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**KNOWLEDGE, ATTITUDE, AND PRACTICE OF PET
INSURANCE AMONG PET OWNERS IN SELANGOR,
MALAYSIA**

By

AUDREY KOH RUI PING

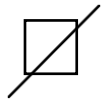
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2024

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ABSTRACT

Pet insurance is a financial tool meant to provide financial support to pet owners for veterinary expenses. It was introduced to the Malaysian market in 2010 with several companies offering various subscription packages. However, the public awareness towards pet insurance is still considered low compared to other pet-related industries in Malaysia for the past 5 years. There is also a lack of research on the acceptance and adoption of pet insurance by pet owners in Malaysia. Therefore, this study aims to (i) assess the knowledge, attitude, and practice (KAP) of pet insurance among pet owners in Selangor, Malaysia, (ii) determine the associations of sociodemographic factors with the KAP, and (iii) determine the correlation between the level of KAP. KAP is widely used in studies to assess factors that can influence behavioral decisions, which in this case of pet insurance, can be used to identify barriers and opportunities to promote the adoption of pet insurance in Malaysia. In other words, knowledge in this case is the awareness of pet insurance, attitude is the perceptions and willingness to adopt pet insurance, and practice is the actual behaviours related to the usage of pet insurance. A cross-sectional survey was conducted in Selangor, Malaysia, and 116 pet owners participated in this survey study. Data were subjected to descriptive analysis statistics, followed by Chi-square tests of association and Spearman's correlation analysis which were all done using IBM SPSS Statistic version 27.0. The results showed that most respondents have poor knowledge ($n = 63, 54.3\%$), moderate attitude ($n = 63, 54.3\%$), and poor practice ($n = 87, 75.0\%$) of pet insurance. Significant associations were indicated between income range per month with knowledge and practice ($p < 0.05$), highest education level with attitude ($p < 0.05$), and locality of residence with practice ($p < 0.05$). There is a significant correlation between total knowledge and practice scores ($r = 0.649$). Poor knowledge of insurance among pet owners in Selangor indicated the need to further increase the awareness of pet owners on the benefits of pet insurance, through enhanced marketing and public education initiatives.

Keywords: Pet insurance, Knowledge, Attitude, Practice, Veterinary Care, Selangor

ABSTRAK

Insurans haiwan peliharaan merupakan alat kewangan yang bertujuan memberikan sokongan kewangan kepada pemilik haiwan peliharaan bagi menampung kos rawatan veterinar. Insurans ini mula diperkenalkan di pasaran Malaysia pada tahun 2010 namun kesedaran masyarakat terhadap insurans haiwan peliharaan masih dianggap rendah berbanding industri berkaitan haiwan peliharaan lain di Malaysia dalam tempoh lima tahun kebelakangan ini. Tambahan pula, kajian berkaitan penerimaan dan penggunaan insurans haiwan peliharaan oleh pemilik haiwan peliharaan di Malaysia masih terhad. Oleh itu, kajian ini bertujuan untuk (i) menilai tahap pengetahuan, sikap, dan amalan (KAP) terhadap insurans haiwan peliharaan dalam kalangan pemilik haiwan peliharaan di Selangor, Malaysia, (ii) menentukan perkaitan faktor sosiodemografi dengan KAP, dan (iii) mengenal pasti hubungan antara tahap KAP. KAP lazim digunakan dalam kajian untuk menilai faktor yang mempengaruhi keputusan tingkah laku, ia boleh digunakan untuk mengenal pasti halangan dan peluang dalam mempromosikan penggunaan insurans haiwan peliharaan di Malaysia. Pengetahuan merujuk kepada kesedaran mengenai insurans haiwan peliharaan, sikap merujuk kepada persepsi serta kesediaan untuk menerima insurans tersebut, manakala amalan merujuk kepada tingkah laku sebenar berkaitan penggunaannya. Kajian rentas ini dijalankan di Selangor dengan penglibatan 116 pemilik haiwan peliharaan. Data dianalisis menggunakan statistik deskriptif, manakala perkaitan dan hubungan diuji menggunakan ujian Chi-square dan Spearman correlation test dengan perisian IBM SPSS Statistic versi 27.0. Keputusan menunjukkan kebanyakan responden mempunyai pengetahuan yang rendah ($n = 63, 54.3\%$), sikap sederhana ($n = 63, 54.3\%$), dan amalan yang rendah ($n = 87, 75.0\%$) terhadap insurans haiwan peliharaan. Terdapat perkaitan signifikan antara julat pendapatan bulanan dengan pengetahuan dan amalan ($p < 0.05$), tahap pendidikan tertinggi dengan sikap ($p < 0.05$), dan kawasan tempat tinggal dengan amalan ($p < 0.05$). Korelasi signifikan juga ditunjukkan antara jumlah skor pengetahuan dengan jumlah skor amalan ($r = 0.649$). Pengetahuan yang rendah mengenai insurans haiwan peliharaan dalam kalangan pemilik haiwan peliharaan di Selangor menunjukkan keperluan untuk meningkatkan kesedaran melalui inisiatif pemasaran dan pendidikan awam yang lebih berkesan.

Kata kunci: Insurans haiwan peliharaan, Pengetahuan, Sikap, Amalan, Penjagaan Veterinar, Selangor

CERTIFICATION

This is to certify that we have read this research paper entitled '**Knowledge, Attitude, And Practice Of Pet Insurance Among Pet Owners In Selangor, Malaysia**' by **Audrey Koh Rui Ping**, and in our opinion, it is satisfactory in terms of scope, quality, and presentation as partial fulfillment of the requirements for the course DVT 55204 – Research Project.



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Thank You

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DEDICATION

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LIST OF ABBREVIATIONS

KAP - Knowledge, Attitude, and Practice

Insurtech - Insurance Technology

LIST OF SYMBOLS

% = Percentage

n = The number of respondents



CHAPTER 1

INTRODUCTION

1. 1 Research Background

Pet ownership in Malaysia has become increasingly popular over the years. According to Consumer Report Malaysia 2023 by Standard Insights, 51.1% of Malaysians own pets, with more than half (26.42%) within this group owning more than 1 pet (Standard Insights, 2023). In addition, up to 26.22% of the overall responses had expressed their interest in owning a pet in the future, although they currently do not own any (Standard Insights, 2023). With these statistics, it is projected that the pet ownership market in Malaysia will grow by up to 70% by 2025 compared to 2016 (Branded - The Edge Malaysia, 2023). Cats are the most popular pets in Malaysia, with up to 77.7% of pet owners owning at least one cat, followed by different fishes (19.8%), and dogs (14.9%); other pet ownership is made up of, but not limited to, avians, reptiles, and small mammals (Standard Insights, 2023).

Pet ownership brings many benefits to pet owners, which include companionship, improved mental health and wellbeing, build better social connections and active lifestyle, and a better sense of security (Jeremy, 2020; Standard Insights, 2023; Mordor Intelligence, 2024). With the various benefits brought by pets, increasing numbers of pet owners view their pets as family members and therefore are more willing to invest in the health and wellbeing of their pets, this includes seeking veterinary advice (Khew, 2023; Standard Insights, 2023). According to Standard Insights, up to 77.7% of pet owners in Malaysia seek consultations from veterinary professionals, with up to 51.9% of pet owners seeking consultation from veterinary professionals more than once annually (Standard Insights, 2023).

However, the increasing cost of veterinary services that are further affected by inflation can be another challenge for pet owners in accessing essential veterinary services for their pets' medical conditions. This could result in reduced veterinary visits or refusal of veterinary services, with high chances for owners seeking cheaper but questionable alternatives (Standard Insights, 2023). The challenge is further aggravated when the sudden occurrence of illness requires a high cost of treatment, resulting in the inability of the owner to provide the best treatment for the pet,

causing in death of the pets. Therefore, to prepare for the unexpected, pet owners are advised to put aside savings for their pets, but there are also better options available for such preparation, such as pet insurance (Kilroy, 2023; PLC MY Editor, 2023).

In 2010, Mitsui Sumitomo Insurance Group (Malaysia) Berhad (MSIG) launched pet insurance into the Malaysian market. Currently, there are four companies—MSIG, Oyen, CG Cover, and eTiQa—that offer different pet insurance packages. Oyen is currently the insurtech, which is the automation of the traditional insurance services, that provides the highest medical coverage limit in Malaysia (Khew, 2023; PLC MY Editor, 2023). However, Oyen also faces challenges of pet owners thinking that pet insurance is a scam and that the process of insurance claims is very difficult and not worth the time and money (Bahari, 2023). Veterinarians play a crucial role in advocating for pet insurance, as it was observed that pet owners believe in the information provided by veterinarians more than directly from pet insurance agents, but it was still observed that the majority of veterinarians, even in European countries, only did the minimum of displaying brochures and posters in their practice (Loria, 2022; Brown, 2017).

1.2 Research Problem Statement

Although pet insurance has been marketed in Malaysia since 2010, it is still a relatively new concept that is not well-known among the pet owners in Malaysia (Khew, 2023). Aside from that, there are still no data on the knowledge, attitude, and practice of pet insurance among pet owners in Malaysia. The benefits of broad acceptance and use of pet insurance by pet owners in Malaysia include better health outcomes for diseases, improvement of veterinary services and facilities, and thereby improvement of overall health conditions of pets in Malaysia (Bahari, 2023). Therefore, investigating the knowledge, attitude, and practice of pet insurance among pet owners in Malaysia is needed to find a suitable approach to educate and gain acceptance from the general public on pet insurance.

1.3 Research Questions

1. What is the knowledge, attitude and practice level of pet insurance among pet owners in Selangor?
2. What are the demographic factors that affect the level of KAP towards pet insurance?

1.4 Research Hypothesis

1. Pet owners in Selangor have a low knowledge, attitude and practice level towards pet insurance.
2. There is no association between age, education level, income range, and purchase of own personal health insurance with the level of KAP towards pet insurance.

1.5 Research Objectives

1. To determine the knowledge, attitude and practice level of pet insurance among pet owners in Selangor.
2. To determine the factors affecting KAP levels of pet insurance by pet owners in Selangor.

CHAPTER 2

LITERATURE REVIEW

2.1 Overview of Pet Insurance

Pet insurance, as the name suggests, is an insurance policy purchased or subscribed to by pet owners, which acts similarly to any health insurance policy, providing coverage for the cost of veterinary bills when pets require treatments due to injuries or diseases (Twin, 2022; Goodnight, 2024).

It was first initiated in the year 1890 by Claes Virgin, founder of the Swedish insurance company Agria, to provide financial protection to clients owning working animals and production animals such as horses and livestock, to afford veterinary care to these animals should there be incidence of illness or injuries (Twin, 2022). The concept gained popularity and started to be adopted in several countries in addition to Sweden, such as the United Kingdom, United States, Australia, and Germany, which have increased pet ownership in the mid-20th century. Pet insurance has undergone several modifications and evolutions to meet the needs of pet owners throughout the years, especially for cats and dogs.

As of date, pet insurance mostly still runs on a reimbursement model, that is, pet owners still pay upfront during veterinary visits, and then either the veterinary practice or pet owner submits the medical records and bills to the insurance provider. The insurance provider then reimburses for the bill according to the plans that the pet owner subscribes to, within the annual limit that the plans offer (Kowalski, 2024).

According to the North American Pet Health Insurance Association (NAPHIA), this association monitors three types of pet insurance coverage, namely, accident-only coverage, accident and illness coverage, and insurance with embedded wellness (Steere, 2022; National Association of Insurance Commissioners, 2023). Based on insurance with embedded wellness, it is observed that plans that include early screening diagnostics, preventative vaccinations, dental care, and nutritional advice are beginning to be available in the North American market, which requires huge popularity and practice of pet insurance in the respective demographics to support

the industry. However, such coverage is yet to be available in Malaysia. In Malaysia, pet insurance coverage is still rather traditional, with at most covering veterinary and surgical fees, pet death from illness and injury, pet burial or cremation cost, third-party liability cost, advertisement, and reward cost for the search of insured missing pets, and boarding kennel and cattery fees for when the pet owners themselves are hospitalized and unable to care for their pets for a certain period.

2.2 Global Pet Insurance Size Analysis

Based on a report by Global Market Insights in 2024, the global pet insurance market size is valued at USD 7.3 billion in 2021, USD 8.3 billion in 2022, and USD 9.6 billion in 2023, indicating that there is continuous expansion of the pet insurance market (Faizullabhoy, 2024). The global pet insurance market size is forecasted to expand at a compound annual growth rate (CAGR) of 6.4% to 19%, according to the analysis of 3 different market research companies, namely Global Market Insights estimating USD 14.9 billion, Allied Market Research estimating USD 16.8 billion, and Research And Markets estimating USD 32.7 billion (Keller, 2023). According to a research report published by Spherical Insights & Consulting, the global pet insurance market size is forecasted to reach USD 39.53 billion by 2033, with a CAGR of 15.52% (Spherical Insights LLP, 2024). Regardless of the variety of valuations, analysts agree that pet insurance is a great business opportunity, especially when insurers can offer insurtech solutions (Keller, 2023). In addition to the above information, during the forecasted period, dogs are expected to be the species that hold the largest share of the global pet insurance market, with the accident and illness category of pet insurance being the most preferred insurance policy (Spherical Insights LLP, 2024).

The increase in pet adoption and knowledge of pet insurance are the possible driving factors for the increase in pet insurance market value, even in the Asia Pacific. This can be seen by the forecast of China dominating the Asia Pacific pet insurance market, with even 2 firms, China Continent Insurance and the Taikang Insurance Group, introducing insurance that covers also diabetic cases in pets (Verghese, 2023).

2.3 Driving Factors for Increase Pet Insurance Market

The increase in the global pet insurance market can be seen due to the increase in the overall pet market. According to Stanfield in the article ‘Pet Industry Statistics 2024: Facts & Trends on the \$246 Billion Pet Market’ published in April 2024, the global pet market as of date is worth USD 246 billion and is projected to reach roughly USD 350 billion by 2027 (Stanfield, 2024). Based on Business Fortune Insights, the global pet market size value is also projected to grow from USD 259.37 billion in 2024 to USD 427.75 billion by 2032, with an estimated CAGR of 6.45% within the forecast period (Fortune Business Insights, 2024). Looking at the pet market in Malaysia alone, The Edge forecasted pet ownership in Malaysia to grow by up to 70% by 2025, as compared to 2016 (Branded - The Edge Malaysia, 2023). With increasing pet owners viewing their pets as part of their family, there is an increased awareness of pet insurance, especially the benefits of pet insurance which is what brings the market to pet insurance.

Pet insurance most importantly provides financial protection to pet owners, especially with the increasing cost of veterinary care. According to Williams et. al. in their study ‘The Impact of Pet Health Insurance on Dog Owners’ Spending for Veterinary Services’ in 2010, 23% of US pet owners involved in the study revealed that they do not have sufficient funding for veterinary care when their pets needed, 5% of pet owners state that the cost of veterinary care exceeded their expectations (Williams et al., 2020). This condition persists to date, and can also be observed in Malaysia, as 48.1% of pet owners admit that they do not bring their pets for annual veterinary visits, with 22.3% not even getting veterinary care for their pets even if their pets fall sick, with cost being part of the contributing factors (Standard Insights, 2023). The high cost of veterinary care also causes pet owners to opt for cheaper treatment alternatives, taking the risk of giving non-veterinary recommended treatments to their pets although there are potential adverse effects, or worse still, resulting in having to put down their pets due to inability to afford the high treatment cost (Standard Insights, 2023). A lot of pet owners also are not financially ready for any sudden veterinary cost incurred due to accidents. Pet insurance offers financial protection and the ability of pet owners to choose better treatment options for their pets, thereby improving the overall quality of life and life expectancy of pets, without having to make the hard decision between financial well-being and pet’s well-being, regardless if it is a prepared or sudden incident (Standard Insights, 2023; Kowalski, 2024).

Pet insurance also covers costs other than veterinary care, including compensation for pet death from illness and injury, pet burial, or cremation cost, which is much appreciated by pet owners who view their pets as family and would prefer a more humanized after-life service. Pet insurance also covers third-party liability costs should their pet cause damage to third-party properties, advertisement and reward costs for the search of insured missing pets, and pet insurance offered by insurance companies that also offer health insurance, boarding kennel, and cattery fees for when the pet owners themselves are hospitalized and unable to care for their pets for a certain period, provided that the pet owners also have health insurance subscribed with the same insurance company (Etiqa, 2023; PLC MY Editor, 2023).

2.4 Pet Insurance in Malaysia

Pet insurance was introduced to the Malaysian market by Mitsui Sumitomo Insurance Group (Malaysia) Berhad (MSIG) in 2010. As of date, 4 companies are offering various pet insurance packages, including MSIG, Oyen, CG Cover, and eTiQa. Oyen is an insurtech company that is licensed to sell policies provided by MSIG, with the highest medical coverage limit in Malaysia (Khew, 2023). The other companies provide policies that cover a wide variety of sudden situations, including veterinary and surgical fees, pet death from illness and injury, pet burial or cremation costs, and third-party liability costs. As insurance companies that provide policies for humans as well, MSIG and CG Cover also cover advertisement and reward costs for the search of insured missing pets and boarding kennel and cattery fees for when the pet owners themselves are hospitalized and unable to care for their pets for a certain period. To prevent insurance fraud, all 4 companies would require the pet to be microchipped as part of the registration process (PLC MY Editor, 2023).

2.5 Challenges of the Pet Insurance Market

The biggest challenge expected of pet insurance is the lack of awareness of pet insurance in general (Keller, 2023; Faizullahoy, 2024). The frequency of searches for pet insurance information on Google Trends search engine revealed that for the past 5 years (2019 to 2024) pet insurance has the lowest number of searches in Malaysia, as compared to other pet-related industries, including pet shops (with the highest search frequency), veterinary services, pet food

and pet hotels. Even in Selangor and Kuala Lumpur, the search rate for pet insurance in Malaysia is only about 1% and 2% in each respective state. In an interview with Smart Investor Malaysia, Michelle Chin, the co-founder of Oyen, mentioned that the major challenge faced by Oyen is that up to 80% to 90% of the clients that enquired with Oyen lack knowledge of how pet insurance in Malaysia works (Khew, 2023). This is aside from the scepticism and fear of being scammed as pet insurance is still not a well-known market in Malaysia (Bahari, 2023). According to Michelle, co-founder of Oyen Malaysia, there is still low awareness of pet insurance in Malaysia, leading to a lack of confidence in Malaysian pet owners to purchase pet insurance (Bahari, 2023). Some are also intrigued with the idea of pet insurance due to the hassle of paperwork to get reimbursements (Khew, 2023).

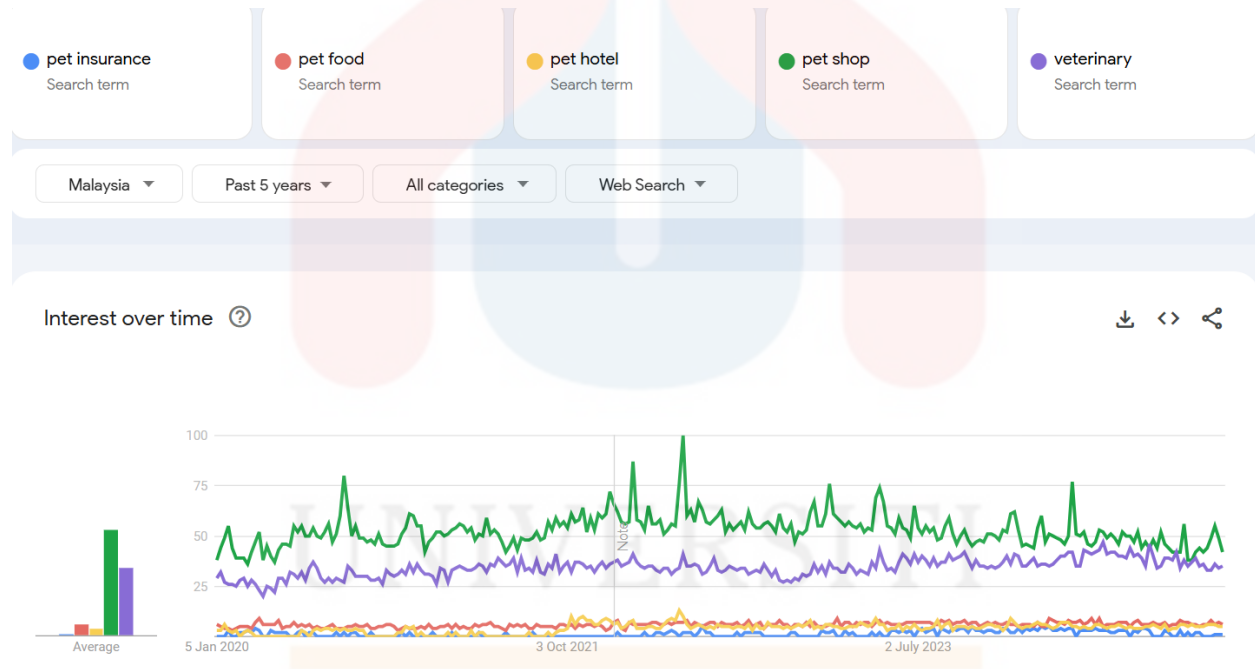


Figure 1 The search interest of Malaysians regarding the pet-related industry for the past 5 years.

Aside from that, ignorance may also be part of the contributing factors, according to several articles from RinggitPlus, the possible factors of the low amount of pets being insured include the lack of knowledge about pet insurance, and that 30% of working Malaysians between 25 to 40 years old, which is also the range of the most respondents having pets, do not personally own any health insurance, with 16% not intending to own any in the near future (Mudhakkir, 2016; Cheong

et al., 2022). According to a survey conducted by the Behavioral Insights Team (BIT) in collaboration with Perbadanan Insurans Deposit Malaysia (PIDM), Sabah, Sarawak and East Coast residents have the highest number of respondents that are uninsured (29.1% and 26.0% respectively). The article identified 5 possible principles that would influence the behaviour of Malaysians towards insurance, namely, being at risk assessment, the tendency to avoid difficult decisions, peer influence and pressure, the need to be guided by key time points, and putting more emphasis of present benefits more than the future (PIDM, 2022).

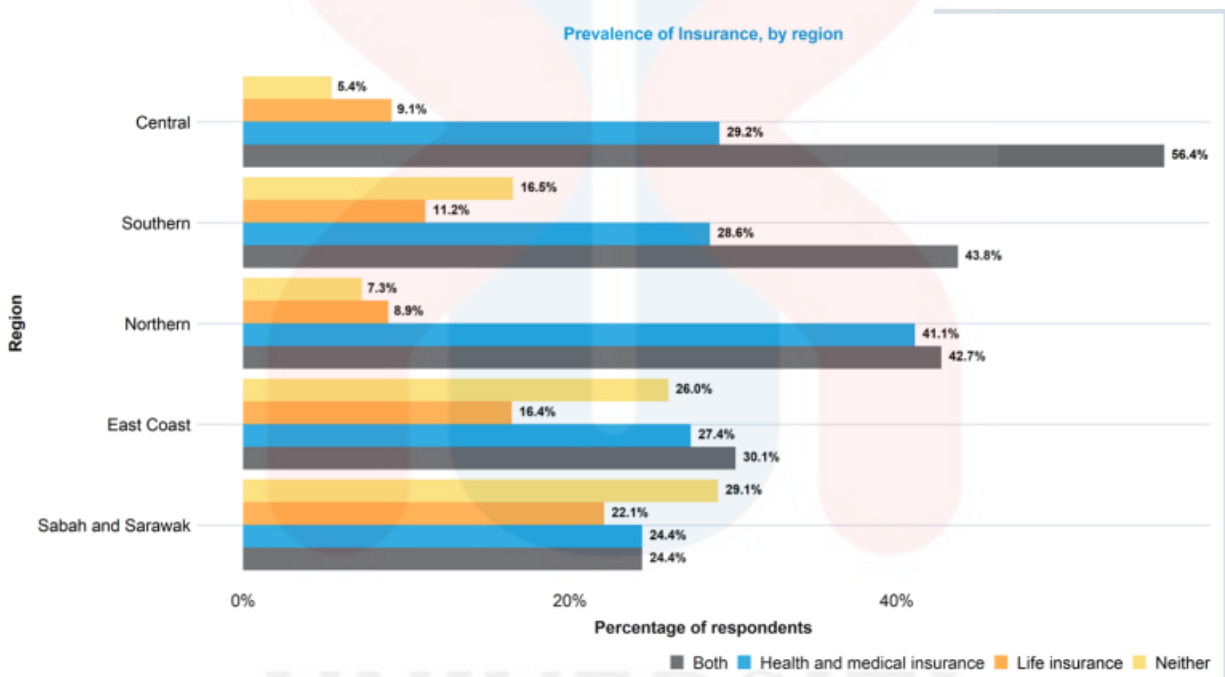


Figure 2 The Uptake of Insurance by Residents of Different Regions in Malaysia (PIDM, 2022)

The level of income can also influence the practice of insurance, which it was also observed in the survey study by BIT in collaboration with PIDM in 2022, higher monthly income levels were typically associated with higher insurance ownership rates among respondents, and vice versa. As shown in Figure 3 below, the lower the income levels, the more respondents do not own any insurance for themselves. This implies that the affordability of insurance can affect the decision to own insurance, which can also be applied onto pet insurance.

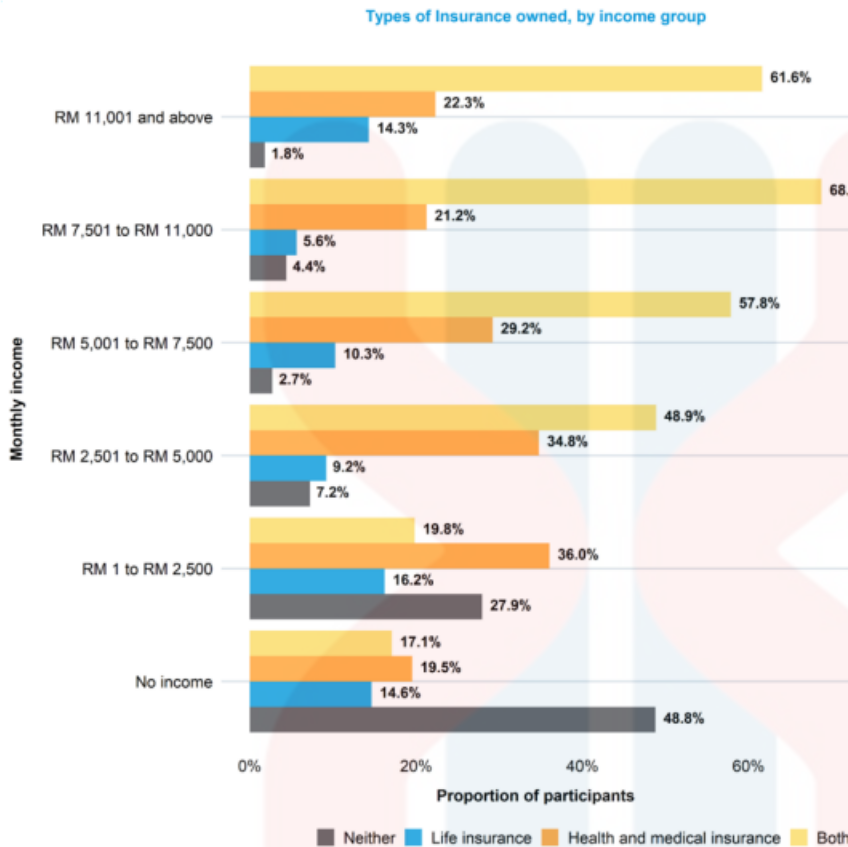


Figure 3 Association of Lower Income Levels with the Lower Purchase of Insurance (PIDM, 2022)

2.6 Benefits of Pet Insurance for Veterinary Practices and Overall Animal Welfare

Aside from providing benefits to pet owners, pet insurance also benefits veterinary practices. According to a 2019 study by the United Veterinary Services Association, it was found that although over 95% of cat and dog owners in the United States were satisfied with the quality of veterinary services provided to their pets, 48% of pet owners were not satisfied with the cost incurred (Williams et al., 2020). 30% of pet owners chose not to bring their pets for annual veterinary visits due to the cost of veterinary services, this indicated at least USD 7 billion of veterinary services not provided to pets in the United States (Williams et al., 2020). This situation can also be observed in Malaysia, as seen in Consumer Report Malaysia 2023 available on Standard Insights, as 22.3% of pet owners choose not to bring their pets for any veterinary consultations, and 19% of pet owners only bring their pets for veterinary consultations when their pets are sick.

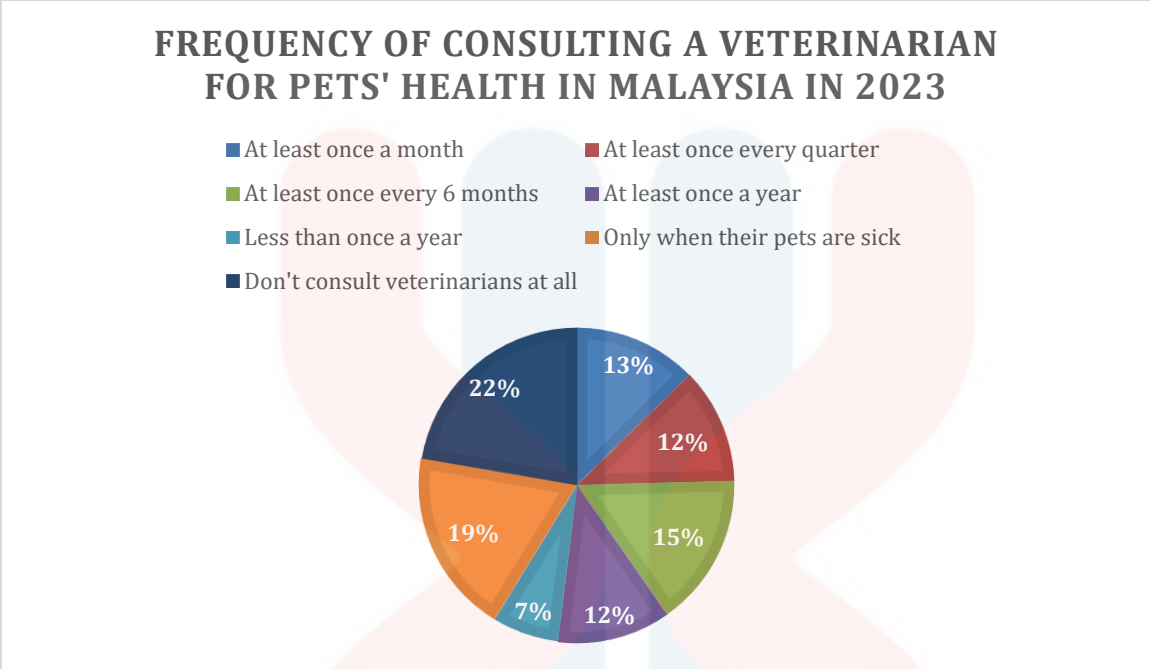


Figure 4 Frequency of Consulting a Veterinarian for Pets' Health in Malaysia in 2023 (Standard Insights, 2023)

With the increased popularity and practice of pet insurance, there is increased client compliance from pet owners, thereby the possibility of increased consultations, which benefits veterinary businesses, aside from improved pet well-being as veterinarians can advocate for preventative care for better animal welfare to more clients (Icxx, 2023). According to Kevin Hoong, CEO and co-founder of Oyen Sdn Bhd during his interview with The Edge Malaysia Weekly in July 2023, Oyen insurance covers not just major injuries and illnesses, but also minor illnesses, and also provides pets with wellness plans that include claims for vaccinations, routine blood tests, and de-fleaing or deworming (Ravimalar, 2023). With such insurance plans, it can be forecasted that there will be more clients that will bring their pets for treatment even for the most minor injuries or illnesses, and also for routine preventative care which prevents infectious disease, or even detects early stages of illness such as kidney disease and for early intervention to be conducted. This highly enhances the fifth animal welfare, which is freedom from pain, injury and disease. The enhanced emphasis on animal welfare indirectly improves veterinary businesses, which therefore gives veterinary practices the ability and motivation to further invest in obtaining better veterinary equipment for better diagnosis and treatments, as well as further education to better serve pet owners, indirectly contributing to overall client satisfaction.

2.7 Overview of Selangor Population

Selangor is a state in Peninsular Malaysia, which as of July 2023, has an overall population of approximately 7.2 million, making Selangor the most populous state. Selangor also has the largest economy in terms of gross domestic product (Statista, 2023). Selangor has 9 districts, namely Hulu Selangor, Gombak, Hulu Langat, Kuala Langat, Kuala Selangor, Petaling, Klang, Sabak Bernam, and Sepang. Selangor has an increasing number of pet-friendly parks, with 8 listed as in Says (Garreth, 2021). As of September 2023, there were at least 650 companion animal practices in Malaysia, with at least 40 of these practices located in Klang Valley alone (Preez, 2023). This is an indication that there is a high demand for veterinary services in Selangor. According to an article in The Edge in 2023, the median total household income in Selangor is RM9,983, which means 50% of Selangor households earn more than RM9,983 per month in a family, making Selangor the highest-earning state (Vasu, 2023; Salian, 2023). Selangor also made the largest contribution to the GDP with RM406.1 billion, followed by Kuala Lumpur (RM249.3 billion), Johor (RM148.2 billion), Sarawak (RM142.4 billion), and Pulau Pinang (RM116 billion) (The Star, 2024; Aman, 2024). Given all of the conditions, Selangor is a good choice to start studies on the knowledge, attitudes, and practices of pet owners regarding pet insurance, at a state level, despite that there is insufficient data on which state has the highest number of pet owners.

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CHAPTER 3 RESEARCH METHODOLOGY

3.1 Study Design and Study Area

This cross-sectional study was conducted among pet owners as respondents, regardless of species kept as pets, residing in Selangor, Malaysia, from 15 July 2024 to 31 October 2024. Selangor was selected based on our observation that the community have a surge of pet-friendly parks and condominiums, cafes and getaways, which is an indication of the increased demand for pet-related markets in Selangor, making Selangor a suitable state to actually understand pet insurance awareness, acceptability and actual usage in Malaysia.

3.2 Sample Size and Sampling Method

According to the demographic chart by Statistica, as of July 2024, there were approximately 7.4 million people residing in Selangor (Siddharta, 2024). The sample size was determined using the sample size formula, and it was calculated that the minimum number of participants required is 385 to gain a 95% confidence level, with the maximum acceptable difference of 5% or 0.05 in detecting the Knowledge, Attitude and Practice (KAP) proportions in the population. Participants were selected using a simple random sampling method. However, the total number of respondents that could be successfully achieved within the 3 months and 2 weeks period is 116, mainly due to the possible reasons of insufficient budget to boost posts on social media, or to provide small rewards to respondents.

$$\text{Sample size} = \frac{\frac{z^2 \times p(1-p)}{e^2}}{1 + \left(\frac{z^2 \times p(1-p)}{e^2 N}\right)}$$

N = population size • e = Margin of error (percentage in decimal form) • z = z-score

(Survey Monkey, 2024)

3.3 Inclusion and Exclusion Criteria of Respondents

3.3.1 Inclusion Criteria

Pet owners aged 18 years old and above, residing in Selangor who are currently the primary caretakers of at least one pet, and have given consent for data to be collected for the survey.

3.3.2 Exclusion Criteria

Pet owners residing outside of Selangor, pet owners who are not the primary caretaker for at least one pet, pet owners who used to own pets but no longer own any, or pet owners who have not given consent for data to be collected for the survey.

3.4 Questionnaire Design

A new questionnaire was developed following an extensive literature search and subjected to content and face validation solely for this study. The questionnaire was designed to be distributed through Google Forms. The questionnaire was made up of 4 sections, labelled as Section A, B, C, D and E:

Part A: Sociodemographic, which included age, highest education level, monthly income range, owning of personal insurance, and number and types of pets owned.

Part B: Pets' information, which determines the number and types of pets owned by pet owners. Parts A and B in general contribute to the sociodemographic information of the study.

Part C: Knowledge towards pet insurance, to determine if pet owners are aware of the availability of pet insurance in Malaysia, the species of animals that pet insurance is available for, the function of pet insurance and the claiming process of pet insurance. This section also determines whether pet owners have ever come across advertisements for pet insurance in Malaysia.

Five multichotomous questions were prepared to assess the knowledge of respondents. For each response of "Yes" a score of 1 will be given, whereas for each response of "No" or "Unsure" a score of 0 will be given. The respondents' knowledge level of pet insurance will be graded poor if scored 0 - 1.5, graded moderate if scored 2 - 3.5, and graded good if scored 4 - 5.

Part D: Attitude towards pet insurance, to determine the level of preparedness of pet owners for their pets' medical needs, and mainly, the level of belief of pet insurance in terms of affordability, ease of claiming, ease of getting help and information from insurance companies.

Six questions with a 5-point Likert scale were prepared to measure the attitude of respondents towards pet insurance. The response "Strongly agree" has a score of 5, "Agree" has a score of 4, "Neutral" has a score of 3, "Disagree" has a score of 2, and "Strongly disagree" has a score of 1. The total attitude score summed up can reach a maximum score of 30, and at the most minimum, a score of 6. Respondents with a score of 6 - 14 will be considered to have poor attitude, a score of 15 - 22 to have a moderate attitude, and a score of 23 - 30 to have a good attitude.

Part E: Practice of pet insurance, to determine the frequency of the search for pet insurance information and the frequency of using pet insurance.

Three multichotomous questions were prepared to evaluate the level of practice of pet owners. For two questions directly related to the practice of pet insurance, a response of "Often" will have a score of 2, "Sometimes" will have a score of 1, and "Never" will have a score of 0. For 1 question indirectly related to the practice of pet insurance but rather on the practice of providing medical and health care to pets, a response of "Never" will have a score of 0, "When my pet is sick" will have a score of 1 corresponding to "Sometimes", and "Once a year" and "Multiple times a year" will have a score of 2 corresponding to "Often", as both meets the ideal practice of animal health care which is for the pet to get at least annual check-ups. The total score summed up can reach a maximum score of 6. Respondents with a score of 0 - 2 will be considered to have poor practices, a score of 3 - 4 to have moderate practices, and scores 5 - 6 to have good practices.

The questionnaire was designed in English and translated into Malay and Chinese to cater to the wide ethnic variety in Malaysia. The context was checked by both supervising lecturers, and a pre-testing study was conducted before the study with 5 respondents with similar criteria. The responses from the 5 respondents were used for a reliability test using Cronbach's Alpha, and the results obtained showed good reliability. The questionnaire is attached in the Appendix.

3.5 Data Collection Techniques

The calculated minimum number of respondents required to gain a 95% confidence level is 385, in which attempts to achieve this were made by the distribution of the survey forms randomly via social media such as through several Facebook public groups involving residents of different districts in Selangor, and also public groups involving pet owners or pet lovers of various pet species, in Malaysia. The survey forms are also distributed randomly as public posts on different social media platforms, such as Instagram and Xiao Hong Shu. To ensure that the survey also involves pet owners who may not be active on social media, several respondents are approached during walks at morning markets. Other efforts also included the addition of Malay and Chinese translation of the questions into the same survey form so that respondents are more comfortable answering the survey form using the language that they are more comfortable with. However, the total number of respondents that could be successfully achieved within the 3 months and 2 weeks period is 116, mainly due to the possible reasons of insufficient budget to boost posts on social media, or to provide small rewards to respondents.

3.6 Statistical Analysis

The collected data were imported into Microsoft Excel and then analysed using IBM ® SPSS ® Version 27 (IBM ®, USA). Frequency and percentage descriptive statistics were used to depict the category variables. The relationship between the sociodemographic traits and the knowledge, attitude, and practice (KAP) scores was then examined using Pearson Chi-Square; a p-value of less than 0.05 was deemed statistically significant. Finally, the association between the overall knowledge, attitude, and practice score was measured using Spearman's rho correlation, which is significant when $p < 0.05$.

CHAPTER 4 RESULTS

4.1 Sociodemographic Characteristics of Respondents

A total of 116 respondents were included in this study. They were from various districts in Selangor. The highest number of respondents were from the Petaling district (n = 42/116, 36.2%). The majority of respondents were between the age of 21 to 30 years old (n = 80/116, 69%), with an income of less than RM 2, 500 (n = 43/116, 37.1%). Most of the respondents have the highest education level, a bachelor's degree (n = 72/116, 62.1%). The majority of the respondents claimed that they own personal insurance for themselves (n = 76/116, 65/5%). 44% (n = 51/116) own one pet, while the remaining 56% of the respondents own more than one. 87.1% of the total respondents own at least one cat or dog (n = 101/116), while the remaining owns only fully exotic pets. The detailed percentage of each sociodemographic response is shown in Table 1 below.

Table 1 Respondents' Sociodemographic Characteristics (n = 116)

Sociodemographic characteristics	Total	
	n	%
Age		
18 - 20	7	6.0
21 - 30	80	69.0
31 - 40	13	11.2
41 - 50	9	7.8
51 - 60	7	6
Highest Education Level		
Primary	2	1.7
Secondary	7	6.0

Pre-University or Diploma	17	14.7
Bachelor's Degree	72	62.1
Masters	17	14.7
PhD	1	0.9
District of Residence		
Gombak	13	11.2
Hulu Langat	17	14.7
Hulu Selangor	5	4.3
Klang	17	14.7
Kuala Langat	2	1.7
Kuala Selangor	17	14.7
Petaling	42	36.2
Sabak Bernam	0	0.0
Selangor	3	2.6
Income Range per Month		
< RM 2, 500	43	37.1
RM 2, 500 - RM 4, 999	27	23.3
RM 5, 000 - RM 7, 499	13	11.2
RM 7, 500 - RM 9, 999	4	3.4
> RM 10, 000	8	6.9
None	21	18.1
Is any Personal Insurance Owned?		
Yes	76	65.5
No	26	22.4
Choose not to answer	14	12.1

Number of Pets Currently Owned		
1	51	44.0
2	32	27.6
3	17	14.7
4	3	2.6
5	2	1.7
>5	11	9.5
Types of Pets Currently Owned		
Dog	58	45.0
Cat	50	38.8
Exotic	21	16.2
Whether Owning at Least one Cat or Dog		
At least 1 Cat or Dog	101	87.1
Only Exotics	15	12.9

4.2 Knowledge of Pet Insurance

Based on the 116 responses collected, it is observed that most of the respondents were not aware of pet insurance availability in Malaysia (n = 79/116, 68.1%). 37 respondents claimed that they are aware of pet insurance availability. 29 of them mentioned Oyen Pet Insurance as the pet insurance provider that they are aware of. 5 of these respondents could not recall the names of pet insurance providers.

Less than half of the respondents recall coming across advertisements or articles regarding pet insurance in Malaysia (n = 49/116, 42%), with 67.2% of total respondents not knowing that pet insurance in Malaysia is currently only available for cats and dogs (n = 78/116). More than half of respondents did not know that pet insurance can help financially when their pets need medical attention (n = 66/116, 56.9%), and only 19.8% of total respondents know about the claiming process for pet insurance (n = 23/116), as shown in Table 2.

Table 2 Knowledge of Respondents Towards Pet Insurance (n = 116)

Knowledge	Total			
	Yes		No	
	n	%	n	%
Q1: Do you know that pet insurance is available in Malaysia?	37	31.9	79	68.1
Q2: Have you ever come across any advertisements/articles regarding pet insurance in Malaysia?	49	42.2	67	57.8
Q3: Do you know that pet insurance is only available for cats and dogs?	38	32.8	78	67.2
Q4: Do you know that pet insurance, like any other insurance, helps financially when your pet needs medical attention?	50	43.1	66	56.9
Q5: Do you know about the claiming process for pet insurance?	23	19.8	93	80.2

Table 3 Pet Insurance Brands Known by Respondents (n = 37)

Pet Insurance Brand	Total	
	n	%
Oyen	29	78.4
eTiqa	1	2.7
Zurich and Bank of China	1	2.7
Bank of China	1	2.7
Cannot Recall	5	13.5

4.3 Attitude Towards Pet Insurance

Most respondents agree (total n = 70/116, 60.34%) that they have saved up or prepared for any medical situation that their pets require. Even so, most also agree (total n = 85/116, 73.28%) that getting pet insurance provides more freedom to choose better treatments and ensure a better quality of life for their pets. Regarding the affordability of pet insurance, a total of 50% of responses believe that pet insurance is affordable (total n = 58/116).

For the ease of the pet insurance claiming process, 55.2% (n = 64/116) of respondents found themselves neither agree nor disagree. But when it comes to getting more help and information, most of the respondents agree (total n = 65/116, 56%) that help and advice from pet insurance providers are easily accessible, while 50.86% (total n = 59/116) of respondents believe that information on pet insurance in Malaysia is transparent and readily available.

Table 4 Attitude Towards Pet Insurance (n = 116)

Attitude	Total Scale (n = 116)									
	Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	n	%	n	%	n	%	n	%	n	%
Q1: I believe that I have saved up/ prepared for any situation should my pet(s) require medical attention.	6	5.2	10	8.6	30	25.9	47	40.5	23	19.8
Q2: I believe that by getting pet insurance, I will have more freedom to choose better treatments for my pet(s) and provide my pet(s) with a better life.	5	4.3	4	3.4	22	19.0	50	43.1	35	30.2
Q3: I think the cost of purchasing pet insurance is affordable.	4	3.4	8	6.9	46	39.7	46	39.7	12	10.3
Q4: I think the pet insurance claiming process is easy and straightforward.	5	4.3	10	8.6	64	55.2	30	25.9	7	6.0
Q5: I believe help and advice are made easily accessible by pet insurance providers.	4	3.4	12	10.3	35	30.2	47	40.5	18	15.5
Q6: I think all information on pet insurance offered in Malaysia is transparent and easily available for pet owners.	10	8.6	11	9.5	36	31.0	48	41.4	11	9.5

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4.4 Practice of Pet Insurance

Based on the frequencies and percentage of the responses to the 3 practice questions, it reveals that most respondents only sometimes bring their pets to the vet ($n = 55/116$, 47.4%), which means close to half of the respondents only bring their pets to the vet when their pets are sick. However, it is also good to know that 44.8% of the respondents ($n = 52/116$) bring their pets to the vet at least once a year.

Based on the 116 respondents, most of the respondents have not searched for pet insurance information before ($n = 74/116$, 63.8%), and even though there are 36.2% of respondents that did at least sometimes search for pet insurance information, 89.7% of the total respondents have never used pet insurance ($n = 104/116$).

Table 5 Practice of Pet Insurance (n = 116)

Practice	Total Scale					
	Never		Sometimes		Often	
	n	%	n	%	n	%
Q1: How often do you bring your pet(s) to the vet?	9	7.8	55	47.4	52	44.8
Q2: How often do you search for pet insurance information?	74	63.8	34	29.3	8	6.9
Q3: How often do you use pet insurance?	104	89.7	9	7.8	3	2.6

4.5 Acceptable Annual Price Range for Pet Insurance Subscription by Pet Owners in Selangor

Considering that cost would be a concern to most pet owners, a question to survey on the ideal annual subscription pricing of pet insurance was also added to the survey form to better understand the ideal range of pet insurance cost that most pet owners in Selangor, Malaysia can accept. The results are tabulated in Table 6 below and showed that many of the respondents are willing to spend up to RM 200 a year to purchase pet insurance ($n = 44/116$, 37.9%), while a total 36.2% of the respondents are willing to spend more than RM 200 per year to purchase pet insurance.

Table 6 Acceptable Annual Price Range for Pet Insurance Subscription by Pet Owners (n = 116)

Price Range	Total	%
< RM 200	44	37.9
RM 200 - RM 399	23	19.8
RM 400 - RM 599	14	12.1
RM 600 - RM 799	2	1.7
> RM 800	3	2.6
Not willing to spend on pet insurance	30	25.9

However, this study observed that the higher income range does not indicate the willingness to pay for higher pet insurance plans. Rather it was observed that those in the higher income range are less likely to purchase pet insurance as compared to the lower income range with a higher tendency to purchase pet insurance should the annual premium be less than RM 200.

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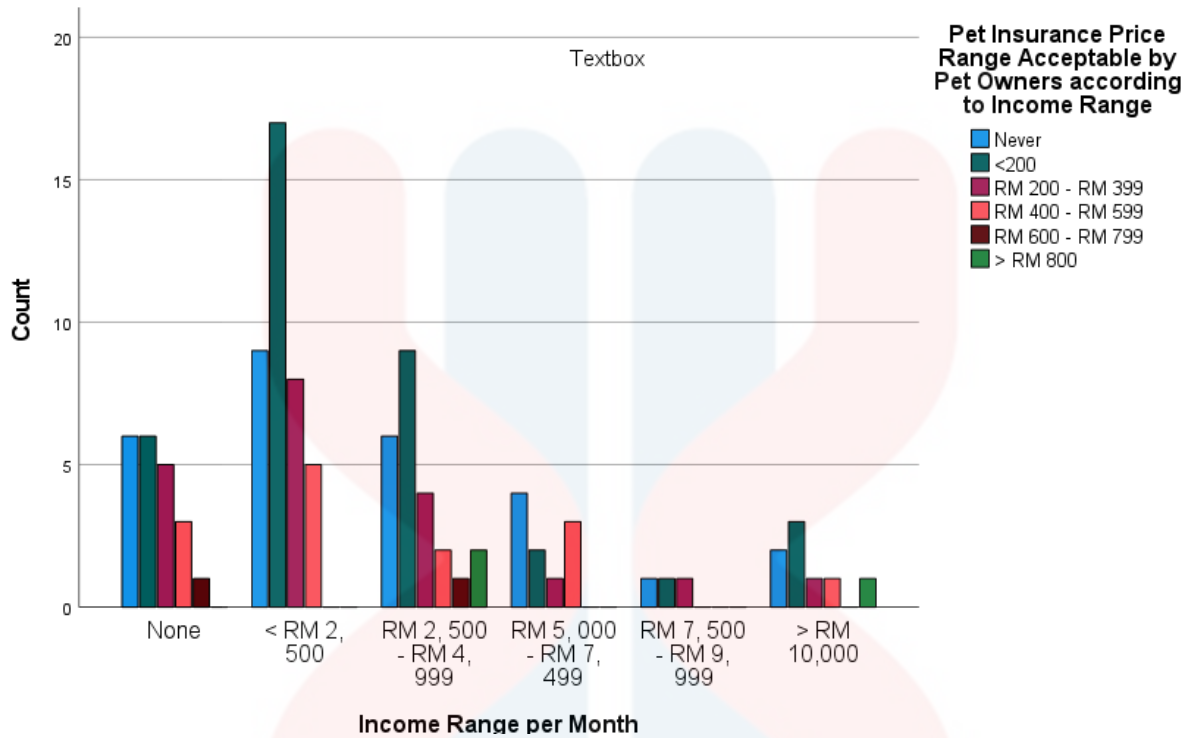


Figure 5 Pet Insurance Price Range Acceptable by Pet Owners according to Income Range

4.6 Respondents' Level of Knowledge, Attitude, and Practice of Pet Insurance

The data collected are categorized and analyzed descriptively and presented using frequency and percentage. Scoring is done for each variable and categorized into poor, moderate and good to indicate the level of knowledge, attitude, and practice of each respondent. The results are tabulated and as shown in Table 7, the majority of respondents demonstrated a poor level of knowledge ($n = 63/116$, 54.3%), moderate level of attitude ($n = 63/116$, 54.3%), and poor level of practice ($n = 87/116$, 75.0%) of pet insurance in Selangor, Malaysia.

Table 7 Selangor Respondents' Level of Knowledge, Attitude, and Practice of Pet Insurance in Malaysia

Variables	Level	Score	n	%
Knowledge	Poor	0 - 1.5	63	54.3
	Moderate	2 - 3.5	26	22.4
	Good	4 - 5	27	23.3
Attitude	Poor	6 - 14	6	5.2
	Moderate	15 - 22	63	54.3
	Good	23 - 30	47	40.5
Practice	Poor	0 - 2	87	75.0
	Moderate	3 - 4	25	21.6
	Good	5 - 6	4	3.4

4.7 Association between Respondents' Sociodemographic and Knowledge, Attitude and Practice of Pet Insurance by Pet Owners in Selangor

Table 8 showed that there was a significant association between income range per month with knowledge ($p = 0.006$). There is a higher percentage of respondents with income lower than RM 2, 500 or no income to have poor knowledge.

Table 8 Association between Respondents' Sociodemographic and Knowledge of Pet Insurance by Pet Owners in Selangor

Variable	Grades n (%)			Chi-Square Test (df)	p-value
	Poor	Moderate	Good		
Age Range				7.991 (8)	0.434
18 - 20	3 (2.6)	2 (1.7)	2 (1.7)		
21 - 30	43 (37.1)	20 (17.2)	17 (14.7)		
31 - 40	6 (5.2)	1 (0.9)	6 (5.2)		
41 - 50	6 (5.2)	1 (0.9)	2 (1.7)		
51 - 60	5 (4.3)	2 (1.7)	0 (0)		
Highest Education Level				12.670 (10)	0.243
Primary	2 (1.7)	0 (0)	0 (0)		
Secondary	6 (5.2)	1 (0.9)	0 (0)		
Pre-University or Diploma	7 (6)	4 (3.4)	6 (5.2)		
Bachelor's Degree	39 (33.6)	14 (12.1)	19 (16.4)		

Masters	9 (7.8)	6 (5.2)	2 (1.7)		
PhD	0 (0)	1 (0.9)	0 (0)		
District of Residence				8.761 (14)	0.846
Gombak	7 (6)	3 (2.6)	3 (2.6)		
Hulu Langat	9 (7.8)	5 (4.3)	3 (2.6)		
Hulu Selangor	2 (1.7)	1 (0.9)	2 (1.7)		
Klang	10 (8.6)	3 (2.6)	4 (3.4)		
Kuala Langat	1 (0.9)	0 (0)	1 (0.9)		
Kuala Selangor	10 (8.6)	2 (1.7)	5 (4.3)		
Petaling	23 (19.8)	12 (10.3)	7 (6)		
Sabak Bernam	0 (0)	0 (0)	0 (0)		
Sepang	1 (0.9)	0 (0)	2 (1.7)		
Income Range per Month				24.734 (10)	0.006*
< RM 2, 500	29 (25.0)	8 (6.9)	6 (5.2)		
RM 2, 500 - RM 4, 999	9 (7.6)	8 (6.9)	10 (8.6)		
RM 5, 000 - RM 7, 499	5 (4.3)	0 (0)	8 (6.9)		
RM 7, 500 - RM 9, 999	3 (2.6)	1 (0.9)	0 (0)		
> RM 10, 000	4 (3.4)	3 (2.6)	1 (0.9)		

None	13 (11.2)	6 (5.2)	2 (1.7)		
Owning of Personal Insurance				5.385 (4)	0.250
Yes	39 (33.6)	16 (13.8)	21 (18.1)		
No	13 (11.2)	8 (6.9)	5 (4.3)		
Choose not to answer	11 (9.5)	2 (1.7)	1 (0.9)		
Number of Pets				13.663 (10)	0.189
1	32 (27.6)	13 (11.2)	6 (5.2)		
2	16 (13.8)	6 (5.2)	10 (8.6)		
3	8 (6.9)	2 (1.7)	7 (6)		
4	2 (1.7)	0 (0)	1 (0.9)		
5	1 (0.9)	0 (0)	1 (0.9)		
>5	4 (3.4)	5 (4.3)	2 (1.7)		
Type of Pets				1.198 (2)	0.549
At least 1 Cat or Dog	53 (45.7)	24 (20.7)	24 (20.7)		
Only Exotics	10 (8.6)	2 (1.7)	3 (2.6)		

Table 9 showed that there was a significant association between the highest education level with attitude ($p < 0.001$). Most of the respondents have a Bachelor's degree and have a moderate attitude towards pet insurance in Malaysia.

Table 9 Association between Respondents' Sociodemographic and Attitude of Pet Insurance by Pet Owners in Selangor

Variable	Grades n (%)			Chi-Square Test (df)	p-value
	Poor	Moderate	Good		
Age Range				14.801 (8)	0.063
18 - 20	0 (0)	3 (2.6)	4 (3.4)		
21 - 30	2 (1.7)	43 (37)	35 (30.2)		
31 - 40	1 (0.9)	6 (5.2)	6 (5.2)		
41 - 50	1 (0.9)	7 (6)	1 (0.9)		
51 - 60	2 (1.7)	4 (3.4)	1 (0.9)		
Highest Education Level				46.903 (10)	<0.001*
Primary	2 (1.7)	0 (0)	0 (0)		
Secondary	1 (0.9)	5 (4.3)	1 (0.9)		
Pre-University Diploma	0 (0)	11 (9.5)	6 (5.2)		
Bachelor's Degree	3 (2.6)	41 (35.3)	28 (24.1)		
Masters	0 (0)	6 (5.2)	11 (9.5)		
PhD	0 (0)	0 (0)	1 (0.9)		

District of Residence				22.569 (14)	0.068
Gombak	0 (0)	9 (7.8)	4 (3.4)		
Hulu Langat	0 (0)	13 (11.2)	4 (3.4)		
Hulu Selangor	0 (0)	2 (1.7)	3 (2.6)		
Klang	1 (0.9)	5 (4.3)	11 (9.5)		
Kuala Langat	0 (0)	2 (1.7)	0 (0)		
Kuala Selangor	1 (0.9)	6 (5.2)	10 (8.6)		
Petaling	4 (3.4)	26 (22.4)	12 (10.3)		
Sabak Bernam	0 (0)	0 (0)	0 (0)		
Sepang	0 (0)	0 (0)	3 (2.6)		
Income Range per Month				11.593 (10)	0.313
< RM 2, 500	1 (0.9)	23 (19.8)	19 (16.4)		
RM 2, 500 - RM 4, 999	3 (2.6)	13 (11.2)	11 (9.5)		
RM 5, 000 - RM 7, 499	2 (1.7)	4 (3.4)	7 (6)		
RM 7, 500 - RM 9, 999	0 (0)	3 (2.6)	1 (0.9)		
> RM 10, 000	0 (0)	6 (5.2)	2 (1.7)		
None	0 (0)	14 (12)	7 (6)		
Owning of Personal Insurance				1.187 (4)	0.880
Yes	5 (4.3)	41 (35.2)	30 (25.9)		

No	1 (0.9)	14 (12)	11 (9.5)		
Choose not to answer	0 (0)	8 (6.9)	6 (5.2)		
Number of Pets				16.961 (10)	0.075
1	2 (1.7)	21 (18.1)	28 (24.1)		
2	3 (2.6)	17 (14.7)	12 (10.3)		
3	1 (0.9)	10 (8.6)	6 (5.2)		
4	0 (0)	2 (1.7)	1 (0.9)		
5	0 (0)	2 (1.7)	0 (0)		
>5	0 (0)	11 (9.5)	0 (0)		
Type of Pets				0.396 (2)	0.820
At least 1 Cat or Dog	5 (4.3)	53 (45.7)	42 (36.2)		
Only Exotics	1 (0.9)	9 (7.8)	5 (4.3)		

The figure 6 below shows that when comparing the attitude level between Masters level and Degree level of education, it can be observed that there are a higher number of Masters with good attitudes towards pet insurance as compared to moderate attitudes, whereas there is a higher moderate attitude level towards pet insurance as compared to good attitude level in Degree holders. However, this results may not be reliable as the number of respondents with Masters and PhD education are lower than the number of respondents with Bachelor's Degree. Figure 7 further shows that the higher the education, the most responses that agree that pet insurance is a financial tool that can enable policy holders to choose for better treatment options for their pets when needed.

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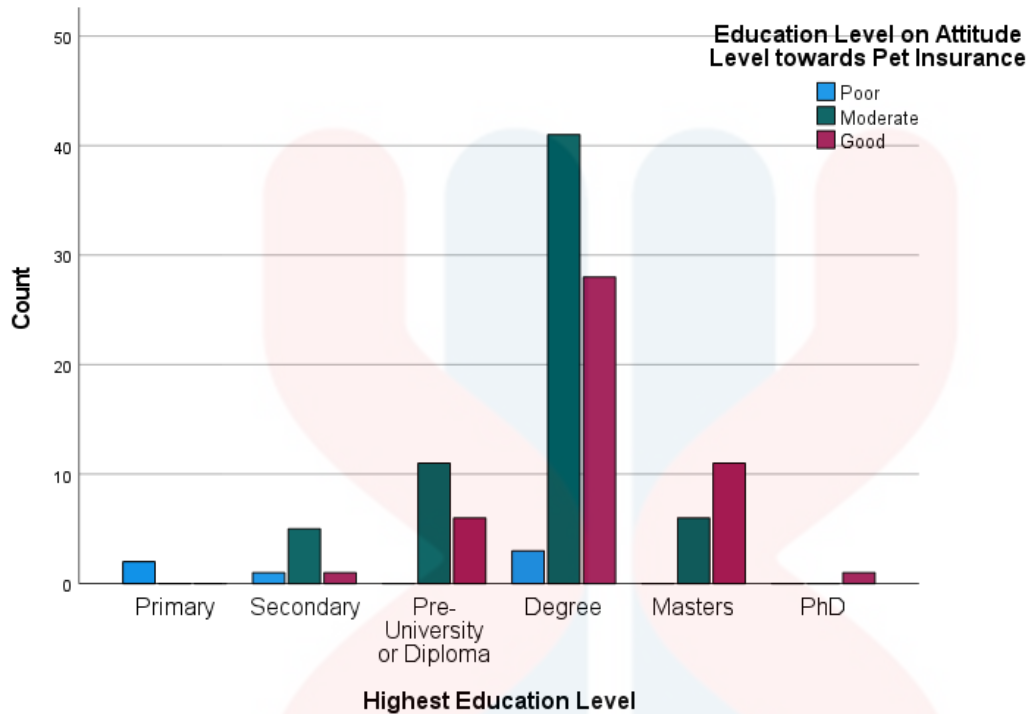


Figure 6 The Education Level on Attitude Level towards Pet Insurance

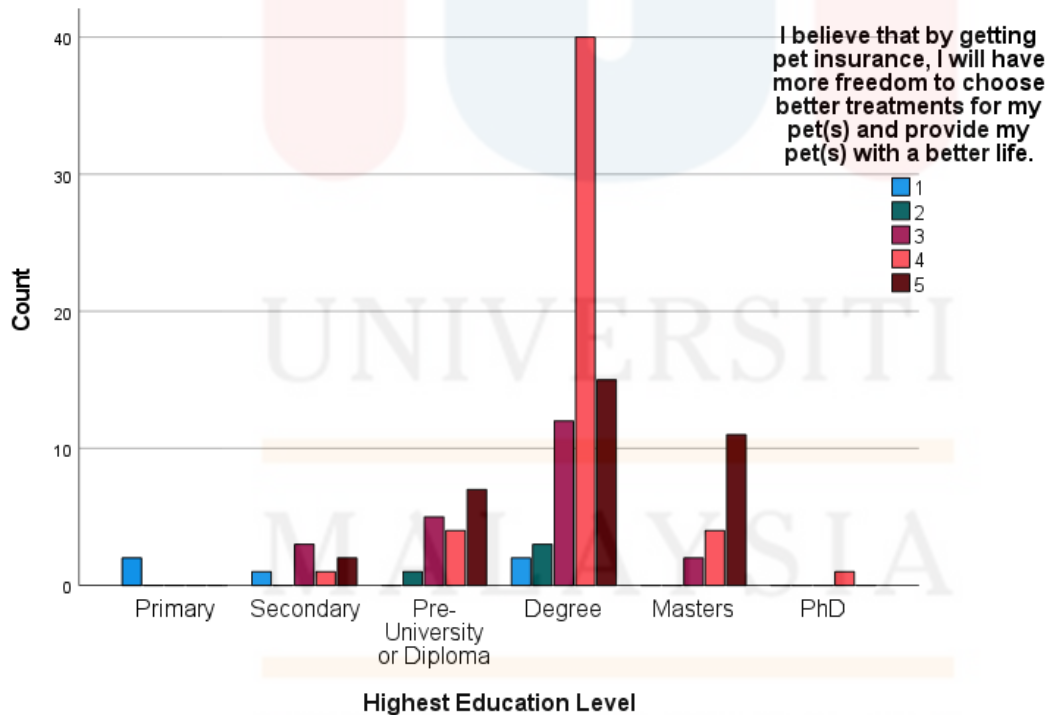


Figure 7 The Education Level on the Belief that Pet Insurance is a Financial Tool that Allows for Choosing Better Treatment Option for Pets

Table 10 showed that there was a significant association between the district of residence with practice ($p = 0.045$) and income range per month with practice ($p = 0.006$). Most respondents are from Petaling district with the majority of them having poor practice of pet insurance, while respondents with income lower than RM 2, 500 or no income showed poor practice levels of pet insurance.

Table 10 Association between Respondents' Sociodemographic and Practice of Pet Insurance by Pet Owners in Selangor

Variable	Grades n (%)			Chi-Square Test (df)	p-value
	Poor	Moderate	Good		
Age Range				7.259 (8)	0.509
18 - 20	4 (3.4)	3 (2.6)	0 (0)		
21 - 30	64 (55.2)	13 (11.2)	3 (2.6)		
31 - 40	7 (6)	5 (4.3)	1 (0.9)		
41 - 50	7 (6)	2 (1.7)	0 (0)		
51 - 60	5 (4.3)	2 (1.7)	0 (0)		
Highest Education Level				4.223 (10)	0.937
Primary	2 (1.7)	0 (0)	0 (0)		
Secondary	6 (5.2)	1 (0.9)	0 (0)		
Pre-University Diploma or	12 (10.3)	5 (4.3)	0 (0)		
Bachelor's Degree	53 (45.7)	15 (12.9)	4 (3.4)		
Masters	13 (11.2)	4 (3.4)	0 (0)		

PhD	1 (0.9)	0 (0)	0 (0)		
District of Residence				24.053 (14)	0.045*
Gombak	10 (8.6)	3 (2.6)	0 (0)		
Hulu Langat	14 (12.1)	3 (2.6)	0 (0)		
Hulu Selangor	4 (3.4)	1 (0.9)	0 (0)		
Klang	13 (11.2)	4 (3.4)	0 (0)		
Kuala Langat	1 (0.9)	1 (0.9)	0 (0)		
Kuala Selangor	12 (10.3)	2 (1.7)	3 (2.6)		
Petaling	32 (27.6)	10 (8.6)	0 (0)		
Sabak Bernam	0 (0)	0 (0)	0 (0)		
Selangor	1 (0.9)	1 (0.9)	1 (0.9)		
Income Range per Month				24.864 (10)	0.006*
< RM 2, 500	37 (31.9)	5 (4.3)	1 (0.9)		
RM 2, 500 - RM 4, 999	17 (14.7)	10 (8.6)	0 (0)		
RM 5, 000 - RM 7, 499	5 (4.3)	6 (5.2)	2 (1.7)		
RM 7, 500 - RM 9, 999	4 (3.4)	0 (0)	0 (0)		
> RM 10, 000	5 (4.3)	2 (1.7)	1 (0.9)		
None	19 (16.4)	2 (1.7)	9 (7.8)		
Owning of Personal Insurance				7.953 (4)	0.093

Yes	51 (44)	21 (18.1)	4 (3.4)		
No	24 (20.7)	2 (1.7)	0 (0)		
Choose not to answer	12 (10.3)	2 (1.7)	0 (0)		
Number of Pets				8.419 (10)	0.588
1	41 (35.3)	8 (6.9)	2 (1.7)		
2	25 (21.6)	5 (4.3)	2 (1.7)		
3	10 (8.6)	7 (6)	0 (0)		
4	2 (1.7)	1 (0.9)	0 (0)		
5	1 (0.9)	1 (0.9)	0 (0)		
>5	8 (6.9)	3 (2.6)	0 (0)		
Type of Pets				1.447 (2)	0.485
At least 1 Cat or Dog	87 (75)	25 (21.6)	4 (3.4)		
Only Exotics	13 (11.2)	2 (1.7)	0 (0)		

4.8 Correlation between Knowledge, Attitude and Practice Score of Pet Insurance

Based on Table 11, there is a weak positive correlation between total knowledge score with total attitude score ($r = 0.042$), and total attitude score with total practice score ($r = 0.070$). There is a moderate correlation between total knowledge score with total practice score ($r = 0.649$). Only the correlation between the total knowledge score with total practice score is significant in this study (p -value < 0.001).

Table 11 Correlation between Total Knowledge, Attitude, and Practice Score

Spearman's Correlations	rho	TKS (p-value)	TAS (p-value)	TPS (p-value)
TKS		1.000	0.042 (0.655)	0.649 (<0.001*)
TAS		0.042 (0.655)	1.000	0.070 (0.456)
TPS		0.649 (<0.001*)	0.070 (0.456)	1.000

TKS: Total Knowledge Score, TAS: Total Attitude Score, TPS: Total Practice Score

*Correlation is significant at the 0.05 level (2-tailed)

CHAPTER 5

DISCUSSION

This study was conducted to determine the knowledge, attitude, and practice of pet insurance by pet owners in Selangor, Malaysia. Our results showed that there is 54.3% of the respondents have poor awareness, 54.3% have moderate attitude, and 75% have poor practice. Based on this study, there is a significant positive correlation between the level of knowledge and the level of practice. Other than the significant association between income range per month with knowledge, highest education level with attitude, and district of residence and income range per month with practice, there is no other association between sociodemographic characteristics with the knowledge, attitude, and practice of pet insurance by pet owners in Selangor, Malaysia.

Based on this study, respondents showed a poor knowledge level of pet insurance, with the majority not knowing that there is pet insurance available in Malaysia, and less than half of the respondents coming across advertisements or articles directly mentioning the availability of pet insurance options in Malaysia. A follow-up question was asked to respondents who did know of the availability of pet insurance in Malaysia, and the majority responded that Oyen is the pet insurance brand that they know of, in which Oyen has made a more effective marketing of their pet insurance product to the members of the public in Malaysia. Based on the results obtained on the respondents' knowledge, it can be concluded that there is insufficient publicity of pet insurance-providing companies, therefore pet owners are unaware of the availability of pet insurance, and the benefits of pet insurance. Aside from the efforts of pet insurance-providing companies, veterinarians also play a crucial role in increasing the knowledge levels of pet owners in regard to pet insurance, the choice of policies, how it can help with the cost of veterinary care, why it is better to get pet insurance early, and where pet owners can get more information on pet insurance. According to Darryl Rawlings, chief operating officer of Seattle-based Trupanion in his interview with Veterinary Practice News for the article 'Why pet insurance is a win for vets and pets', pet owners are more likely to trust their veterinarian's judgement on getting pet insurance, and hence more likely to obtain more information on pet insurance after recommendations by their veterinarian (Brown, 2017). Pet insurance can be recommended to pet owners during the early consultations such as during the puppy or kitten vaccines, whereby veterinarians can also educate owners on long-term health care, possible diseases that the pet may encounter as they age, and the

approximate cost of care, which can then ease into pet insurance availability in Malaysia and the method of claims (Brown, 2017; Loria, 2022).

Based on this study, most respondents have moderate attitude levels towards pet insurance in Malaysia. The results showed that the majority of the respondents agree that help, advice and information can be easily accessible, and more financial ability can be secured and used for better treatment options if they purchase pet insurance policies for their pets. However, most of the responses have neutral view on the ease of the insurance claiming process. In terms of affordability, the responses can seem to be either good or neutral. As the knowledge levels of pet insurance is low, it is less likely for pet owners to have used or heard reviews from friends and family in regards to pet insurance, therefore responses can still be skeptical of the cost and claiming process, therefore, less likely to have a clear opinion on the cost and claiming process. This can be further observed as more than half of the respondents have claimed that they have saved up for any emergency situations of their pets, which shows that they do care for their pets' health, however, the only way that they know to finance for any emergency situations of their pets is by putting away money as savings for emergencies. It was observed that there was a significant association between the highest education level with attitude, with respondents with Masters and PhD having higher good attitude level towards pet insurance comparing to moderate attitude levels, whereas respondents with Bachelor's Degree having higher moderate attitude levels towards pet insurance, as seen in Figure 6. It can also be observed in Figure 7 that the higher the education level, the more likely the respondents agree that pet insurance is a financial tool that can provide more financial freedom for pet owners to choose better treatment options for their pets. Based on the finding, it can be believed that the level of education have a positive impact on the people's acceptance towards new things, in which in this case, pet insurance. Another possibility of the strong moderate perceptions towards pet insurance when there is low level of knowledge towards pet insurance is the impact of internet accessibility on the acceptability of new things, as it was observed that the usage of internet increases the open-mindedness of people, and therefore less likely to reject new concepts (Weyand, 2014).

As seen in the results, there is a low practice level of pet insurance by the majority of the pet owners in Selangor. Most of the pet owners have never searched for pet insurance before and

have no experience in using pet insurance claims. It may not have incurred to most pet owners to know more about pet insurance as it was seen in knowledge level, most pet owners are unaware of the availability of pet insurance in Malaysia, which also explains the low practice rate. Most of the respondents only bring their pets for veterinary care when their pets are sick, instead of bringing their pets for annual veterinary checkups. Given the fact that pet insurance requires the pet's health condition to be free from any injury or diseases at the start of the insurance subscription, pet owners who bring their pets to veterinary care when there are diseases or injuries occur would less likely to purchase or successfully subscribe to pet insurance even with veterinary professional's recommendation to get pet insurance. It is only those that do bring their pets for annual checkups that veterinary professionals can recommend and promote the use of pet insurance. Otherwise, more marketing strategies would be required to further increase the awareness of pet insurance. Significant association between monthly income range and pet insurance practice, which as compared to a research study on pet insurance and veterinary expenditures in the United State, it is shown that higher income of pet owners allows for more disposable income which highly influence the expenditure on pet healthcare (Becker et al., 2021; Williams et al., 2020). However in this study, it is observed that the higher income does not indicate higher willingness to pay for higher policies, as shown in Figure 5, rather the majority are more inclined to annual policies priced at less than RM 200. The results may vary, as from a consumer psychology standpoint, monthly subscription models appear to have lower upfront expenses, with more flexibility to change to different plans according to requirement, whereas annual subscriptions although may provide more discounts, the higher upfront expenses and lesser flexibility can turn off potential clients (Bailey, 2024; Hamilton, 2024). Therefore, determining the acceptable monthly payment plans should be considered shall a similar study be conducted.

The study identified a positive correlation between knowledge and practice scores, suggesting that pet owners with greater awareness and understanding of pet insurance are more likely to demonstrate proactive behaviors in seeking and utilizing these services. This finding is also similarly observed in the Journal article 'A Study On Pet Health Insurance And Its Impact On Owners Spending For Veterinary Services With Reference To Mysuru City' that was published in 2023, in which it was found that pet owners in Mysuru City, India, who are unaware of pet insurance are now interested to subscribe for it and acknowledge that pet health insurance is just

as vital as human health insurance, demonstrating that awareness influences the willingness to pay and has a big influence on pet insurance purchases (Gowtham et al., 2023, 3413 - 3425). This finding highlights the importance of knowledge in shaping practice. In particular, pet owners' confidence and willingness to use pet insurance services seem to be enhanced by greater knowledge of the availability, advantages, and procedures of pet insurance, including eligible species, financial coverage, and the claims procedure.

Animal welfare emphasizes the 5 freedoms of animals, including freedom from discomfort, freedom from thirst, hunger and malnutrition, freedom to express normal behaviour, freedom from fear and distress, and freedom from pain, injury and disease. Pet insurance focuses on providing the financial capability to further enhance the fifth freedom, as it acts as a financial tool to help with the funding of veterinary bills. Preparation of sufficient funds for any medical needs of pets is one of the key responsibilities of pet owners to meet the criteria of the fifth freedom, and as seen in this study 40.5% and 19.8% of pet owners agree and strongly agree that they are prepared for any situation should their pets require medical attention, and only 7.8% of pet owners have never brought their pets for any veterinary consultations, this showed that most of the pet owners in Malaysia take up their responsibility to meet the fifth criteria of good animal welfare. However, due to the limited knowledge of pet insurance availability in Malaysia, majority of the pet owners are unaware of the availability and benefits of pet insurance, and therefore there is a low practice of pet insurance in Malaysia. In the 2021 article 'Evaluation of owners' attitudes towards veterinary insurance in a specialty hospital', it was observed that pet owners have higher adherence to any recommended diagnostic tests and treatments as they have insurance, which, similar to people who have health insurance, there is the tendency to utilize prescription drugs more frequently, visit the doctor more frequently for preventative care, and follow doctor's orders more closely (G. Chaumet et al., 2021). This shows that insurance can enhance animal welfare and hence further efforts should be implied to harvest the highest benefits.

The advocate for pet insurance, both pet insurance-providing companies and veterinarians play a crucial role. Pet insurance providers should further enhance their marketing strategies, as can be observed with Oyen Pet Insurance, which has the highest recall rate as compared to other pet insurance providers in Malaysia. According to Michelle Chin, co-founder and Chief Operating

Officer of Oyen Pet Insurance, the first and most important steps in starting a business are advertising and word-of-mouth marketing to attract the initial clientele and to overcome scepticism for this relatively new market. The founders of Oyen Pet Insurance are also active in participating in vet-related activities and events and maintain close ties with local veterinarians in Malaysia in order to stay up to date with the constantly evolving field of veterinary care, to ensure that their goods and services continue to be efficient and in line with the changing needs of pet owners and veterinary practices (Bahari, 2023). In other words, pet insurance providers should highly utilise the power of social media, as well as the good connection with veterinary community, in order to increase the publicity.

As for the role of veterinarians, apart from the most minimal of displaying posters and brochures of pet insurance, veterinarians should familiarize themselves with the basic knowledge of pet insurance, including the species, age and basic health history requirements for the application of pet insurance, and the benefits of pet insurance such as the coverage for illness, injuries and outpatient treatments (Loria, 2022; Brown, 2017). This allows for veterinarians to be able to add in the pet insurance topics during the conversation with pet owners, especially during visits of pets that are just newly adopted, or during vaccinations (Loria, 2022; Brown, 2017). For pet owners that showed interest in knowing more and getting pet insurance for their pets, it is also advisable that veterinarians have the list of resources that pet owners could have easy access to for further information and contacts with the pet insurance providers. This is mainly because of the observation that pet owners are more likely to take in pet insurance information from their consulting veterinarians as it is the professional that they trust (G. Chaumet et al., 2021; Brown, 2017)

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CHAPTER 6

CONCLUSION

Pet insurance benefits veterinary practices as pet owners are more willing to accept and follow through with any recommended diagnosis and treatment plan, aside from an increased willingness to bring their pets for consultations, this enhanced the overall animal welfare aside from increasing the overall revenue of veterinary practices, and at the same time encourages veterinary practices to bring in or implement more advanced facilities to meet the needs of their customers. This study successfully evaluated the knowledge, attitude, and practice of pet insurance by 116 pet owners in Selangor, Malaysia. The results indicated that most pet owners have poor levels of knowledge and practice and moderate attitudes towards pet insurance in Malaysia. Many respondents are unaware of the availability of pet insurance in Malaysia and the benefits that pet insurance can provide, which is believed to be the cause of low research and practice rates. However, the number of responses was insufficient to reflect the entire population of pet owners in Selangor as the achieved sample size did not meet the minimum 385 participants required to gain a 95% confidence level, this is because of the limited resources and funding available to utilize to attract more respondents.

Future collaborations with pet insurance companies, pet shops or veterinary services should be attempted should this study be revised, this is to increase the trust of pet owners to fill in the form and also to increase the reachability to more pet owners, this is to ensure the target sample size is achieved to better reflect the entire population of pet owners in Selangor for better understanding of the knowledge, attitude and practice of pet insurance in Selangor. The questionnaire should also be reviewed for the questions to be detailed to get more precise answers for the formation of recommendations to better promote pet insurance.

Based on the findings of this study, the awareness of pet insurance should be improved in order to increase acceptance and practice. It is suggested that both pet insurance companies and veterinarians play an important role. Pet insurance companies are suggested to increase publicity with the usage of social media, participation in veterinary-related events, and maintain good

connections with local veterinarians. Pet insurance companies should also consistently review their current products and services for improvements and enhancement to ensure that their products and services continue to be efficient and in line with the changing demands of both veterinary clinics and pet owners. Veterinarians, on the other hand, should play their role by displaying informational materials, familiarizing themselves with basic pet insurance knowledge, and incorporating it into their conversations with pet owners, particularly during vaccinations or visits with newly adopted pets, as veterinarians are often regarded as the most reliable source of information. By working together, pet insurance providers and veterinarians can improve awareness, acceptance, and usage of pet insurance, ultimately benefiting pet health, pet owners, and the veterinary industry.



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APPENDIX

Figure 8 The Questionnaire Form

Knowledge, Attitude, and Practice of Pet Insurance Among Pet Owners in Selangor, Malaysia

Greetings and thank you for participating in this survey! My name is Audrey Koh, I am a fourth-year student at the Faculty of Veterinary Medicine (FPV) at the University of Malaysia Kelantan (UMK). I am conducting this research survey to understand the knowledge, attitudes, and practices of pet insurance by pet owners in Selangor, Malaysia. Your valuable insights will contribute to the understanding of pet insurance trends in Selangor, Malaysia.

This survey is intended for individuals owning pets and residing in Selangor, Malaysia. This survey will take approximately 5 to 10 minutes to complete. Your responses will be kept strictly confidential and used exclusively for academic purposes.

Please answer the following questions honestly and to the best of your knowledge. Your input is essential for our research. Thank you!

If you encounter any difficulties or have questions regarding this survey, please contact:

Audrey Koh Rui Ping (d20b0082@siswa.umk.edu.my)

Salam sejahtera dan terima kasih kerana mengambil bahagian dalam tinjauan ini! Nama saya Audrey Koh, saya merupakan pelajar tahun empat di Fakulti Perubatan Veterinar (FPV) Universiti Malaysia Kelantan (UMK). Saya menjalankan tinjauan penyelidikan ini untuk memahami pengetahuan, sikap, dan amalan insurans haiwan peliharaan oleh pemilik haiwan peliharaan di Selangor, Malaysia. Pendapat anda yang berharga akan menyumbang kepada pemahaman tentang trend insurans haiwan peliharaan di Selangor, Malaysia.

Tinjauan ini ditujukan kepada individu yang memiliki haiwan peliharaan dan menetap di Selangor, Malaysia. Tinjauan ini akan mengambil masa kira-kira 5 hingga 10 minit untuk diselesaikan. Jawapan anda akan dirahsiakan dan digunakan secara eksklusif untuk tujuan akademik.

Sila jawab soalan berikut dengan jujur berdasarkan pengetahuan anda. Input anda adalah penting untuk penyelidikan kami. Terima kasih!

Jika anda menghadapi sebarang kesulitan atau mempunyai soalan mengenai tinjauan ini, sila hubungi:

Audrey Koh Rui Ping (d20b0082@siswa.umk.edu.my)

您好，感谢您参与本次调查！我的名字叫许瑞彬，是位马来西亚吉兰丹大学(UMK)兽医学院(FPV)的兽医系大四学生。我正在进行一项研究调查，以了解马来西亚雪兰莪州宠物主人对宠物保险的知识、态度与对待方式。您的宝贵见解将有助于了解马来西亚雪兰莪州的宠物保险趋势。

本次调查主要面向居住于马来西亚雪兰莪州的宠物主人们。本次调查大约需要5到10分钟完成。再次感谢您赐予我们您宝贵的时间填写此问卷。您的回答将会被严格保密且仅用于学术目的。

请尽您所知，如实地回答以下问题。您的意见对我们的研究至关重要。谢谢！

如果您遇到任何困难或对本次调查有疑问，请联系：

许瑞彬 (d20b0082@siswa.umk.edu.my)

* Indicates required question

1. Consent form/*Borang Persetujuan*/同意书: *

By continuing with this survey, you acknowledge the following:

1. Your participation in this survey is entirely voluntary. You are free to withdraw at any time without any consequences.
2. Your responses will be kept confidential and used solely for academic purposes. No personally identifiable information will be disclosed.
3. You understand the purpose of this survey and agree to participate based on the information provided.

Dengan meneruskan tinjauan ini, anda mengakui perkara berikut:

1. *Penyataan anda dalam tinjauan ini adalah secara sukarela sepenuhnya. Anda bebas untuk menarik diri pada bila-bila masa tanpa sebarang akibat.*
2. *Jawapan anda akan dirahsiakan dan digunakan semata-mata untuk tujuan akademik. Tiada maklumat peribadi anda akan didedahkan.*
3. *Anda memahami tujuan tinjauan ini dan bersetuju untuk mengambil bahagian berdasarkan maklumat yang diberikan.*

若继续进行此调查，即表示您承认以下事项：

1. 您参与此调查完全是自愿的。您可以随时退出，不会有任何后果。
2. 您的回答将会被保密且仅用于学术目的。任何个人身份信息不会披露。
3. 您了解此调查的目的，并同意参与。

Mark only one oval.

I agree / Saya bersetuju / 我同意

Section A: Pet Owner's Demographics

Bahagian A: Demografi pemilik haiwan peliharaan

A 部分：宠物主人的人口统计

2. Age *

Umur

年龄

Mark only one oval.

- 18 - 20
- 21 - 30
- 31 - 40
- 41 - 50
- 51 - 60
- 61 - 70
- > 70

3. Highest Education Level *

Peringkat Pendidikan Tertinggi

最高学历

Mark only one oval.

- Primary / Peringkat Rendah / 小学
- Secondary / Peringkat Menengah / 中学
- Pre-University or Diploma / Pra-Universiti atau Diploma / 预科班或文凭
- Bachelor's Degree / Ijazah Sarjana Muda / 学士学位
- Masters / Sarjana / 硕士
- PhD / 博士

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4. District of Residence *

Daerah Kediaman

居住地区

Mark only one oval.

- Gombak
- Hulu Langat
- Hulu Selangor
- Klang
- Kuala Langat
- Kuala Selangor
- Petaling
- Sabak Bernam
- Sepang

5. Income Range (per month) *

Pendapatan (sebulan)

收入 (一个月)

Mark only one oval.

- < RM 2,500
- RM 2,500 - RM 4,999
- RM 5,000 - RM 7,499
- RM 7,500 - RM 9,999
- > RM 10,000
- None

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6. Do you own any personal insurance for yourself? *
- Adakah anda memiliki sebarang insurans peribadi untuk diri anda sendiri?*
- 您有为自己购买人身保险吗？*

Mark only one oval.

- Yes / Ada / 有
- No / Tak / 没有
- Choose not to answer / Tidak ingin menjawab / 选择不回答

Section B: Pets' Information

Bahagian B: Maklumat Haiwan Kesayangan

B 部分：宠物信息

7. How many pets do you currently own? *
- Berapakah bilangan haiwan peliharaan yang anda miliki pada masa ini?*
- 您目前拥有多少只宠物？*

Mark only one oval.

- 1
- 2
- 3
- 4
- 5
- > 5

8. Which type of pet(s) do your currently own? (Can select multiple) *
- Apakah jenis haiwan peliharaan yang anda miliki sekarang? (Boleh pilih lebih daripada satu)*
- 您目前养了哪种宠物？(可多选)*

Check all that apply.

- Dog / Anjing / 狗
- Cat / Kucing / 猫
- Other: _____

Section C: Knowledge Towards Pet Insurance

Bahagian C: Pengetahuan Terhadap Insurans Haiwan Kesayangan
C部分：对于有关宠物保险的知识

9. Do you know that pet insurance is available in Malaysia? *
Adakah anda tahu bahawa insurans haiwan peliharaan boleh didapati di Malaysia?
您知道马来西亚是有几家保险公司提供宠物保险吗？

Mark only one oval.

- Yes / Ya / 知道
 No / Tidak / 不知道
 Unsure / Tidak pasti / 不确定

10. If yes, please provide one example.
Jika ya, sila berikan satu contoh.
如果有，请举一个例子。

11. Have you ever came across any advertisements/articles regarding pet insurance in Malaysia? *
Pernahkah anda terjumpa iklan/artikel berkenaan insurans haiwan peliharaan di Malaysia?
您是否曾经看到过有关马来西亚宠物保险的广告/文章？

Mark only one oval.

- Yes / Ya / 知道
 No / Tidak / 不知道
 Unsure / Tidak pasti / 不确定

12. Do you know that pet insurance is only available for cats and dogs? *
- Adakah anda tahu bahawa insurans haiwan peliharaan hanya tersedia untuk kucing dan anjing?*
- 您是否知道宠物保险仅适用于猫和狗吗？*

Mark only one oval.

- Yes / Ya / 知道
- No / Tidak / 不知道
- Unsure / Tidak pasti / 不确定

13. Do you know that pet insurance, like any other insurance, helps financially when your pet needs medical attention? *
- Adakah anda tahu bahawa insurans haiwan peliharaan, seperti insurans yang lain, membantu dari segi kewangan apabila haiwan kesayangan anda memerlukan rawatan perubatan?*
- 您是否知道宠物保险与其他保险一样，可在您的宠物需要医疗护理时提供经济帮助？*

Mark only one oval.

- Yes / Ada / 有
- No / Tidak / 不知道
- Unsure / Tidak pasti / 不确定

14. Do you know about the claiming process for pet insurance? *
- Adakah anda tahu tentang proses tuntutan insurans haiwan peliharaan?*
- 您是否知道宠物保险的索赔流程？*

Mark only one oval.

- Yes / Ada / 有
- No / Tidak / 不知道
- Unsure / Tidak pasti / 不确定

Section D: Attitude Towards Pet Insurance

Bahagian D: Sikap Terhadap Insurans Haiwan Kesayangan
D 部分：对于宠物保险的态度

Indications / Petunjuk / 指示

- 1 - Strongly Disagree / Sangat Tidak Setuju / 非常不同意
2 - Disagree / Tidak bersetuju / 不同意
3 - Neutral / Berkecuali / 中立
4 - Agree / Setuju / 同意
5 - Strongly Agree / Sangat Setuju / 非常同意

15. I believe that I have saved up/ prepared for any situation should my pet(s) require medical attention. *

Saya percaya bahawa saya telah menyimpan/bersedia untuk sebarang situasi sekiranya haiwan peliharaan saya memerlukan rawatan perubatan.

我相信我已经为我的宠物需要医疗救治的任何情况做好了准备。

Mark only one oval.

- | | | | | | | |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|---------------------------------------|
| | 1 | 2 | 3 | 4 | 5 | |
| Strongly Disagree / Sangat Tidak Setuju / 非常不同意 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | Strongly Agree / Sangat Setuju / 非常同意 |

16. I believe that by getting pet insurance, I will have more freedom to choose better treatments for my pet(s) and provide my pet(s) with a better life. *

Saya percaya bahawa dengan mendapatkan insurans haiwan kesayangan, saya akan mempunyai kebebasan yang lebih untuk memilih rawatan yang lebih baik bagi haiwan kesayangan saya dan menyediakan kehidupan yang lebih baik kepada haiwan peliharaan saya.

我相信通过购买宠物保险，我将有更多的自由为我的宠物选择更好的治疗方法，并为我的宠物提供更好的生活。

Mark only one oval.

- | | | | | | | |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|---------------------------------------|
| | 1 | 2 | 3 | 4 | 5 | |
| Strongly Disagree / Sangat Tidak Setuju / 非常不同意 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | Strongly Agree / Sangat Setuju / 非常同意 |

17. I think the cost of purchasing pet insurance is affordable. *
- Saya rasa kos untuk membeli insurans haiwan peliharaan adalah berpatutan.*
 我认为购买宠物保险的费用是可以承受的。

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree / Sangat Tidak Setuju / 非常不同意	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree / Sangat Setuju / 非常同意

18. I think the pet insurance claiming process is easy and straightforward. *
- Saya rasa proses tuntutan insurans haiwan peliharaan adalah mudah.*
 我认为宠物保险索赔流程非常简单。

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree / Sangat Tidak Setuju / 非常不同意	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree / Sangat Setuju / 非常同意

19. I believe help and advice are made easily accessible by pet insurance providers. *
- Saya percaya bantuan dan nasihat akan didapat dengan mudah oleh penyedia insurans haiwan kesayangan.*
 我相信我可轻松地由宠物保险提供商获得帮助和建议。

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree / Sangat Tidak Setuju / 非常不同意	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree / Sangat Setuju / 非常同意

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20. I think all information on pet insurance offered in Malaysia is transparent and easily available for pet owners. *

Saya rasa semua maklumat mengenai insurans haiwan peliharaan yang ditawarkan di Malaysia adalah telus dan mudah didapati bagi pemilik haiwan peliharaan.

我认为马来西亚提供的宠物保险信息都是透明的且可以轻松获取。

Mark only one oval.

1 2 3 4 5

Strongly Disagree / Sangat Tidak Setuju / 非常不同意 Strongly Agree / Sangat Setuju / 非常同意

Section E: Practice of Pet Insurance

Bahagian E: Amalan Insurans Haiwan Kesayangan

E部分：有关宠物保险的实践

21. How often do you shop for food products for your pet(s)? *

Berapa kerap anda membeli produk makanan untuk haiwan kesayangan anda?

您多久为您的宠物购买一次宠物食品？

Mark only one oval.

- Never / Tidak pernah / 不曾
- Sometimes / Kadang-kala / 有时候
- Often / Selalu / 经常

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22. In a year, on average how much do you spend on food for one pet? *
- Dalam setahun, secara purata berapa banyakkah yang anda belanjakan untuk makanan bagi satu haiwan peliharaan anda?*
- 一年中，您平均为一只宠物的食物花费多少钱？

Mark only one oval.

- < RM 500
- RM 501 - RM 1, 000
- RM 1, 001 - RM 1, 500
- RM 1, 501 - RM 2, 000
- > RM 2, 000

23. How often do you shop for toys for your pet(s)? *
- Berapakah kekerapan anda membeli-belah mainan untuk haiwan kesayangan anda?*
- 您多久会给您的宠物购买一次玩具？

Mark only one oval.

- Never / Tidak pernah / 不曾
- Sometimes / Kadang-kala / 有时候
- Often / Selalu / 经常

24. In a year, on average how much do you spend on toys for one pet? *
- Dalam setahun, secara purata berapa banyakkah yang anda belanjakan untuk mainan untuk satu haiwan peliharaan?*
- 一年中，您平均为一只宠物购买玩具花费多少钱？

Mark only one oval.

- < RM 500
- RM 501 - RM 1, 000
- RM 1, 001 - RM 1, 500
- RM 1, 501 - RM 2, 000
- > RM 2, 000

25. How often do you bring your pet(s) to the vet? *
- Berapakah kekerapan anda membawa haiwan peliharaan anda ke doktor haiwan?*
- 您多久帶您的寵物去看一次兽医？*

Mark only one oval.

- Never / Tidak pernah / 不曾
- When my pet is sick / When my pet is sick / 当我的宠物生病时
- Once a year / Sekali setahun / 一年一次
- Multiple times a year / Berbilang kali setahun / 每年多次

26. In a year, on average how much do you spend on health care for one pet? *
- Dalam setahun, secara purata berapa banyakkah yang anda belanjakan untuk penjagaan kesihatan untuk satu haiwan peliharaan?*
- 一年中，您平均为一只宠物的医疗保健花费多少钱？*

Mark only one oval.

- < RM 500
- RM 501 - RM 1, 000
- RM 1, 001 - RM 1, 500
- RM 1, 501 - RM 2, 000
- > RM 2, 000

27. How often do you search for pet insurance informations? *
- Berapakah kekerapan anda mencari infomasi insurans haiwan?*
- 您多久寻找有关宠物保险的资料？*

Mark only one oval.

- Never / Tidak pernah / 不曾
- Sometimes / Kadang-kala / 有时候
- Often / Selalu / 经常

28. How often do you use pet insurance? *
- Berapakah kekerapan anda menggunakan insurans haiwan?*
您多频繁使用宠物保险？

Mark only one oval.

- Never / Tidak pernah / 不曾
- Sometimes / Kadang-kala / 有时候
- Often / Selalu / 经常

29. How much are you willing to spend per year on getting pet insurance for one pet? *
- Berapa banyakkah yang anda sanggup belanjakan setahun untuk mendapatkan insurans haiwan kesayangan bagi satu haiwan peliharaan?*
您每年愿意花多少钱为一个宠物购买宠物保险呢？

Mark only one oval.

- I would not spend on getting pet insurance / Saya tidak akan mendapatkan insurans haiwan peliharaan / 我不将购买宠物保险。
- < RM200
- RM 200 - RM 399
- RM 400 - RM 599
- RM 600 - RM 799
- > RM 800

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Table 12 Cronbach's alpha reliability level (Adapted from Journal of Physics: Conference Series 2021)

Cronbach's Alpha Value	Reliability Level
<0.20	Unacceptable reliability
0.20 – 0.40	Poor reliability
0.40 – 0.60	Acceptable reliability
0.60 – 0.80	Good reliability
0.80 – 1.00	Excellent reliability

Reliability Statistics

Cronbach's Alpha	N of Items
.720	5

Figure 9 Reliability of Knowledge Questions

Reliability Statistics

Cronbach's Alpha	N of Items
.913	6

Figure 10 Reliability of Attitude Questions

Reliability Statistics

Cronbach's Alpha	N of Items
.719	3

Figure 11 Reliability of Practice Questions

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