed of 2 Likert scales; 5 Likert scale for frequency questions and 7 Likert scale for the awareness section. The researcher chose 7 Likert scale for the awareness section due to the nature of behaviour questionnaire which is usually subjective and the data collection usually carried out in qualitative approach. The wider scale may help in providing more accurate analysis as the Likert scales were meant to analyze a series of questions in order to answer a research question, not to be used as analysis tool for single question items³⁶.

3.6 Validity and Reliability of the Research Instruments

Questionnaire validation was made by using 2 methods. First method, the questionnaire went through pilot test which was tried by 14 close friends and relatives. It was also proofread by a language validator for both English and Malay versions. Feedbacks acquired include; jargons that needed definition/illustration presented such as, “Kosher” logo and “dubious”; a question needed to be rephrased due to understanding gap during pilot test; a couple questions were also rearranged for its

³⁶ Rinker, T. (2014). On the treatment of Likert Data. University at Buffalo. *ResearchGate*
https://www.researchgate.net/publication/262011454_Likert

suitable sequence of definition and then its function; the removal of Brand names in the last section which may raise legal concerns, thus only the certification number references were listed; Some questions were not in sync order from the two available versions; a suggestion to reconsider the frequency used in section 2; and finally, a few translation gap and grammatical errors.

	Brands	Name	Certification
1		Vital Whey or Vital Mass	MS1500:2009 1017-04/2018
2		Titan Whey	MS1500:2009 1046-11/2018
3		EAS Whey Protein	Halāl Certification Code :27522
4		Orgain Organic Protein	Halāl Certification Code : 137025
5		Garden of Life: Organic plant-based protein	(Halāl Certification Code :147685

Table 3.1 Halāl Certified protein powder³⁷

Table 3.1 shows the removed Brand names and pictures in the last section due to the possibility of having legal issues, thus only the certification number references

³⁷ Islam Hashtag. (2016, August 26). Halal Whey Protein for Muslim Bodybuilders. *Islamhashtag.com*. <https://islamhashtag.com/halal-whey-protein/>

were listed. Author original intention was to promote the *Halāl* Certified Protein available in the market.

Secondly, the collected data from 14 respondents were then imported into Excel for Cronbach's alpha tests in order to investigate the validity of the questions. Using Cronbach's Alpha formula, the calculation's final result is $\alpha = 0.706$. However, after amendments and running a second pilot test the Cronbach's alpha increased to $\alpha = 0.715$. Even though it is less than 0.85, this is still within good reliability range.

3.7 Data collection

The data collection are mainly primary and secondary data. The primary data would be collected through a questionnaire from 50 respondents in Brunei and the secondary data would be from library research of collections of journals and past studies related to consumption behaviour. The data collection period was carried out 3 times in order to reach the targeted number. This prolonged period is due to the second and third lockdown and the transition to Endemic phase the country was having. The first collection period was done in September 6th until 20th of 2021, the second period was in March 14th until 26th of 2022 and the last period was in May 5th until June 9th of 2022.

3.8 Data Analysis

This dissertation would adopt quantitative approach which involves descriptively statistical analysis for instance, frequency, percentage, mean score and standard deviations. The illustrations, data representations and analysis would be carried out in SPSS. The data collected would be analyzed with the aid of automatic illustrations and Excel sheets from Google Forms features. The data would then be imported into

SPSS for basic calculations to test and find out the Correlation and Cronbach's Alpha in SPSS.

3.9 Chapter Summary

This study uses quantitative approach, online questionnaire which data would be used to answer the research questions. The questionnaire was validated by language expert, Excel's Cronbach's Alpha and NHANES consumption behaviour survey 2019-2020. Likert scales used are the 5s and 7s and analyzed in SPSS ver. 26. This study was approved by the CGS office in UNISSA. The data was collected in 3 different collection period due to COVID-19. The analysis and discussion of the findings would be explained in the next chapter.

CHAPTER FOUR: FINDINGS AND DISCUSSION

4.1 Introduction

This chapter will consist of the data collected from the questionnaire. Each question will be analyzed and will be compared with the suitable variables to answer the research questions. Then, finally will be critically analyzed and discussed in relation to the literature reviews.

4.2 Respondents' demographic data Analysis from the questionnaire

The respondents' demographic information was asked in the questionnaire to correlate their background with the factors affecting their consumption behaviour in protein supplements without *Halāl* logo. The questions include gender, age, marital status, level of education, religion, education, occupation and their income range. These questions are set as mandatory for respondents.

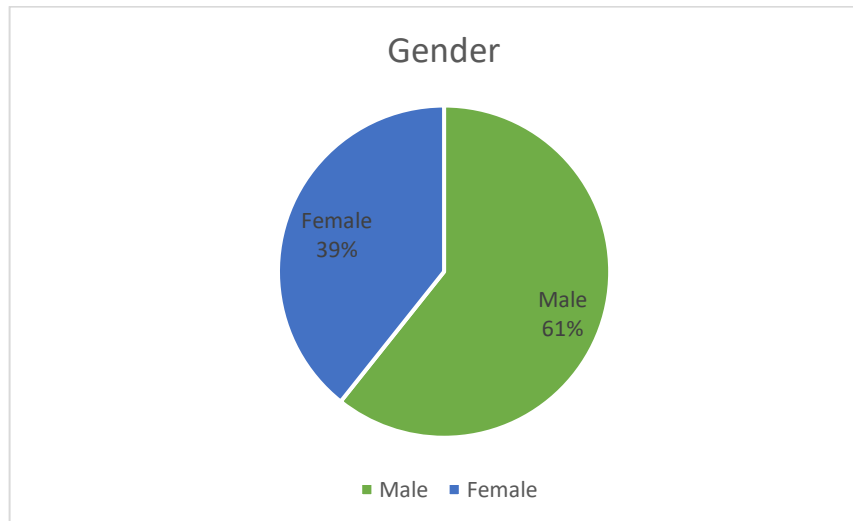


Figure 4.1 Respondents' Gender distribution

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	17 - 21	8	14.4	14.4	14.4
	22 - 26	27	48.3	48.3	62.7
	27 - 31	13	23.3	23.3	86.0
	32 - 36	5	8.6	8.6	94.6
	37 - 41	3	5.4	5.4	100.0
	Total	56	100.0	100.0	

Table 4.1 The age range of the respondents

Figure 4.1 shows the respondents' gender distribution and stated that 61% (n=34) of the respondents were male while 39% (n=22) of them were female. Table 4.1 below shows the ages of the respondents which was not set into range in the questionnaire, the respondents need to state their ages which is then grouped, as follows, using the existing collected data. Majority of the respondents, which weigh 48.3% (n=27), were from the age group of 22 to 26 years old and the range age (maximum – minimum = Range) age is 4 years.

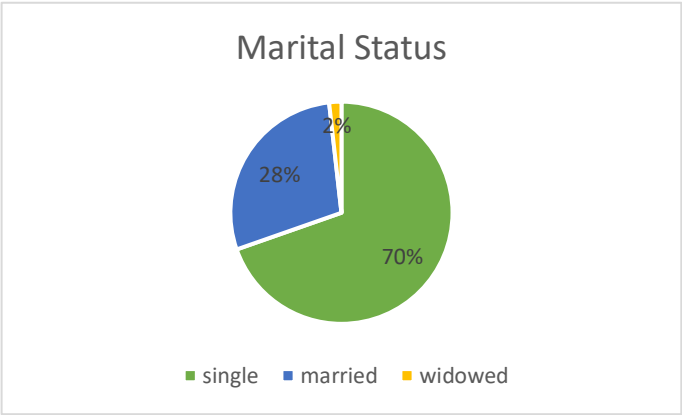


Figure 4.2 Marital status of the respondents

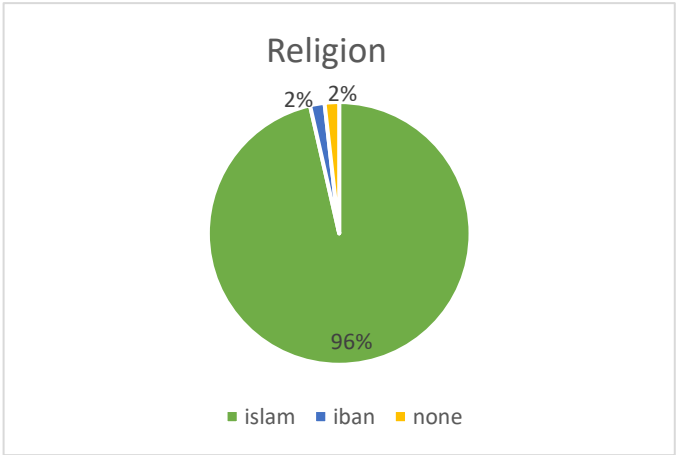


Figure 4.3 Religion of the respondents

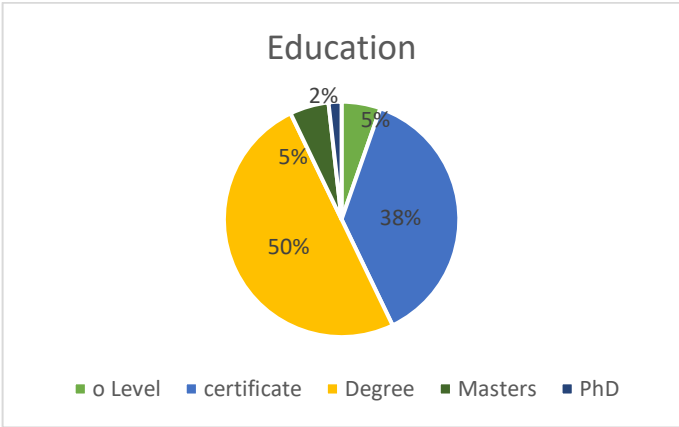


Figure 4.4 Education level of the respondents

Figure 4.2 shows the marital status of the respondents. 69.6% (n=39) of the respondents are single while figure 4.3 shows the religion of the respondents. As high as 96.4% (n=54) of the respondents are Muslims, leaving only one from the Iban heritage beliefs and one who chose others but did not state his religion. figure 4.4 shows the education levels of the respondents where 50% (n=28) are a bachelor's degree holder, followed by 37.5% (n=21) came from a certificate level or Higher National Diploma (HND).

		Occupation			Cumulative
		Frequency	Percent	Valid Percent	Percent
Valid	government officer/staff	16	28.6	28.6	28.6
	private company	13	23.2	23.2	51.8
	unemployed	6	10.7	10.7	62.5
	student	19	33.9	33.9	96.4
	self employed	2	3.6	3.6	100.0
	Total	56	100.0	100.0	

Table 4.2 The occupation of the respondents

		Income range			Cumulative
		Frequency	Percent	Valid Percent	Percent
Valid	below \$500	26	46.4	46.4	46.4
	501-1500	16	28.6	28.6	75.0
	1501-2500	6	10.7	10.7	85.7
	2501-3500	5	8.9	8.9	94.6
	3501-4500	2	3.6	3.6	98.2
	4501-5500	1	1.8	1.8	100.0
	Total	56	100.0	100.0	

Table 4.3 Income range of the respondents

Table 4.2 shows the occupation of the respondents. One-third (n=19) of the respondents are students while 28.6% (n=16) are working as government officer or staff. In table 4.7 stated that almost half (46.4%, n=26) of the respondents earn below \$500 per month followed by 28.6 % (n=16) of the respondents earn between BND\$501 to BND\$1500.

4.3 Descriptive Data to investigate the factors affect Bruneian consumption behaviour in their selection of protein powder without Halal Logo

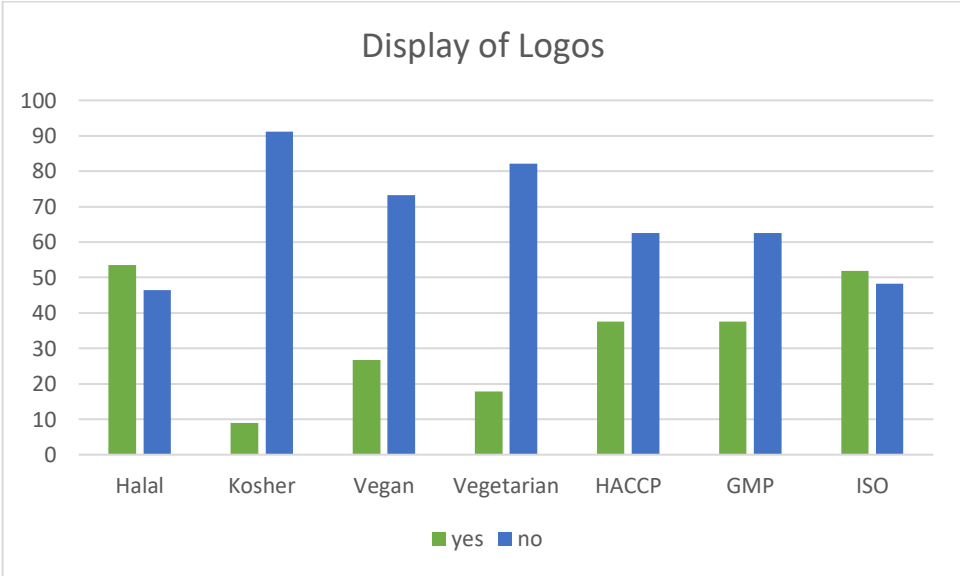


Figure 4.5 Display of logos in respondents’ supplements

	<i>Halal</i>	Kosher	Vegan	Vegetarian	HACCP	GMP	ISO
yes	30	5	15	10	21	21	29
no	26	51	41	46	35	35	27

Table 4.4 Frequency of logo being displayed in the respondents’ supplements

Figure 4.5 and table 4.4 show the percentage and frequency results of the logo displayed in the respondents’ supplements and it stated that 53.6% (n=30) of them

answered ‘yes’ to *Halāl* logo being displayed. The average mean of the respondents answered ‘No’ to logos other than *Halāl* logo being displayed is 45%.

Correlation

Control Variables		Kosher logo.	vegan labels.	No alcohol.	vegetarian labels.	No known dubious
Does your protein powder display any of this logo? [<i>Halāl</i> Logo]	Correlation	-.097	.228	.361	.212	.276
	Sig (2-tailed)	.598	.209	.043	.245	.126
	df	30	30	30	30	30

Table 4.5 Correlation between *Halāl* logo and the importance of their supplement’s quality

Table 4.5 shows the correlation between having *Halāl* logo and the importance of the supplement’s quality according to the respondents. The correlation row shows how positively or negatively the two are related and the significance row show how strong they are related statistically. For example, it shows above that Kosher is negatively correlated which means most who has *Halāl* logo displayed on their supplements usually did not see Kosher logo being displayed and it is 0.598 significance. A significant of 1 means 100% significant statistically and not by chance. On the contrary, the table shows that the relation of checking the alcohol content as opposed to having *Halāl* logo is 0.361 correlated however has only 0.043 significance.

Descriptive Statistics: The quality of the protein powder is important

	N	Minimum	Maximum	Mean	Std. Deviation
[I ensure the product I buy has <i>Halāl</i> Logo.]	56	3	7	5.46	1.175
[I usually buy protein powder which has the best review.]	56	4	7	6.04	.873
[I would buy it if the protein powder is labelled with a Kosher logo.]	56	1	7	3.96	1.747
[I only buy protein powder with vegan labels.]	56	1	7	3.89	1.448
[I check the ingredients and ensure there is no alcohol.]	56	2	7	5.77	1.362
[I only buy protein powder with vegetarian labels.]	56	1	7	4.09	1.481
[I check the ingredients and ensure there are no known dubious substances.]	47	2	7	5.64	1.258
Valid N (listwise)	47				

Table 4.6 The importance of the quality of the supplements

Table 4.6 shows the importance of the respondents' supplements quality which also helped in answering the first research question of this study. The results stated that with the mean score of 5.77 (SD=1.362), the respondents somewhat agreed to checking whether the supplements have alcohol and with the mean score of 5.64 (SD=1.258) somewhat agreed to checking the ingredients and ensure no dubious substance known to them.

Descriptive Statistics: The price is very important to me

	N	Minimum	Maximum	Mean	Std. Deviation
The price of the protein powder is very important to me. [I chose the most affordable brand.]	56	3	7	5.63	1.169
The price of the protein powder is very important to me. [I cross-check prices of protein products before buying.]	56	3	7	5.86	1.103
The price of the protein powder is very important to me. [I always buy before my powder runs out.]	56	1	7	4.93	1.683
The price of the protein powder is very important to me. [I always buy enough for 2 months.]	56	1	7	5.14	1.600
Valid N (listwise)	56				

Table 4.7 The importance of the price of the supplements

Table 4.7 shows the importance of the price of the supplement to the respondents. The result stated that with the mean score of 5.86 (SD=1.103) of the respondents agreed to have cross-checked the prices before buying and the mean score of 5.63 (SD=1.169) of the respondents have chosen ‘agree’ that they chose the most affordable brand.

Descriptive Statistics: The accessibility is important to me

	N	Minimum	Maximum	Mean	Std. Deviation
The accessibility to the protein powder is very important. [I bought my protein powder online.]	56	1	7	4.77	1.452
The accessibility to the protein powder is very important. [I prefer to buy and browse in stores.]	56	1	7	5.52	1.375
The accessibility to the protein powder is very important. [I would just buy whatever protein powder on the shelf.]	56	1	7	3.93	1.512
The accessibility to the protein powder is very important. [I prefer to pre-order my specific protein powder.]	56	2	7	4.61	1.569
Valid N (listwise)	56				

Table 4.8 The importance of the accessibility of products

Table 4.8 shows the importance of the accessibility of the supplement product according to the respondents. With the mean score of 5.52 (SD=1.375), most of the respondents prefer to browse and buy their supplement in store and with the mean score of 4.77 (SD=1.452), the second most popular method of buying their supplement is through online purchase. Most of the respondents, with the mean score of 3.93 (SD=1.512), somewhat disagreed to buy whatever protein powder available on shelf.

Descriptive Statistics: Preferences

	N	Minimum	Maximum	Mean	Std. Deviation
[Protein content is the most important for me.]	56	4	7	5.75	1.100
[I chose the most famous brand.]	56	1	7	5.13	1.322
[I bought my supplement based on my preferences on the product's ambassador.]	56	1	7	4.73	1.555
[I prefer sweet fruity flavour]	56	1	7	4.91	1.468
[I usually buy malty, non-fruit flavour e.g. chocolate and cappuccino]	56	1	7	5.46	1.525
[I always use the same brand.]	56	2	7	5.34	1.240
[I try different brands and stick to what is best for me.]	56	1	7	5.27	1.368
[I'm only using the brand because the weight loss programme I am in use the brand.]	56	1	7	4.59	1.660
Valid N (listwise)	56				

Table 4.9 The respondents' preferences of products

Table 4.9 show the respondents personal preferences when purchasing their protein supplements. The results stated that with the mean score of 5.75 (SD=1.100), most of the respondents chose their supplements based on the protein content. Secondly, with the mean score of 5.46 (SD=1.525) most respondents preferred the non-fruity flavour for example, chocolate.

4.4 Descriptive Data to explore the level of awareness on the non- permissible substances and dubious ingredients in their protein powder

Descriptive Statistics: The respondents' research method when in doubt

	N	Minimum	Maximum	Mean	Std. Deviation
When in doubt [I cross check with MOH to ensure the protein product is not listed as unsafe for consumption.]	56	1	5	2.79	1.569
When in doubt [I google any unfamiliar and dubious substances which are labelled in jargons and codes.]	56	1	5	3.64	1.600
When in doubt [I usually ask a relative who is familiar with the substances which are labelled in jargons and codes.]	56	1	5	3.50	1.695
When in doubt [I send the required amount of protein supplements for Lab testing for assurance.]	56	1	5	1.70	1.143
Valid N (listwise)	56				

Table 4.10 The respondents' research method when in doubt

Table 4.10 shows the research method which respondents used when encounter products with no *Halāl* logo. The results stated that, with the mean score of 3.64 (SD=1.600), the respondents would google the any unfamiliar jargons or codes. While the most unpopular method, with the mean score of 1.70 (SD=1.143), the respondents almost never check through Lab testing.

	N	Mean	Std. Error	Std. Deviation	Var	Skewness		Kurtosis	
						Statistic	Std. Error	Statistic	Std. Error
[Some whey protein is dubious or Non- <i>Halāl</i> .]	56	2.96	.171	1.279	1.635	.231	.319	-.918	.628
. [Whey protein, even though extracted from the enzymes of <i>Halāl</i> animals, can be Non- <i>Halāl</i> .]	56	2.88	.189	1.415	2.002	.109	.319	-1.224	.628
[Pepsin in whey is a digestive enzyme that mostly came from Pig.]	56	2.25	.189	1.417	2.009	.770	.319	-.799	.628
Diglyceride/Emulsifier is a dubious substance which may be non- <i>Halāl</i> if derived from non- <i>Halāl</i> slaughtered animals]	56	2.36	.185	1.381	1.906	.738	.319	-.674	.628
[Some slimming powdered drinks and protein powder contain Diglyceride/Emulsifier.]	56	2.36	.185	1.381	1.906	.653	.319	-.846	.628
[The most pure vanilla is extracted using Alcohol thus making it non- <i>Halāl</i> .]	56	2.30	.180	1.347	1.815	.759	.319	-.576	.628
Beta-Carotene (usually used for bright coloured powder) is possibly made from Pig Gelatine.]	56	2.14	.186	1.394	1.943	.864	.319	-.657	.628
[Human derivatives ingredients are non- <i>Halāl</i> .]	56	2.52	.196	1.465	2.145	.540	.319	-1.087	.628
[L-Cysteine is a protein that may be extracted from human hair.]	56	2.23	.180	1.348	1.818	.851	.319	-.423	.628
Mo2 & diglycerides, Sodium Stearoyl Lactylate, DATEM, Polysorbate 60 or 80 are ingredients that may be made of Lard/pig's fat.]	56	2.18	.189	1.416	2.004	.868	.319	-.638	.628
Valid N (listwise)	56								

Table 4.11 The respondents' average awareness of the dubious ingredients

Table 4.11 show the respondents' average awareness of the dubious ingredients in protein powder. The results stated that the most familiar dubious ingredients among the users is Whey with the mean score of 2.96 (SD=1.279). The second most known non-permissible substance is any derivatives from human with the mean score of 2.52 (SD=1.465) while the most unknown dubious ingredient is the purest vanilla with the mean score of 2.14 (SD=1.347).

4.5 Descriptive Data to explore the effective medium in creating awareness about the existing Halal certified protein powder to both Muslim and Non-muslims

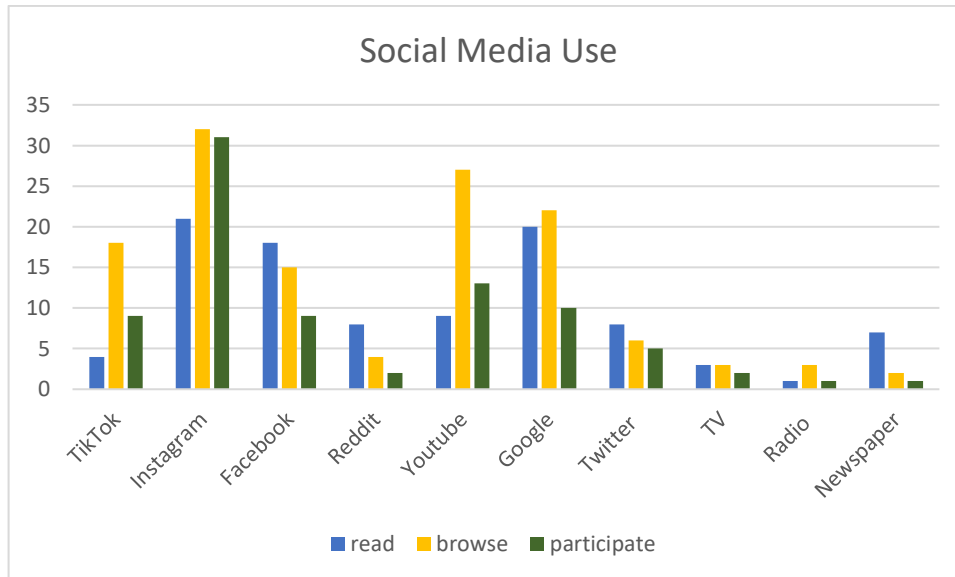


Figure 4.6 The number of participations in different social media

Figure 4.6 shows that the respondents' most used social media for reading, browsing and to participate in. The results stated that Instagram is most engaging social media where over half of the respondents browse and participate on Instagram. The second most browsed media by half of the respondents is YouTube.

4.6 Discussions and Data Analysis

4.6.1 Analysis of the respondents' behaviour on choosing their protein supplements in the absence of Halal Logo

This research investigated the factors that affect Bruneian consumption behaviour in their selection of protein powder without *Halal* logo. The hypotheses are the consumers would buy Protein Powder without *Halal* Logo after ensuring the ingredients and after ensuring the ethical logos are visible on the packaging. The analysis

of this study revealed that a little over half of the respondents have *Halāl* logo displayed on their protein supplement however when compared to the brands they have listed down, some respondents who used the same brand answered differently regarding this presence of this logo. This is either due to the absence of confirmation question regarding their products' country of origin or due to respondents answering the questionnaire based on memory rather than checking their product packaging. Nonetheless, this shows that a little over half of the respondents paid attention to what they are consuming. This behaviour is what a basic human character should be as mentioned in surah Abasa in verse 24:

“Then let mankind look at his food.” (Al-Quran al Karim).

Paying attention to food source, cleaning, processing and serving which all processes align with the actions of looking into what we eat. These all fortunately may be simplified through the presence and display of certified or official Halal Logo on the product. The reason as to why humans are told to watch what they eat is because what they eat will become their flesh³⁸. Once one is used to eat non-permissible this will affect the whole body and especially the king of flesh; the heart. This is against the Maqasid Shariah whereby a Muslim have the responsibility to protect their physical body and their spirituality (deen). If consumption is prolonged, the quality of their worship might also be affected. Hence, the importance of ensuring Halal Logo and free from dubious ingredients.

From the descriptive data, it can be seen that majority of the respondents are within the age group of 22-31 which is consistent to Grand Review Research (2020)

³⁸ Hill, I., (2019). You are what you eat! Is this for real? *The Journal of Pediatrics*, 206, 78. <https://doi.org/10.1016/j.jpeds.2019.01.016>

where the study predicted an increased use of protein supplement among Millennials³⁹ which Fry (2020) grouped them as youth within the age group of 23-39 years old.⁴⁰

The analysis also shows that half of the respondents earn below BND\$500 monthly due to their current profession as Bachelor's degree students. This justifies their behaviour of surveying the prices of the available brands and going for the most affordable ones. This factor is in line with Reynold and Olson (2001) idea of social factors which include the person's level of income would affect their purchasing habit.⁴¹

In Islamic discipline, what you spent on should also be free from the impure as one of the 5 Maqasid Shariah is the protection of wealth (Mal). Again, what we spend on and consume would lead back and relate to the growth and protection of our physical and spiritual deeds. Spending and consuming dubious would also affect the blessings (barakah) of our wealth.

The respondents also ensured the protein content and the non-fruity flavour of their supplements because their purpose drinking the supplement is for assisting in muscle growth and muscle recovery. This is also in line with Kotler's and et. al (2018) idea of psychological factor where it is a factor driven by motives to satisfy the need to grow and recover muscle as reason for consumption and also in line with the personal factor which describe the uniqueness of individuals where the preference of non-fruity flavour among the respondents which made up of 61% male. The author's stereotypical presumption is that female prefers sweet fruity flavour as compared to male who prefer

³⁹ Grand View Research. (2020). *Protein Supplements Market Size, Share & Trends Analysis Report By Product (Protein Powders, Protein Bars), By Source, By Distribution Channel, By Application, By Region, And Segment Forecasts, 2020 – 2027: Regional Insights*. (Report No. GVR-1-68038-694-3). Retrieved December 29, 2020, from <https://www.grandviewresearch.com/industry-analysis/protein-supplements-market>

⁴⁰ Fry, R. (2020, April 28). Millennials overtake Baby Boomers as America's largest generation. *Pew Research Centre*. <https://www.pewresearch.org/fact-tank/2020/04/28/millennials-overtake-baby-boomers-as-americas-largest-generation/>

⁴¹ Reynolds, T. & Olson, J. (2001). *Understanding the Consumer Decision Making Process: The Means-End Approach to Marketing and Advertising Strategy*. Psychology Press.

malt flavour instead. There is one hadith, Shahih hasan in the book of Al-Hujjah with sanad sahih, which says:

“The belief (Iman) of someone will not complete until his desire follows what I (Allah) have ordered.”

To relate to the psychological factor mentioned above, where it is okay to be driven by motives to satisfy the need but a believer should desire within the permissible of Shariah.

Furthermore, the results show that the respondents also prefer to buy their protein supplements from stores, followed by buying online. This is consistent with Jarva’s (2021) studies among young Finnish where their first choice of buying the supplements is at the grocery stores, secondly through an online purchase and third, from fitness/wellness store.⁴² Finally, the analysis of this study which answered the first research question revealed that in the absence of *Halāl* logo, the respondents would ensure that their supplement is alcohol free and free from any known dubious and non-permissible substances or ingredients. This is in line with Reynold and Olson’s (2001) idea of cultural factor which involve the person’s social values and religion which in this case is Islam. Most familiar and widely known non-permissible ingredients among Muslims are any derivatives from alcohol, pork and human as mentioned in the literature review under subheading *Halāl*an Thayyiban.

However, the researcher initially believed that though respondents would find the *Halāl* logo to be missing, there would at least be ethical logos such as Vegan, HACCP, GMP and ISO. But surprisingly, most of the respondents did not find these

⁴² Jarva, E. (2021). *The consumption and attitudes of protein supplement among young adults in Finland*. [Bachelor’s Thesis, Satakunta University of Applied Science]. https://www.theseus.fi/bitstream/handle/10024/511453/Jarva_Elisa.pdf?sequence=2&isAllowed=y

logos being displayed. This is in contrary of the hypothesis where the ethical logos are absent while the of *Halāl* logo is displayed.

4.6.2 Analysis of the awareness on the dubious ingredients that are commonly used in the protein supplement among Bruneian.

This research also explored the level of awareness among the Bruneian consumers on the non-permissible substances and ingredients in their protein powder. The hypotheses are when in doubt, the consumers would do a depth or a certain degree of research by googling the unknown jargons. In the questionnaire, the answer choices offered were research by consulting MOH's website, by asking friends or relatives who familiar with the jargon, by googling the unknown jargons or codes and lastly, by sending sample to DSS for lab-testing. In a way, the second hypothesis is proven because by googling ranked first as most used research method among the respondents. Followed by asking friend or relatives ranked as second method, then consulting MOH's website as third method and finally, sending sample to DSS as the least used method.

The results stated that the most familiar dubious ingredients among the users is Whey and the second most known non-permissible substance is any derivatives from human while the most unknown dubious ingredient is the purest vanilla. The overall mean of respondents' awareness is positioned as somewhat aware in a 7 Likert scale. Regardless of their education level, most respondents would just google to research when in doubt or when encounter unfamiliar jargons in their supplements. This is because google is the most convenient and fastest way to research something, although some articles may contradict and there is many false information out there.

Sending sample to DSS for lab-testing would be the most accurate method to ensure the product is free from non-permissible ingredients however it is not cost-

friendly for individuals consumer as each test to check whether each species is presence costs bnd\$50. If an individual would send to test for alcohol, pork and human DNAs, it would them BND\$150 which is an easy 200% more than the cost of their supplement itself. However, this would be quite affordable for importers and sellers. Some sellers participated in this survey and would invest in the tests to gain the trust of their customers.

4.6.3 Analysis on the effective media to create awareness for the Consumers

This research also explored the options of effective medium in creating awareness about the existing *Halāl* certified protein powder to both Muslims and Non-muslims. The hypotheses are the most effective media to create awareness among Millennials is on Tiktok⁴³, secondly on Instagram and thirdly on Reddit while the most ineffective medium would be the google articles and the newspaper. Unfortunately, this research has failed to investigate the most effective medium in creating awareness to non-Muslims as the respondents are majority among Muslim users with only one of Iban beliefs and another from atheist. This may be due to the misconceptions of Halal products to be exclusively for Muslims only even after the researcher have explained and outlined this in the beginning of the questionnaire and in the consent form. The involvement of non-muslim respondents is important as this research may be a platform to spread the awareness as encouraged by the religion in Hadith:

⁴³ Cuesta-Valiño, P., Gutiérrez-Rodríguez, P., & Durán-Álamo, P. (2021). Why Do People Return to Video Platforms? Millennials and Centennials on TikTok. *Media and Communication*, 10(1). <https://doi.org/10.17645/mac.v10i1.4737>

“Religion is advice. We asked, To Whom (the advice), O Messenger of Allah? He said, To Allah, His books, His Messengers, leader of muslim people and community in general.” (Muslim).

The social media listed in the questionnaire were TikTok, Instagram, Facebook, Reddit, YouTube, Google, Twitter, TV, Radio and Newspaper. The results ranking from the most to the least popular are Instagram, YouTube, Google, TikTok, Facebook, Twitter, Reddit, TV, Radio and newspaper respectively. This is partially consistent with Vancottem study⁴⁴ (2021) where Instagram and YouTube ranked as top 3 most used social media for marketing among influencers. Table 4.12 shows the summarized comparison ranks from the hypotheses and stated from the results.

Rank	Hypotheses	Vancottem (2021)	Results
1 st	TikTok	Instagram	Instagram
2 nd	Instagram	TikTok	YouTube
3 rd	Reddit	YouTube	Google
9 th	Google		Radio
10 th	Newspaper		Newspaper

4.12 The comparison of popular media between the hypotheses and stated results

The hypotheses were generally from the researcher’s observation among her social circle of relatives, friends and course mates where TikTok and Instagram are the most influential and most used while Reddit is a rising popular platform. The researcher also forgot to take into account Vancottem’s study into the hypotheses. The use of

⁴⁴ Vancottem, A. (2021). *A study of influencer marketing on Instagram, TikTok and YouTube: The effects of parasocial interactions, openness, perceived interactivity, persuasion knowledge and correspondence bias* [Master Thesis, Université Catholique de Louvain]. Prom.: STEILS, Nadia. <http://hdl.handle.net/2078.1/thesis:31419>

TikTok maybe more popular among Gen Z and centennials. However, the results stated that Instagram is most engaging social media where over half of the respondents usually browse and participate in is on Instagram. The second most browsed media by half of the respondents is on YouTube. These platforms if used wisely, would bear witness for the spread of advice to the community as encourage in Islamic teachings.

4.7 Chapter Summary

In conclusion, this chapter shares the findings from the analysis which explored and investigated the factors affecting Bruneians consumption behaviour in their selection of protein powder without *Halāl* Logo, the level of awareness among the Bruneian consumers on the non-permissible substances and ingredients in their protein powder and the effective medium in creating awareness about the existing *Halāl* certified protein powder. Next chapter would summarize the main findings, explain the implications of the research along with some recommendations for future studies and the significant limitations in this research.

CHAPTER FIVE: CONCLUSIONS

5.1 Introduction

This chapter would consist of the summary the main findings, also indicate the implications of the research and finally, would be concluded with some recommendations for future studies. Before giving closing remarks, the researcher would share few of the significant limitations during carrying out this study.

5.2 Summary of the main Findings

By referring to the findings and discussion in chapter 4, this research aims to answer these research questions:

- (i) What affect the consumption behaviour of Bruneian in selecting their protein powder in the absence of *Halāl* logo?
- (ii) What is the level of awareness of Bruneian consumers of the dubious and/or the non-permissible ingredients?
- (iii) How to create awareness about the existing *Halāl* certified protein powder

5.2.1 The consumption behaviour of Bruneian in selecting their protein powder in the absence of *Halāl* logo

This research indicated that in the absence of *Halāl* logo, the respondents would ensure that their supplement is alcohol free and free from any known dubious and non-permissible substances or ingredients which is in line with Millwood's (2021) idea of cultural factor which involve the person's social values and religion which in this case is Islam. It can be seen that majority of the respondents are within the age group of 22-31 Millennials⁴⁵ which is consistent to Grand Review Research (2020) study which Fry

⁴⁵ Grand View Research. (2020). *Protein Supplements Market Size, Share & Trends Analysis Report By Product (Protein Powders, Protein Bars), By Source, By Distribution Channel, By Application, By Region, And Segment Forecasts, 2020 – 2027: Regional Insights*. (Report No. GVR-1-68038-694-3).

(2020) had grouped them as within the age of 23-39 years old.⁴⁶ The results also shows that half of the respondents' earnings justifies their behaviour of surveying the prices of the available brands and going for the most affordable ones. The respondents also ensured the protein content and the non-fruity flavour of their supplements because their purpose drinking the supplement is for assisting in muscle growth and muscle recovery which are in line with Reynold and Olson (2001) idea of social factors; the person's level of income would affect their purchasing habit, psychological factor; a factor driven by motives to satisfy the need to grow and recover muscle⁴⁷ and the personal factor; the uniqueness of individuals where the preference of non-fruity flavour among the respondents which made up of 61% male.⁴⁸

Furthermore, a consistency with Jarva's (2021) studies among young Finnish where their first choice of buying the supplements is at the grocery stores, secondly through an online purchase and third, from fitness/wellness store.⁴⁹ There were also a couple of contrary findings as compared to the hypothesis; the ethical logos are absent while the of *Halāl* logo is displayed when initially the researcher hypothesize the other way round and second; some respondents who used the same brand answered differently regarding this presence of *Halāl* logo.

Retrieved December 29, 2020, from <https://www.grandviewresearch.com/industry-analysis/protein-supplements-market>

⁴⁶ Fry, R. (2020, April 28). Millennials overtake Baby Boomers as America's largest generation. *Pew Research Centre*. <https://www.pewresearch.org/fact-tank/2020/04/28/millennials-overtake-baby-boomers-as-americas-largest-generation/>

⁴⁷ Reynolds, T. & Olson, J. (2001). *Understanding the Consumer Decision Making Process: The Means-End Approach to Marketing and Advertising Strategy*. Psychology Press.

⁴⁸ Kotler, P., & Armstrong, G. (2018). *Principles of marketing* (17th ed.). Pearson Prentice Hall.

⁴⁹ Jarva, E. (2021). *The consumption and attitudes of protein supplement among young adults in Finland*. [Bachelor's Thesis, Satakunta University of Applied Science]. https://www.theseus.fi/bitstream/handle/10024/511453/Jarva_Elisa.pdf?sequence=2&isAllowed=y

5.2.2 The level of awareness of Bruneian consumers of the dubious and the non-permissible ingredients

This research indicated the level of awareness among the Bruneian consumers on the non-permissible substances and ingredients in their protein powder. The hypotheses are when in doubt, the consumers would do a depth or a certain degree of research by googling the unknown jargons. The results stated that the respondents are ‘somewhat aware’ of the dubious and the non-permissible ingredients. The most familiar dubious ingredient among the users is Whey and the second most known non-permissible substance is any derivatives from human while the most unknown dubious ingredient is the purest vanilla. The most popular research method used by the respondents is by googling regardless of their education level. Followed by asking friend or relatives ranked as second method, then consulting MOH’s website as third method and finally, sending sample to DSS as the least used method.

5.2.3 Analysis on the efficient media to create awareness about the existing *Halāl* certified protein powder among users

This research indicated that the effective medium in creating awareness about the existing *Halāl* certified protein powder to Muslims is on Instagram. The hypotheses were the most effective media to create awareness among Millennials is on Tiktok⁵⁰, Instagram and Reddit while the most ineffective medium would be the google articles and the newspaper, respectively. Table 4.12 shows the summarized comparison ranks from the hypotheses and stated from the results.

⁵⁰ Cuesta-Valiño, P., Gutiérrez-Rodríguez, P., & Durán-Álamo, P. (2021). Why Do People Return to Video Platforms? Millennials and Centennials on TikTok. *Media and Communication*, 10(1). <https://doi.org/10.17645/mac.v10i1.4737>

Rank	Hypotheses	Vancottem (2021)	Results
1 st	TikTok	Instagram	Instagram
2 nd	Instagram	TikTok	YouTube
3 rd	Reddit	YouTube	Google
9 th	Google		Radio
10 th	Newspaper		Newspaper

4.12 The comparison of popular media between the hypotheses and stated results

This is partially consistent with Vancottem’s (2021) study⁵¹ where Instagram and YouTube ranked as top 3 most used social media for marketing among influencers. The hypotheses were generally from the researcher’s observation among her social circle of relatives, friends and course mates where TikTok and Instagram are the most influential and most used while Reddit is a rising popular platform. The researcher also forgot to take into account Vancottem’s study into the hypotheses.

Majority respondents were only ‘somewhat aware’ with jargons used in the ingredients section of protein powder which implies the importance of Department of Scientific Services (DSS) in testing the chemical contents of the powder. However, it is understandable that each testing is costly for individuals but the price is quite affordable for importers and sellers to invest in to gain trust from their customers. Pricing of these tests are attached in Appendix F.

⁵¹ Vancottem, A. (2021). *A study of influencer marketing on Instagram, TikTok and YouTube: The effects of parasocial interactions, openness, perceived interactivity, persuasion knowledge and correspondence bias* [Master Thesis, Université Catholique de Louvain]. Prom.: STEILS, Nadia. <http://hdl.handle.net/2078.1/thesis:31419>

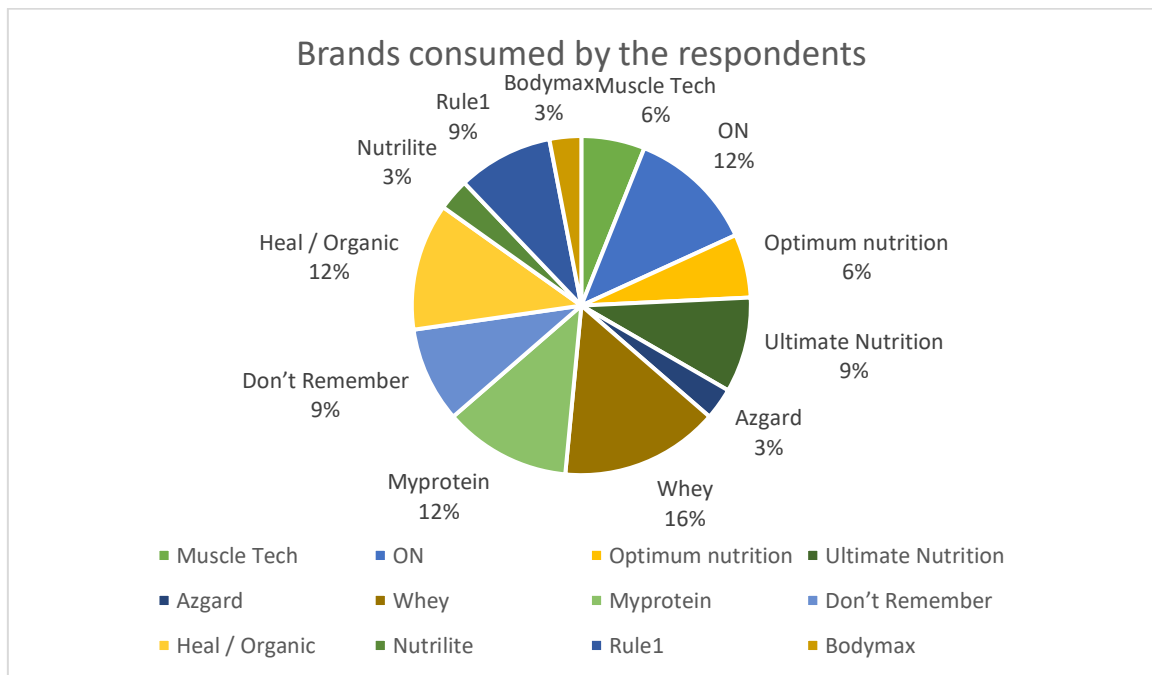


Figure 5.1 List of brands used by the respondents

Figure 5.1 shows the brands consumed by the respondents where the highest amount which weight 16% (n=9) of the respondents are consuming or had consumed Brand ‘Whey protein’. Meanwhile, 12% (n=6) chose Brand ‘Heal’ or ‘Organic’ which definitely show Vegan or Vegetarian logo. All the other brands were cross-checked whether *Halāl* or ethical logos are displayed, unfortunately, the responses were not synchronized. This suggests that either respondents did not check their supplement packaging while answering the questionnaire and answering them from memory or the brands varies from manufacturing batches and countries. The origin of their proteins was not asked thus, general presumption is made here.

5.3 Recommendations for future studies

There were some questions the researcher would recommend for future studies in order to make data more reliable. Questions such as the origin of the consumed protein supplements which would help answering the contradictory showed by the same brand users in relation to *Halāl* logo being displayed. Secondly, there was a question asking users whether or not they were planning to participate in a competition. It was a requisite question only for those who answered their reason for consuming protein shake is to participate in a competition for instance, Alpha challenge which is a boot camp consist of a series of exercises which challenge stamina and endurance, a bodybuilding competition or any sports competition which requires the training of physical body.



Figure 5.2 Respondents who likely to participate in competition

Figure 5.2 shows that 26.8% (n=15) of the respondents chose competition as their reason for consuming and 73.3% (n=11) of them are planning to participate in a competition. The researcher would like to recommend a collaboration with the organizers in making awareness programme among users for instance, conducting a

mandatory briefing or promote an endorsed brand or as simple as spread infographic in their Instagram and TikTok accounts to maximize the reach out to the unexposed users of such information.

5.4 Research Limitations

Limitations faced by the researcher were the lack or almost none-existent of non-Muslims respondents. This perhaps due to the widespread misconceptions of halal products are mistakenly thought exclusively for Muslims consumption only rather than for the benefits of all mankind. Inevitably, the researcher too would have not realized this if it were not for the knowledge acquired during the coursework semesters. However, it was made clear in the beginning of the questionnaire that this study targeted all the consumers of protein shakes whether Muslim or not.

Another limitation was the delayed and prolonged Data collection period due to the start of second and third wave lockdown and the endemic phase trasnisiton in August 2021, December 2021 and February 2022 respectively. As it was a purposive sampling, this disabled the collection to be random. Alternative distribution method was to distribute to Gyms' Whatsapp contact numbers but unfortunately, during the lockdown their hotline did not work which left the researcher to spread through Whatsapp contacts and Instagram contacts which followed the accounts of the participating gyms and sellers online. There were 3 separate data collection periods, where each period lasted for 2-4 weeks, which totaled up to less than a hundred respondents and around 50 usable data. The sources are tabulated as shown in table 5.1.

No.	Districts	Gyms/Seller Contacted	Agreed	Disagreed	Remark
1	Brunei Muara	15	5	3	<ul style="list-style-type: none"> • 3 gyms were contacted via emails due to missing mobile numbers, all no response • Few responded that they needed to ask their management but no respond after follow up. • 1 Gym on hiatus, only selling equipment for the time being.
2	Tutong	4	2	1	<ul style="list-style-type: none"> • Disagree because claimed customers only do cardio and do not consume protein • 1 gym did not reply at all • 1 gym which agreed is closed for business but helped distribute through Whatsapp group
3	Belait	3	2	-	<ul style="list-style-type: none"> • 1 gym did not respond.
4	Temburong	-	-	-	Lakiun sports complex and TK Gym (Limbang)
5	Instagram/Whatsapp	80			<ul style="list-style-type: none"> • Spamming gyms' accounts, protein sellers and known user (from their posts) • Very few replied
	Total	106			For all the gyms contacted, their official letters were already approved by CGS

Table 5.1 Limitations of Data collection

5.5 Conclusions

In conclusion, this research investigated the consumption behaviours of protein supplements without *Halāl* logo among Bruneians. This study has helped the researcher understand that in the absence of *Halāl* logo, the Bruneian consumers would ensure that their supplement is alcohol free and free from any known dubious and non-permissible substances or ingredients. This research also found that the level of awareness among the Bruneian consumers on the dubious and the non-permissible substances and ingredients in their protein powder are ‘somewhat aware’ which is a score of 3 out of 5 Likert scale. This shows that Bruneian consumers need awareness programme to educate them of those substances which can be carried out on Instagram as the research also indicated that the effective medium in creating awareness about the existing *Halāl* certified protein powder to Bruneian consumers is on Instagram.

This research provides the initiative to collaborate with the competitions organizers to conduct innovative and dynamics awareness programme to increase awareness among consumers to protect the health of users. The next phase of the research is to implement the focus group to engage with the importers and sellers and encourage them to send samples of their products for lab-testing at DSS to acquire Brunei *Halāl* logo

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APPENDICES

APPENDIX A: Letter of Supervision



UNISSA/PPS/COS-21

15 Sya'ban 1442H
29 March 2021M

FATIN BASIRAH BTE HJ SAMLI (20MC1077)
Master of Halal Science (Halal Management) [by Coursework & Dissertation]
Halalan Thayyiban Research Centre
Universiti Islam Sultan Sharif Ali

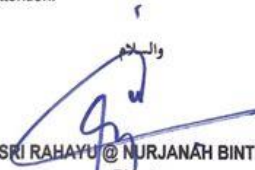
السلام عليكم ورحمة الله وبركاته

CONFIRMATION OF SUPERVISION

Please be informed that the Senate Meeting 08-2020/2021 dated 10 Sya'ban 1442H corresponding to 24 March 2021M has endorsed the following:

NAME OF STUDENT	FATIN BASIRAH BTE HJ SAMLI
REGISTRATION ID	20MC1077
PROGRAMME	MASTER OF HALAL SCIENCE (HALAL MANAGEMENT) [BY COURSEWORK & DISSERTATION]
TITLE OF THESIS / DISSERTATION	THE CONSUMPTION BEHAVIOUR OF PROTEIN SUPPLEMENTS WITHOUT HALAL LOGO AMONG BRUNEIANS
SUPERVISOR	HAJAH NORLIZA BINTI DSS HAJI MAHALLE

With that, we thank you for your kind attention.


[DR HAJAH SRI RAHAYU NURJANAH BINTI HAJI DOLLAH]
Director
Centre for Graduate Studies
Universiti Islam Sultan Sharif Ali

- cc:
- Rector, UNISSA
 - Deputy Rector, UNISSA
 - Acting Assistant Rector (Academic), UNISSA
 - Acting Registrar, UNISSA
 - Director (HTRC), UNISSA
 - Deputy Director (CGS), UNISSA
 - Head of Graduate Studies Programme (HTRC), UNISSA
 - Assistant Registrar (HTRC/CGS), UNISSA
 - Student File

C1-11/179

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APPENDIX B
Sample of Questionnaire
بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ



جامعة السلطان الشريف علي الإسلامية
UNIVERSITI ISLAM SULTAN SHARIF ALI
SULTAN SHARIF ALI ISLAMIC UNIVERSITY

I am a postgraduate student from the Halāl Science Programme at Universiti Sultan Sharif Ali (UNISSA) conducting a survey on ‘The consumption behaviour of protein supplements without Halāl logo among Bruneians’. The objective of this study is to investigate the consumption behaviour of the Bruneians who consistently exercise, in their selection of protein powder, the level of awareness of the dubious and the non-permissible ingredients and to create awareness among users and importers of the existing Halāl certified Protein powder whether they are Muslims or not. I would like to thank you in advance for participating in this survey. All participation is voluntary and any personal information will be kept strictly confidential and will be used for academic purposes only. Thank you for your time. Any questions, comments or complaints, you may contact me through this email: 20MC1077@siswa.unissa.edu.bn

MASTER OF HALĀL SCIENCE (HALĀL MANAGEMENT)

FATIN BASIRAH BINTI HAJI SAMLI
20MC1077

Halālan Thayyiban Research Centre
Universiti Sultan Sharif Ali
Negara Brunei Darussalam

SECTION 1: DEMOGRAPHIC


Please tick the appropriate answer for the following questions

Demographic Profile		
1a.	Gender	<ul style="list-style-type: none"> ● Male ● Female
1b.	Age	Please State
1c.	Marital Status	<ul style="list-style-type: none"> ● Married ● Single ● Divorced ● Widowed
1d.	Religion	<ul style="list-style-type: none"> ● Islam ● Christian ● Buddhist ● Atheist ● Other, please state: _____
1e.	Education Level	<ul style="list-style-type: none"> ● Certificate ● Diploma, HND ● Degree ● Masters ● Other, please state: _____
1f.	Occupation	<ul style="list-style-type: none"> ● Government staff/officer ● Private Company ● Unemployed ● Student ● Self-employed ● Other, please state: _____
1g.	Income range	<ul style="list-style-type: none"> ● Below 500 ● BND 501-1500 ● BND 1501-2500 ● BND 2501-3500 ● BND 3501-4500 ● BND 4501-5500 ● Above BND 5500

SECTION 2: GYM AND ROUTINE

The frequency of your activities and consumption of Protein powder.

2a	Why do you consume or drink Protein shakes?	<ul style="list-style-type: none"> • Muscle growth • Bodybuilding • To gain muscle to assist fat loss • Beauty or skincare routine • Others 				
2b	How frequently do you	Never	Rarely (once in 6-8 months)	Sometimes (once in 3 months)	Frequently (once in a month)	Usually (4-5 days in a week)
	Go to the gym					
	Do outdoor sports					
	Do home workout					
	Buy protein powder					
	Consume protein shakes					
2c	What kind of activities do you usually do?	<ul style="list-style-type: none"> • Weights • Bodyweight Training • Cardio • Others. Please state: 				
2d	Why do you go to the gym or practicing active lifestyles? (Allowed to choose more than one)	<ul style="list-style-type: none"> • Hobby • Work requirement • To Challenge stamina and endurance • To maintain healthy lifestyle / maintain bodyweight • To lose weight • To gain weight • For competitions (Bodybuilding / Alpha challenge) • Stress reliever 				
2e	For those who chose 'For competitions', have you participated before?	<ul style="list-style-type: none"> • Yes, once and will again • Yes, once and no more • Yes, more than once • No but planning to • No but already registered • Other. Please state: 				
2f	Approximately how much do you usually spend on each	<ul style="list-style-type: none"> • Less than BND50 • BND50-80 • BND81-110 • BND111-140 				

	protein powder tub?	<ul style="list-style-type: none"> • BND141-170 • BND171-200 • Above BND200 	
2g	The weight of each tub you usually purchase is:	<ul style="list-style-type: none"> • 200-400g • 401-600g • 601-800g • 801g-1kg • 1-2kg • Above 2kg • Other. Please state: 	
2h	What is the brand name of protein powder/shake that you currently consume?		
	Examples of Logo	 <p>GMP Logo Halal Indonesia Halal Malaysia Halal Philippines Halal Singapore</p> <p>Halal Thailand ISO Logo Kosher logo Vegan Logo Vegetarian logo</p>	
2i	Does your protein powder display any of these logo?	Yes	No
	Halāl Logo		
	Kosher Logo (Jew’s version of Halāl)		
	Vegan Logo		
	Vegetarian Logo		
	HACCP Logo		
	GMP Logo		

ISO Logo		
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SECTION 3: ḤALĀLAN THAYYIBAN

This section investigates your understanding on the concept.

Tick one of the 7 boxes for each question below.

Key:

Strongly disagree (1)	Disagree (2)	Somewhat disagree (3)	Neither agree nor disagree (4)	Somewhat agree (5)	Agree (6)	Strongly agree (7)				
Items				(1)	(2)	(3)	(4)	(5)	(6)	(7)
I understand the concept of Ḥalālan Thayyiban (lawful and good) in terms of food.										
Ḥalāl (lawful) and Thayyib (good) carry the meaning of permitted, clean and safe.										
Ḥalāl is a religious obligation.										
Non-muslim can consume Ḥalāl products.										
Ḥalālan Thayyiban simply means quality control.										
I have Islamic education background (i.e. SSSRU, Arabic School, SOASCIS, UNISSA, KUPUSB, Profession in MORA etc.)										

SECTION 4: CONSUMPTION BEHAVIOUR

This section investigates which factors affect your purchase of protein powder if there is no Ḥalāl Logo.

Tick one of the 7 boxes for each question below.

Key:

Strongly disagree (1)	Disagree (2)	Somewhat disagree (3)	Neither agree nor disagree (4)	Somewhat agree (5)	Agree (6)	Strongly agree (7)
--------------------------	-----------------	--------------------------	-----------------------------------	-----------------------	--------------	-----------------------

1	Awareness/Education	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	I did my research before buying protein powder.							
	I surveyed every available brand in Brunei before buying.							
	I ensure the product I buy has Halal Logo.							
	I usually buy protein powder which has the best review.							
	I would buy it if the protein powder is labelled with a Kosher logo.							
	I only buy protein powder with vegan/vegetarian labels.							
	I check the ingredients and ensure there is no alcohol.							
	I check the ingredients and ensure there are no known dubious substances.							
2	Price	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	I chose the most affordable brand.							
	I cross-check prices of protein products before buying.							
	I always buy before my powder runs out.							
	I usually buy enough for 2 months							

3	Preferences	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Protein content is the most important for me.							
	I chose the most famous brand.							
	I bought my supplement based on my preferences on the product's ambassador.							
	I prefer sweet fruity flavor.							
	I usually buy malty, non-fruit flavour e.g. chocolate and cappuccino							
	I always use the same brand.							
	I try different brands and stick to what is best for me.							
	I'm only using the brand because the weight loss programme I am in use the brand.							
4	Accessibility	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	I bought my protein powder online.							
	I prefer to buy and browse in stores.							
	I would just buy whatever protein powder on the shelf, I do not have a specific brand I'm loyal to.							
	I prefer to pre-order my specific protein powder.							

Any additional comments or opinion you would like to add regarding the factors affecting your decision in selecting the product:

SECTION 5: DUBIOUS (DOUBTFUL) AND NON-PERMISSIBLE INGREDIENTS

This section investigates your level of awareness of the ingredients.

Tick one of the 7 boxes for each question below.

Key:

Never	Rarely	Sometimes	Frequently	Usually
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5a	When in doubt	(1)	(2)	(3)	(4)	(5)		
	I cross check with MOH to ensure the protein product is not listed as unsafe for consumption.							
	I Google any unfamiliar and dubious substances which are labelled in jargons and codes.							
	I usually ask a relative who is familiar with the substances which are labelled in jargons and codes.							
	I send the required amount of protein supplements for Lab testing for assurance.							

*Note:

(1) Not at all Aware, (2) Slightly aware, (3) Moderately aware, (4) Very aware, (5) Extremely aware.

5b	I am well-aware with the dubious and non-permissible ingredients in my protein powder.	(1)	(2)	(3)	(4)	(5)		
	Some whey protein is dubious or non-Ḥalāl.							
	Whey protein, even though extracted from the enzymes of Ḥalāl animals, can be non-Ḥalāl.							
	Pepsin in whey is a digestive enzyme that mostly came from Pig.							
	Diglyceride/Emulsifier is a dubious substance which may be non-Ḥalāl if derived from non-							

	Ḥalāl slaughtered animals.							
	Some slimming powdered drinks and protein powder contain Diglyceride/Emulsifier.							
	The most pure vanilla is extracted using Alcohol thus making it non-Ḥalāl.							
	Beta-Carotene (usually used for bright coloured powder) is possibly made from Pig Gelatine.							
	Human derivatives ingredients are non-Ḥalāl.							
	L-Cysteine is a protein that may be extracted from human hair.							
	Mono & diglycerides, Sodium Stearoyl Lactylate, DATEM, Polysorbate 60 or 80 are ingredients that may be made of Lard/pig's fat.							

Any additional comments or opinion you would like to include related to dubious and non-permissible ingredients:

SECTION 6: SOCIAL MEDIA

This section investigates which media is the most effective in order to promote Ḥalāl Protein powder.

Key:

TikTok (1)	Instagram (2)	Facebook (3)	Reddit (4)	Youtube (5)	Google (6)	Twitter (7)	TV (8)	Radio (9)	Newspaper (10)
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6a	Involvement in different Social Media Use	1	2	3	4	5	6	7	8	9	10
	I have these applications on my phone.										
	I spend most of my time browsing here.										
	My participation is more here.										
	When I use this medium, I only look at Infographics.										
	When I use this medium, I read the whole article and/or captions.										
	I read/watch News from here.										
	I read News from here.										
	I acquire any updates from here										
6b	Which channel interest you most?	<ul style="list-style-type: none"> ● Fitness and well-being ● Lifestyle ● Health Education ● Documentary ● 5-minute Video ● Travel and Living (TLC) ● Asian food channels (AFC) ● Culinary ● Oasis ● TV Al Hijrah ● Science in Islam ● How it works ● How it's made 									

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***ADDITIONAL SECTION:**

These are some of the reference numbers of the existing Halal certified Protein powder in the market.

1. (MS1500:2009 1017-04/2018)
2. (MS1500:2009 1046-11/2018)
3. (Halal Certification Code :27522)
4. (Halal Certification Code : 137025)
5. (Halal Certification Code :147685)

	Would you consider changing to a Halal certified protein powder? (Please provide reason)	
	Only for those who import and sell protein powder, would you send some sample to MOH/BKMH lab for Halal Certification?	<ul style="list-style-type: none"> • Yes • Maybe • No • Just a consumer.

End of questionnaire. Thank you for your time!

Any additional comments, you may contact me at 20mc1077@siswa.unissa.edu.bn

For any complaints, you may reach my Supervisor at Norliza.unissa@gmail.com

APPENDIX C

Sample of Cover letter to collect data

Fatin Basirah binti Haji Samli
Fakulti Penyelidikan Halalan Thayyiban
Simpang 347, Jln Pasar Gadong,
Gadong BE 1310
Negara Brunei Darussalam

Kepada yang berkenaan,

11hb Ogos 2021M
2 Muharram 1443H

Tuan/Puan,

PER: Surat Lampiran

Dengan hormat merujuk surat Permohonan Membuat Kajian yang dilampirkan, saya Fatin Basirah binti Haji Samli (01-072786) ingin memohon untuk mengagihkan kertas kaji selidik berupa kod QR dan *link*. Kaji selidik ini tertumpu **hanya kepada ahli dan pengguna gimnasium/kompleks sukan** Tuan/Puan yang **menggunakan serbuk protein** atau apa jenis minuman protein yang membantu bagi pembaikpulihan otot selepas bersenam.

Tajuk kajian saya ialah Tingkah laku penggunaan *protein supplement* tanpa Halal Logo di kalangan orang Brunei. Objektif kaji selidik ini ialah:

- (i) Untuk menyiasat tingkah laku penggunaan orang Brunei yang sering bersenam dalam pemilihan serbuk protein mereka.
- (ii) Untuk menerokai tahap kesedaran tentang bahan-bahan terlarang dalam serbuk protein.
- (iii) Untuk memberi kesedaran tentang kewujudan serbuk protein yang bersijil halal kepada semua pengguna, samada pengguna Muslim atau bukan.

Tempoh pengumpulan data kaji selidik ini akan berjalan **selama 30 hari** dari hari penghantaran kertas kaji selidik yang mana akan dijangka selesai, diambil kembali dan ditutup selewat-lewatnya pada September 2021 (Tertakluk pada perubahan). Sekiranya pihak Tuan/Puan mempunyai sebarang pertanyaan dan maklum balas, sila hubungi saya terus di talian 8939427. Segala pertimbangan dan kerjasama Tuan/Puan amat saya hargai.

Sekian, Terima Kasih.

Yang Benar,

Fatin Basirah Haji Samli

APPENDIX D

Sample of Consent form

Research Ethics: Consent Form



Research title: THE CONSUMPTION BEHAVIOUR OF PROTEIN SUPPLEMENTS WITHOUT HALAL LOGO AMONG BRUNEIANS.

Researcher: Fatin Basirah binti Haji Samli (01-072786 – 8939427)

Supervisor: Hajah Norliza binti Dato Seri Setia Haji Mahalle (Norliza.unissa@gmail.com)

Objectives:

- (i) To investigate the consumption behaviour of the Bruncian who consistently exercise, in their selection of protein powder.
- (ii) To explore the level of awareness of the non-permissible substances and ingredients in their protein powder.
- (iii) To give awareness about the existing halal certified protein powder to both young Muslims and Non-muslims.

Terms: (Please tick to which you agree on)

		Yes	No
1	I confirm that I have read and understand the information for the above study and have had the opportunity to ask questions.		
2	I understand that my company's participation is voluntary and that I am free to withdraw at any time.		
3	I agree with the distribution of the survey questionnaires within my company.		
4	I agree with the distribution of the survey questionnaires among my customers.		
5	I agree with the use of anonymity quotes in publications		

Name of participant

Fatin Basirah

Name of researcher

Date

6th September 2021

Date

Signature

Signature

APPENDIX E

QR Code for Gym Display



Do you drink protein shakes?

Scan me for survey!



<https://forms.gle/zGd48CciKYXjZEm4A>

Awda minum minuman

serbuk protein?

Imbas untuk kajiselidik!



<https://forms.gle/XRzei3CM71bnzcRx8>

APPENDIX F

DSS Procedure for Request for Analysis


DEPARTMENT OF SCIENTIFIC SERVICES
MINISTRY OF HEALTH

Jabatin فرختمتن سائنتيفيك
 DEPARTMENT OF SCIENTIFIC SERVICES
 MINISTRY OF HEALTH

FDS (P) - 001a
 Procedure for Request
 For Analysis

Tel No.: 2382424
 Fax No.: 2381946

Commonwealth Drive, Jalan Menteri Besar,
 Brankas BE3919 Negara Brunei Darussalam.

2. The total weight / volume of samples in its original packaging should not be less than 300 grams.
3. Unsealed or repacked samples should not be less than 300 grams and must be correctly identified and labelled. For repacked samples, moisture analysis will be excluded.
4. Samples should be kept under the correct handling condition (chilled, frozen, room temperature, properly packaged, etc) to minimize sample deterioration or contamination during transportation to the laboratory.
5. Sender must be present to deliver samples personally (Items left on the Reception Counter unattended for shall not be received and hence discarded along with hazardous wastes).

SUBMISSION OF SAMPLES

1. Samples, together with adequate requesting documentation and completed FDS (F)-001 Analysis Request Form should be submitted to the Reception Counter, Food Chemistry Section at Department of Scientific Services, Ministry of Health, Commonwealth Drive, Jalan Menteni Besar, Brankas, Brunei Darussalam during office hours as follows:-

Mon – Thurs,	8.00am – 11.00am
	1.45pm – 3.00pm
Sat	8.00am – 10.30am

CLIENTS' CHARTER (TEKAD PEMEDULIAN ORANG RAMAI - TPOR)

1. The time needed for completion of analysis depends on the type of analysis requested.
2. Client's charter for our laboratory is listed in the published TPOR Jabatan Perkhidmatan Saintifik booklet.

PAYMENT (for paying clients)

1. The fee chargeable for each analysis is given in ANNEX 1


DEPARTMENT OF SCIENTIFIC SERVICES
MINISTRY OF HEALTH

Jabatin فرختمتن سائنتيفيك
 DEPARTMENT OF SCIENTIFIC SERVICES
 MINISTRY OF HEALTH

FDS (P) - 001a
 Procedure for Request
 For Analysis

Tel No.: 2382424
 Fax No.: 2381946

Commonwealth Drive, Jalan Menteri Besar,
 Brankas BE3919 Negara Brunei Darussalam.

PROCEDURE FOR REQUEST FOR ANALYSIS

Food Chemistry Section offers a range of analytical services on food products. The procedure for request for analysis is given below:-

TYPES OF ANALYSIS AVAILABLE

1. The type of analysis available at our laboratory is listed in ANNEX 1.
2. For analysis that is not listed, you may wish to contact us for advice.

ANALYSIS APPLICATION

1. Client should submit adequate documentation requesting for analysis and identification/marketing. For example, the Department of Environmental Health Services should submit their analysis request form. Other government and non-government agencies should submit a letter or memorandum requesting for analysis which includes at least the following details:-
 - a. Description of samples
 - b. Brand Name
 - c. Net weight or Volume
 - d. Expiry date
 - e. Country of Origin.
2. Client should complete FDS (F) - 001 Analysis Request Form.
3. All information requested should be correctly filled in. The type and number of analysis must be clearly indicated in the form.

SAMPLES

1. Sufficient samples must be submitted. The amount of samples required depends on:-
 - the type of analysis required,
 - the number of analysis requested and
 - the type of sample to be analysed.
 As a general guide, about 300 – 500grams of each sample is required.

APPENDIX G

DSS Analysis Pricing

DSS **DEPARTMENT OF SCIENTIFIC SERVICES**
MINISTRY OF HEALTH

جلالین فرخدمتن ساینٹیفیک
 DEPARTMENT OF SCIENTIFIC SERVICES
 MINISTRY OF HEALTH

FDS (P) – 001a
 Procedure for Request
 For Analysis

Tel No. : 2382424
 Fax No. : 2381746

Commenwealth Drive, Jalan Menteri Besar,
 Bandar Brunei Darussalam.

2. Payment should be made at the time of sample submission at the Administration Office of the Department of Scientific Services.
3. Payment may be made in two ways either :
 - Cash
 - Cheque made payable to "Government of Negara Brunei Darussalam". The cheque should be crossed and endorsed by the issuing bank.
4. Payment time

Mon – Thur	8.00am – 11.00am	1.45pm – 3.00pm
Sat	8.00am – 10.30am	

ANALYST REPORT

1. Official analyst report will be issued upon completion of analysis.
2. Reports may be collected from Reception Counter, Food Chemistry Section at Department of Scientific Services, Ministry of Health, Commonwealth Drive, Jalan Menteri Besar, Brakas, Brunei Darussalam during office hours.
3. For paying clients, they must bring their original receipt for verification purposes.

ENQUIRIES

1. Office Hours are :

Mon – Thur & Sat	7.45am – 12.00pm
	1.30pm – 4.30pm
2. For further information please do not hesitate to contact the following :-

Head	2382424 ext.7737
Scientific Officer	Ext.7743 / 7744
Food Chemistry Section	Ext.7745

DSS **DEPARTMENT OF SCIENTIFIC SERVICES**
MINISTRY OF HEALTH

جلالین فرخدمتن ساینٹیفیک
 DEPARTMENT OF SCIENTIFIC SERVICES
 MINISTRY OF HEALTH

FDS (P) – 001a
 Procedure for Request
 For Analysis

Tel No. : 2382424
 Fax No. : 2381746

Commenwealth Drive, Jalan Menteri Besar,
 Bandar Brunei Darussalam.

ANNEX 1 – LIST OF FOOD ANALYSIS CHARGES

1 Basic Nutritional Analysis Package \$105 Include Moisture, Total ash, Total fat, Nitrogen / Protein & Carbohydrate (By calculation) and Energy (By calculation)	10 Preservatives Benzoic acid \$50 Sorbic acid \$50 Sorbic acid \$50 Sulphur dioxide \$50 Formaldehyde in Fish (Screening) \$5	16. Authentication Analysis Detection of Bovine DNA(PCB) \$10 Detection of Bovine DNA (PCD) \$50 Detection of Bovine Protein in Gelatine (ELISA) \$50 Campric Acid \$50	17. Probiotic Analysis Pharyngusa (procyronin) \$10 Organophosphorus (OP) \$10 Synthetic Pyrimidin (SP) \$10 Organochlorine (OC) \$10 Organochlorine-CP \$10 Dithio-C12 \$10 N-Methyl Carbanaters (NAC) \$10 Chlorobalinal \$50 Acrylamide Acid (Makalay) \$50 Others, please specify. \$50
2 Basic Nutritional Analysis Package with Nutrition Claim & Importing Country Requirement (\$105 + \$) = \$	11. Antiox & Cations (per element) Total Dietary Fibre \$50 Sodium without sample preparation \$30 Calcium with sample preparation \$30 Iron \$30 Potassium \$30 Nitrate \$30 Sulphate \$50 Ammonium \$50 Others, please specify.	18. Heavy Metals & Trace Elements (per element) without sample preparation \$15 with sample preparation \$30 Arsenic \$15 Cadmium \$30 Lead \$30 Mercury \$30 Phosphorus \$30 Potassium \$30 Calcium \$30 Others, specify.	19. Veterinary Drug Residue Chloramphenicol \$50 Nitrofurantolones AMOZ \$50 Nitrofurantolones AGZ \$50 Others, please specify. \$50
3. Individual Nutritional Analysis Moisture \$10 Total Ash \$15 Total Fat \$30 Nitrogen / Protein \$50 Total Dietary Fibre \$50	12. Heavy Metals & Trace Elements (per element) without sample preparation \$15 with sample preparation \$30 Arsenic \$15 Cadmium \$30 Lead \$30 Mercury \$30 Phosphorus \$30 Potassium \$30 Calcium \$30 Others, specify.	20. Others pH \$10 Water Activity \$10 Culture \$50 Cholesterol \$50 Bicotine \$50 Acidity \$10 Chlorine \$10 Vitamin C, Ascorbic Acid \$50 Volume Content \$10 Net Weight \$10	
4. Sugar Content Fructose / Glucose / Sucrose \$50 Total Soluble Solids (TSS) \$10	13. Food Additives Screening Agents Screening – \$50 Spiramine \$50 Spiridin screening-Deamylase/Screening/Totality/Parasitoid \$150		
5. Artificial Sweeteners Cyclamate \$10 Saccharin \$10 Aspartam \$10	14. Melamine Melamine & Cyanuric acid \$150 Melamine, Cyanuric acid, Ammeline & Ammelide \$200 Others, please specify. \$50		
6. Alcohol Content Ethanol \$50 Methanol \$50	15. Mycotoxins Aflatoxins B1, B2, G1 and G2 \$120 Ochratoxin \$50 Others, please specify.		
7. Permitted Food Colours Quinoline \$50 Sudan dye I, II, IV \$50 Others, please specify. \$50			
9. Banned/ Restricted Kress test \$10 Peroxide value \$30			