



UNIVERSITI PUTRA MALAYSIA

***STUDY OF OWNER AWARENESS AND RISK FACTORS OF FELINE
OBESITY IN KLANG VALLEY***

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STUDY OF OWNER AWARENESS AND RISK FACTORS OF FELINE OBESITY
IN KLANG VALLEY

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CERTIFICATION

It is hereby certified that we have read this project paper entitled “Study of Owner Awareness and Risk Factor of Feline Obesity in Klang Valley”, by Nur Azlin Binti Misran and in our opinion it is satisfactory in terms of scope, quality, and presentation as partial fulfillment of the requirement for the course VPD 4999-Project

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DEDICATIONS

This project paper is dedicated to

My family

Father

Mother

Brother and Sister

And to all those who are directly and indirectly involved in completion
of this project

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LIST OF ABBREVIATIONS

%	Percentage
n	Frequency
BCS	Body Condition Score
<	Less than
>	More than
kcal	Kilocalorie
BW	Body weight
kg	Kilogram
OR	Odd ratio
=	Equal to

ABSTRAK

Abstrak daripada kertas projek yang dikemukakan kepada Fakulti Perubatan Veterinar untuk memenuhi sebahagian daripada keperluan kursus VPD 4901 – Projek

KAJIAN MENGENAI KESEDARAN PEMILIK KUCING DAN FAKTOR RISIKO OBESITI DALAM KALANGAN KUCING DI KLANG VALLEY

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Satu kajian soal selidik keratin rentas berkaitan pemilik kucing di Lembah Klang telah dilakukan pada Januari 2016. Secara keseluruhan 150 soal selidik telah dikumpulkan. Soal selidik terdiri daripada tiga bahagian: demografi kucing, makanan dan rejim pemberian makanan dan kesedaran pemilik dan pengetahuan mengenai kucing obesiti. Skor keadaan badan (BCS) kucing telah dibuat oleh pemilik kucing menggunakan skala –lima mata (BCS 1- BCS 5). Objektif kajian ini adalah untuk menentukan tahap kesedaran pemilik haiwan tentang risiko obesity dan faktor yang menyumbang obesity dalam kalangan kucing. Data dianalisis dengan menggunakan statistic deskriptif untuk mengenalpasti tahap kesedaran pemilik kucing dan mengetahui bilangan serta peratusan kucing yang mempunyai berat badan berlebihan dan obesiti yang terlibat dalam kajian. Secara keseluruhan, majority pemilik kucing mempunyai kesedaran mengenai risiko kucing obesiti (77%) dan peratusan kucing yang mempunyai berat badan berlebihan dan obes adalah 47.4% (n = 71). Berdasarkan kajian literatur, jantina, status pengkasian, umur, baka, pengurusan, bilangan kucing di rumah, jenis pemakanan, kekerapan makan, jumlah makanan yang diberikan, kesedaran pemilik mengenai

risiko obesity dan pengetahuan pemilik kucing tentang jumlah kalori yang diperlukan untuk kucing telah dikenal pasti berpotensi untuk menjadi factor risiko untuk kucing menjadi obesiti. Oleh itu, ujian khi kuasa dua telah dilakukan untuk menentukan hubungan antara faktor yang berisiko dan peluang untuk kucing mempunyai berat badan berlebihan dan obes ($P < 0.05$). Dalam kajian ini kucing yang mempunyai berat badan berlebihan dan obes lebih cenderung mempunyai hubungan dengan status dikasi, umur kucing, jenis pemakanan, pengurusan dan kekerapan makan. Kemudian regresi logistic binari telah dilakukan untuk mencari faktor risiko utama untuk obesiti kucing.

Berdasarkan keputusan, kucing yang telah dikasi, senior (> 9 tahun), makanan komersial, dijaga sepenuhnya di rumah dan makan lebih daripada tiga kali sehari mempunyai risiko yang tinggi untuk menjadi obese. Kajian ini menekankan kepentingan sikap pemilik ke arah pencegahan obesity kerana berdasarkan kajian pengetahuan pemilik kucing tentang pencegahan obesity kucing masih rendah. Oleh itu pendidikan tentang pengurusan makanan dan anggaran BCS adalah penting untuk mengelakkan insiden kucing obes.

Kata kunci: Kucing, Obesiti, keadaan skor badan (BCS), kesedaran pemilik, factor risiko

ABSTRACT

**An abstract of the project paper presented to the Faculty of Veterinary Medicine in
partial fulfillment of the course VPD 4901-Project.**

STUDY OF OWNER AWARENESS AND RISK FACTORS OF OBESITY IN CAT IN KLANG VALLEY

By

Nur Azlin Binti Misran 2016

Supervisor: Dr. Puteri Azaziah Megat Abdul Rani

Co-Supervisor : Dr. Hasliza Binti Abu Hassim

A cross-sectional questionnaire study of cat owners in Klang Valley was done in January 2016. In total 150 questionnaires were collected. The questionnaires comprised of three sections: demographics of the cat, feed and feeding regime and owner awareness and knowledge about feline obesity. The body condition score (BCS) of cats was rated by the cat owner using a validated five point scale. The objectives of this study are to determine the level of awareness of pet owner about the risk of obesity in cat and to determine factors that contributing obesity in cat. Data was analysed using descriptive statistics to identify the level of awareness of cat owner and rate of overweight and obesity cat involved in study. Overall, majority of the cat owner were aware about the risk of feline obesity (77%) and rate for overweight and obese cat was 47.4% (n=71). Based on the literature review, gender, neutering status, age, breed, management, number of cat in household, type of diet, frequency of feeding, amount of feed given, owner awareness about risk of obesity and owner knowledge about calorie needed for their cat were identified as potential to be a risk factor for

feline obesity. Therefore, Chi square test was done to determine the association between those variables and chances of cat become overweight and obese ($P < 0.05$). In this study overweight and obese cats were more likely had relationship with neutering status, age of cat, type of diet, management and frequency of feeding. Then binary logistic regression conducted to find the major risk factor for feline obesity. Based on the results, cats that are neutered, senior age (> 9 years old), commercial diet, kept indoor and feeding more than three times a day have a high risk in developing obesity. This study highlighted the importance of owner attitude towards prevention of obesity as the cat owner knowledge about prevention of feline obesity is still low. Therefore owner education about feeding management and estimation of BCS is important to prevent the incidence of feline obesity.

Keywords: Feline, Obesity, Body condition score (BCS), Descriptive statistic, owner awareness, risk factor

1.0 INTRODUCTION

According to Crane (2002), obesity has been defined as condition of positive energy balance and excessive adipose tissue formation with adverse effects on morbidity and mortality. Companion animals are considered overweight is when the body weight is between 10% and 19% above ideal while obese when their body weight is 20% greater than ideal (Burkholder et al., 2000). There was no study had been reported was done on prevalence of feline obesity in Malaysia. However in United States the latest study based on 2014 National Pet Obesity Survey Result revealed the prevalence of overweight and obesity cats was 57.9%. This showed most of the owner did not aware or did not fully understand the danger of the obesity to their pet's life.

When talked about managing pet's health, owner's knowledge and awareness play a significant role. This is because owner's approach on management of their pet will determine the health status of the cat. The most common problem reported related with owner was, underestimation of BCS of owner (Colliard et al., 2009). In addition, many owners don't know how much energy needed in diet for their cat. (Schokkenbroek, 2006)

The main reason for the development of obesity is having a positive mismatch between energy intake and energy expenditure. Therefore, either excessive dietary intake or inadequate energy utilization can lead to a state of positive energy balance; numerous factors may be involved, including genetics, the amount of physical activity,

and the energy content of the diet (Burkholder et al., 2000). Previous studies has identified the risk factor for the feline obesity which include being male, neutered, middle age (Colliard et al., 2009; Courcier et al., 2010), mixed breed, living in single-or two cat households, confinement indoors (Robertson, 1999). In addition, owner underestimation of their cat's body condition also can be one of the main risk factor for feline obesity (Colliard et al., 2009). Dietary factors can also lead to the development of obesity in cat where frequent feeding was identified as a risk factor (Courcier et al., 2010).

Obesity is a growing problem and main concern in cat's health. Moreover, owner awareness and attitude play a major role in determine the health status of their cat. Since there is no previous study was done on feline obesity in Malaysia hence, the objectives of this study are:

- i. To determine the awareness of pet owner about the risk of obesity in cat.
- ii. To determine factors that contributing obesity in cat.

For this study, the following hypotheses were proposed:

- i. The percentage of pet owner who are aware is lower than the percentage of pet owner who are not aware.
- ii. There are factors that contributing obesity in cat.

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