

Running head: PET ATTACHMENT AND SELF-ESTEEM

Relationship of Pet Attachment and Self-Esteem  
among Adolescents in Hong Kong

Chan Hiu Ying, Karen  
(08637296)

April 2010

HONG KONG BAPTIST UNIVERSITY LIBRARY

Honours Project Release Form

Student No.: 08637296

Author / Student Name: CHAN HIU YING KAREN

Honours Project Title: Relationship of Pet Attachment and  
Self-Esteem among Adolescents in Hong Kong

Degree Program: Bachelor of Social Science (Honours) in Psychology

Year of the Honours Project : Year 3

Declaration :

- I agree that the full text of my Honours Project may be consulted by *any/all users* in electronic format online through Internet connection, and in print version for onsite use at the University Library, for purposes of private study, educational use, scholarship or research.

Signature of Author:  Date : 23 Sep 2011

## DECLARATION

I declare that the work in this honours project is original except where indicated by special reference in the text.

Any views expressed in the honours project are those of the author and in no way represent those of the bachelor degree programme in Psychology, Hong Kong Baptist University.

Signed: \_\_\_\_\_

Date: \_\_\_\_\_

### Abstract

This study was designed to examine the relationship between pet attachment and self-esteem among adolescents in Hong Kong. In this study, two hypotheses were formulated. Hypothesis one was adolescent pet owners who score higher on pet attachment scale showed significantly higher score on the self esteem scale. Hypothesis two was adolescent pet owners would score higher on self-esteem scale than that of the adolescent non pet owners. The participants were 422 secondary school students from two different secondary schools in Hong Kong. Results showed two hypotheses were rejected. However, results showed that time spent in playing with pets was significantly related to pet attachment. Also, a trend was found that the higher the average score obtained, the higher the pet attachment. Additionally, no gender difference of pet attachment between pet owners and non pet owner was found.

### 撮要

此研究旨在探討寵物依戀與青少年自尊心的關係。此研究共有兩個假設：假設一為香港青少年飼養貓狗者的寵物依戀程度會與自尊心程度有正面關係；假設二為香港青少年飼養貓狗者與非飼養貓狗者的自尊心會有所不同。是次研究的受訪者為四百二十二位來自香港兩所不同中學的學生。結果發現兩個假設均不成立。但值得注意的是寵物依戀和與寵物每天嬉戲的時間有正面關係及寵物依戀和學術成績有正面趨勢。除此以外，結果指出香港青少年飼養貓狗者在寵物依戀上沒有性別上的不同。

## ACKNOWLEDGEMENTS

I would like to give my biggest thanks to my supervisor, Dr. Karen Cheung, for guiding me throughout the entire study. Without Dr. Karen's excellent guidance, this honours project may not be completed.

In addition, special thanks are given to Dr. Henry Li, for spending extra time to give me some advices for this honours project, especially in data analysis.

Moreover, I would like to thanks Dr. Terence Lee, Dr. Ice Tsui, Dr. Vivian Luan, Dr. Clement Lee and Ms. Melanie Chan for all of their hard work, guidance and support, not only for this honours project, but also throughout the duration of my graduate study.

Last but not least, I would like to thanks my classmates for getting along with me in these two years. Their warm supports always come to my mind when doing this honours projects. I am extremely grateful of all of the time they have given me over the years.

Last, I would like to thanks my dog, Cookie. Without him, the topic of this honours project may not be generated. And thanks for all the hours he accompanied with me by lying on the floor next to the computer and playing with me anytime I needed a break. Also, I hope to thank my dear GOD who gave me more than I expected in these two years.

## List of Tables

		Page
Table 1	Descriptive statistics of pet owners' demographics	32
Table 2	Descriptive statistics of non pet owners' demographics	33
Table 3	Descriptive statistics of non pet owners' close friend number	35
Table 4	Self-esteem score by pet owners and non pet owners	36
Table 5	Gender difference of self-esteem and pet attachment	36

## List of Figure

		Page
Figure 1	Bar chart of average score and pet attachment	38

## Table of Contents

	Page	
CHAPTER ONE	Introduction	10
CHAPTER TWO	Literature Review	
	Attachment Theory	14
	Erickson's Prosocial Theory	15
	Pet attachment	16
	Gender differences of pet attachment	17
	Type of pets of pet attachment	18
	Benefits of pet attachment	18
	Scales	19
	Self-esteem	20
	Gender differences of self-esteem	21
	Age differences of self-esteem	21
	Family support and self-esteem	22
	Peers relationships and self-esteem	22
	Scales	23
	Pet attachment and self-esteem	23
	A brief overview of methodology	25
CHAPTER THREE	Method	
	Participants	27
	Measures	27
	Procedure	29
	Pilot study	29



	Data analysis	29
CHAPTER FOUR	Results	
	Descriptive analysis	31
	Hypotheses testing: Research question 1	34
	Hypotheses testing: Research question 2	35
	Other analysis	36
CHAPTER FIVE	Discussion	
	Hypothesis one	39
	Hypothesis two	41
	Gender differences of pet attachment	42
	Time spent in playing with dog and Pet attachment	42
	Average score and pet attachment	43
	Limitations	44
	Suggestions for further study	44
	Conclusion	46
References		47
Appendices		9
Tables		5
Figure		6

## Appendices

	Page	
Appendix 1	Informed Consent form	51
Appendix 2	Questionnaire of Rosenberg's Self-Esteem Scale	52
Appendix 3	Questionnaire of Lexington Attachment to Pet Scale	53
Appendix 4	Demographic survey	55
Appendix 5	Debriefing note	56

## Relationship of Pet Attachment and Self-Esteem among Adolescents in Hong Kong

### CHAPTER ONE

#### Introduction

In Hong Kong, there were around two hundred and ninety thousand household pet owners (Census and Statistic Department, 2006). This data suggested that there is a huge proportion of the population that owns pets, but within this group of people, how many of them really know the true values behind pet owning? One typical answer is companionship when they are asked why they own pets and unfortunately they are incapable of explaining this reason further (Endenburg, Hart, & Bouw, 1994). 2006 census report cited that 21.2% of household pet owners considered not keeping the current pets because they did not like the pets anymore. Hence, it is important to let them recognize the significance of owning pets. Recognition of the benefits of pet ownership and pet attachment could facilitate the continuance of responsible pet ownership in our society.

A great number of studies taken place around the globe over the past decade showed that pet ownership and pet attachment have positive benefits and outcomes for the pet owners. Attachment is a close emotional bond between two people (Santrock, 2008). Moreover, it would be seen between humans and their pets too. Staat, Miller, Carnot, Rada and Turnes (as cited in Alonso & Hinijosa, 2005) stated that pet attachment is an important part of understanding the relationship between humans and their pets. Attached to pet has positive

impacts include physical and psychological health, such as less depression of elderly (Garrity, Stallones, Marx, & Johnson, 1989), more concern for the next generation of young adults (Marks, Koepke, & Bradley, 1994), more empathic and prosocially oriented of preadolescent and early adolescent pet owners (Vidovic, Stetic, & Bratko, 1999) and more satisfied with lives and extend social network of the elderly (Chan, Cheung, & Lo, 2007).

Adolescence encompasses a number of self development tasks which are the acquisition of self-esteem and self-identity towards each others. Self-esteem is the overall way we evaluate ourselves (Sanrock, 2008). Robins, Trzesniewski, Tracey, Potter and Gosling (as cited in Sanrock, 2008) suggested that self-esteem dropped considerably during adolescence. They may have different levels of self-esteem in different aspects such as social, scholastics, appearance, general conduct and actions (Cornell University, 2003). Adolescents with low self-esteem correlate with various problems including depression, unsafe sex and drug abuse (Nunley, 2001). There are two factors affecting self-esteem in adolescence.

Essentially, family plays an important role on the children's development (Wickliffe, 2000). The relationship between parents and adolescent acts as a factor of building self-esteem and a research suggested that a better relationship between parent and adolescent will increase the adolescent's self-esteem (Foehrkolb, 2005). Nevertheless, Hong Kong's economy has been developing rapidly years by years due to the improvement in economic status, the inflation rate have also increased proportionally. As a result of the inflation, an

increased number of parents have to leave home to work in order to earn more to achieve a satisfied living style. To the extent that, it is difficult for parents to have time to stay at home, to take care of their children and even establish a better relationship between them.

Not only family is a crucial factor of developing adolescents' self-esteem, but also peers. Adolescents with low self-esteem will seek out group to find a collective self-esteem (Nunley, 2001). The greater the collective self-esteem, the greater the personal self-esteem gained. Yet, no matter family or peers would influence the development of self-esteem, these are uncontrollable. Because it is difficult to force parents to give up their job and stay at home to look after their children and assure adolescent have positive peers influence, not negative one. The present study conceives that owning a pet may be a way to make up the insufficiencies of the above two factors and somehow pet attachment could be another way to help adolescents improve self-esteem.

Covert, Whiren, Keith and Nelson (as cited in Vidovic et al., 1999) declared that preadolescent and early adolescent pet owners have stronger self-esteem than those who have no pets. However, researches of the similar study in Hong Kong are very limited. If it is conducted in Hong Kong, there would be important implications to the adolescent pet owners and their parents. Adolescent pet owners would explore one of the true values of pet owning which is the enhancement of their self-esteem and this benefit could somehow assist them to away from the problem behaviors that correlate with low self-esteem. Then, parents can be

recommended to consider owning pet for the children in order to compensate for their shortcomings.

In light of the above rationale, this study was designed to explore the relationship of pet attachment and self-esteem among adolescents in Hong Kong. The research questions examined are is self-esteem of Hong Kong adolescents linked with the intensity of attachment to the pet? And could owning pet enhance adolescents' self-esteem?

## CHAPTER TWO

### Literature Review

#### *Theoretical foundations*

*Attachment Theory.* There are a few theories provided the theoretical structure for the study of human attachment and a famous research on monkey by Harlow has contributed to the understanding of human attachment. Attachment is a close emotional bond between two people (Santrock, 2008). Two theorists called Bowlby and Erickson stressed that the importance of attachment is in the first year of life and the responsiveness of the caregivers (Bowlby, 1982; Santrock, 2008). Bowlby believed that both infants and their primary givers are biologically inclined to form attachment, usually the mother (Bowlby, 1982). Infants want to keep the primary caregivers nearby in order to obtain security. Securely attached babies use the caregivers as a secure base from which to explore environment and it means they feel secure to explore everything new when the caregivers are present. According to Hazan and Zeifman (as cited in Beck & Madresh, 2005), the attachment figures change from parents to friends when the child grows up. Then, the figures change again that is from friends to romantic partners as a secure base to which they feel comfortable and secure in stressful time when becoming adults. There are two dimensions of adults' attachment which are attachment-related anxiety and attachment-related avoidance. Attachment-related anxiety is the extent to which individuals feel secure or insecure about whether a partner will be

available and responsive and attachment-related avoidance is the degree to which individuals feel secure or insecure depending on each other and being intimate with them. Hence, the adults score low in these two dimensions when they are securely attached to their partner (Santrock, 2008).

Not only mother can be attachment figures, but also significant others. With reference to Trinke and Bartholomew (as cited in Beck & Madresh, 2005), peers and siblings can be attachment figures. Also, Kurdek (2008) also mentioned that mothers, fathers, siblings, romantic partners and best friends can be attachment figures as well. Ainsworth (1991) developed four-feature model of attachment figures which are secure base, safe haven, proximity maintenance and separation distress (as cited in Kurdek, 2008). Firstly, secure base refers to the attachment figure is regarded as a dependable source of comfort who alleviates any vulnerability linked with exploring, Secondly, safe haven refers to the attachment figure is sought for contact or safety in distress time. Thirdly, proximity maintenance refers to feel enjoyable when near the attachment figure. Lastly, separation distress refers to the negative feelings such as missing created when being away from the attachment figure. That means the one will be conceived as the attachment figure when they are embedded with these four features.

*Erikson's Psychosocial Theory.* There are eight stages of development as we go through life which comprise of trust vs. mistrust, autonomy vs. shame and doubt, initiative vs. guilt,



industry vs. inferiority, identity vs. identity confusion, intimacy vs. isolation, generativity vs. stagnation and integrity vs. despair. A unique developmental task encounters individuals with a crisis that must be resolved at each stage. The more successfully an individual resolves the crises, the healthier development will be. Each of the stage has positive and negative pole and the positive pole dominates in the healthy solution to the crisis (Santrock, 2008). For adolescence, they are undergone the fifth developmental stage which is identity vs. identity confusion. Identity is the positive pole and identity confusion is the negative pole.

Adolescents are faced with finding out who they are, what they are all about and where they are going in life. If adolescents explore roles in a healthy manner and achieve a positive path to follow in life, a positive identity acquired (Santrock, 2008). When identity dominates and it should be healthy for development. Kienlen (2007) suggested that self-esteem and self-confidence will be increased after finding the true identity. On the contrary, either adolescents do not adequately explore many roles and define a positive future path or parents push an identity on them, identity confusion occurred and it should be less healthy for further development (Santrock, 2008).

### *Pet attachment*

At the beginning, the definitions between pet bonding and pet attachment should be clarified clearly. Melson (1989) outlined four dimensions of human-pet attachment which includes time spent with and activities directed towards the pet, interest in and affect toward

the pet, knowledge about the pet and its care and behavioral responsiveness to the pet and its needs (as cited in Sable, 1995). Furthermore, pet attachment can be explained by the attachment theory and it means pet attachment is an enduring emotional bond between pet owners and pets characterized by a tendency to obtain or maintain security. The pet owner represents the parents or the caregiver and the pet represent the infant or the receiver of the caregiving. The pet is considered as the attachment figures since it has the four-feature model which encompasses secure base, safe haven, proximity maintenance and separation distress. On the other hand, pet bonding bases on the affection and attraction felt by one individual for another particular individual, which could extend to an animal (Sable, 1995). Many behaviors that the pet owners display with pets are similar to that of a mother towards an infant as well such as petting, hugging, touching and sleeping next to one another (Bierer, 2000). Therefore, pet bonding and pet attachment have similar meaning in comparison and these terms often are used interchangeably actually.

*Gender differences of pet attachment.* Poretzky and Daniels (1998) found that there was a statistically small gender difference in pet attachment (as cited in Herzog, 2007). Lewis, Krageloh, and Shepherd (2009) found that females were significantly more likely to have higher pet attachment than males in a survey of 336 adults. However, many studies which examined pet attachment in the past revealed that there was relatively small and even no gender difference. Likewise, neither Stallones, Marx, Garrity, and Johnson (1988) nor Stevens

(1990) found any gender difference in pet attachment (as cited in Herzog, 2007). Hence, there is not a large gender difference on pet attachment.

*Type of pets of pet attachment.* Most studies of pet attachment measure dogs and cats only because they are owned by people mostly. In Hong Kong, there were 48.4% dog owners, 22.3% cat owners and 19.3% tortoise owners (Census and Statistic Department, 2006). It showed that the majority of pet subjects in Hong Kong are dogs and cats too. Besides, Vidovic et al. (1999) compared the pet attachment level of dog owners, cat owners and other kinds of pet owners in a survey of 826 children. They found that dog owners and cat owners more attached to their pets than owners of other kinds of pets. In the same study, it showed that dogs and cats are owned by people mostly as well. 826 children were divided into 216 owners owned a dog, 76 owners owned a cat and 157 owners owned other kinds of pets. Hence, the majority of pet subjects of pet attachment would be dogs and cats.

*Benefits of pet attachment.* Attachment to a pet has been shown to have a variety of benefits for various special needs population, especially the elderly. Chan, Cheung, and Lo (2007) found some positive impact of owning pet on physical, psychological and social health of elderly owners such as providing a sense of security; minimizing the loneliness and boredom of them. Garrity et al. (1989) found that pet ownership and strong attachment were significantly associated with less depression of the elderly people. Moreover, Anderson, Reid and Jennings (1997) found that the elderly pet owners had significantly lower blood pressure

and plasma triglyceride than those without pets (as cited in Chan et al., 2007). Not only elderly people receive the benefits from pets, but also adults. Marks et al. (1994) suggested that young adults who are more attached to their pets expressed higher levels of generativity, which means concern for the next generation in a survey of 176 adults. Furthermore, a survey of 350 college students showed that the pets helped them to get through difficult times in life (Nauert, 2008). Except the researches on elderly and adults, there should be a number of researches of pet attachment on adolescent and children. According to Vidovic et al. (1999), it discovered that children who scored higher than average on pet attachment showed significantly higher scores on empathy and prosocial orientation than non-owners. In addition, both Davis and Juhasz (1985) and Van Houtte and Jarvis (1995) found that there are higher level of self-concept, self-esteem and autonomy in preadolescent and early adolescent pet owners (as cited in Vidovic et al., 1999).

*Scales.* To measure pet attachment level, there are three scales more common than others which are Pet Attachment Questionnaire (PAQ), Pet Attachment Scale (PAS) and Lexington Attachment to Pet Scale (LAPS). Pet Attachment Questionnaire consists of 6 items and its Cronbach's alpha value is .51 (Lewis et al., 2009). Then, Pet Attachment Scale is designed to measure how affectionate people are with their pets and its Cronbach's alpha value is .83 (Alonso & Hinojosa, n.d.). For Lexington Attachment to Pet Scale, more researchers used it as the materials in survey than the other two scales (Zheng, Fu, & Headey, 2005; Shore,

Douglas, & Riley, 2005; Voeks & Glickman, 2001). Lexington Attachment to Pet Scale has 23 items and its Cronbach's alpha value is .928 (Johnson, Garrity, & Stallones, 1992). It is a good indicator of pet attachment for both dogs and cats because it has high reliability. It is a thorough scale too since three factors of it are identified which are general attachment, people substituting and animal rights. People substituting indicate the pet occupies a more central position in the owner's life and animal rights indicate the pet's status within the owner's household (Johnson et al., 1992). These three factors reflect human-pet attachment.

### *Self-esteem*

According to Santrock (2008), self-esteem refers to global evaluation of the self and it is also called self worth or self image. Rosenberg viewed that self-esteem represents affective variables and it was the subjective life of an individual including one's thoughts, feelings, and behaviors (as cited in Owens, Stryker, & Goodman, 2001). Individuals are in charge of their own feelings which come from an individual's evaluation themselves and the extent to which one believes they are the competent and worthy people (McKenzie, 1999). Moreover, Owens et al. (2001) suggested that self-esteem was made up of reflected appraisals, the process of social comparison, self-attribution that means the process of people who make observations and explanations of their own behavior and self identifications. Self-esteem allows people to have self awareness as well, which is motivated to increase self-esteem if it is low and to maintain it if it is high. Rosenberg suggested some characteristics of high and low self-esteem.

Individual who has high self-esteem tends to seek personal growth, respect and appreciate others, not feelings of superiority. While individual who has low self-esteem tends to feel shy, conspicuous, unable to express themselves with confidence, worried to make a mistake, have a strong incentive to avoid people and more depressed and unhappy (as cited in Owens et al., 2001).

*Gender differences of self-esteem.* A number of research showed that gender difference in self-esteem during adolescence was the most manifest. Since girls focuses on their body images and overall physical appearance, they have lower self-esteem than boys. Two studies of Baldwin and Hoffman (2002) also pointed out that self-esteem of girls declined more than that of boys during adolescence (as cited in Santrock, 2008). Additionally, gender difference in self-esteem is found in different aspects such as girls have higher self-esteem than boys in academic self-concept, personal character and being more responsible while boys have higher of that in calm emotion, socially at ease and satisfied with themselves (Owens et al., 2001).

*Age differences of self-esteem.* According to Robins, Trzesniewski, Tracy, Gosling, and Potter (2002), they discovered the significant results about age differences in self-esteem via an on line survey of 326 641 individuals. The results showed that self-esteem was at its highest level during childhood, and then declined sharply from childhood of ages 9 to 12 to adolescence of ages 13 to 17. After that, self-esteem continued to decline from adolescence to the college period of ages 18 to 22. To be young adult, self-esteem rose in the post-college

period that is ages 23 to 29 and it increased again from age of 40s to 60s. After reaching age of 60, self-esteem declined markedly and the majority of the decrease occurred between ages of 70s to 80s. Finally, self-esteem levels were as low as those found during adolescence by the age of 80s. To sum up, self-esteem was high in childhood, and then dropped during adolescence and rose gradually throughout adulthood. At last, it declined in old age.

*Family support and self-esteem.* There are a few researches claimed that self-esteem is related to the family support. James (n.d.) suggested that perceived family support and self-esteem were significantly positively correlated. Another research of Yabiku, Axinn, and Thornton (1999) suggested that children have higher self-esteem when their parents are loving, supportive and deeply involved in their lives (as cited in James, n.d.). Also, a research replicated the finding of a positive correlation between parental support and adolescents' self-esteem (MacDonald, Steger, Adams, & Marshall, n.d.). Therefore, family support should be a major influence of self-esteem.

*Peer relationships and self-esteem.* Aside from family support, the great influence of adolescents should be peer relationship. Azmitia (2002) stated that friends of the child and their peer group take on a greater significance to the young person than they did during the middle childhood years (as cited in Lake & Eastwood, n.d.). Not only Harter (1990) claimed that relationships with peers are important sources of social support that contribute to adolescents' self-esteem (as cited in Cornell University, 2003). But also Clemes and Bean

(1990) suggested that groups provide an opportunity for students to build their self-esteem and a sense of belonging (as cited in McKenzie, 1999). Those findings tell people how important peer relationship is during adolescence.

*Scales.* To measure self-esteem, a few scales are available such as The Offer Self-Image Questionnaire, Self-Esteem Testing Scale (SERS) and Rosenberg's Self-Esteem Scale (RSE). First, The Offer Self-Image Questionnaire measures adolescents' perception of their own psychological world in 11 areas and its Cronbach's alpha value is .77 (MacDonald et al. n.d.). Second, Self-Esteem Testing Scale is a very complex scale which consists of 40 items and its internal consistency is .97 (Cheong, Teoh, & Ng, 2005). It measures self-esteem from a wide range area of self-evaluation including overall self-worth, social competence, problem-solving ability, intellectual ability, self-competence and worth relative to other people (Cheong et al., 2005). For Rosenberg's Self-Esteem Scale, it is a universal scale and many researchers used it to measure self-esteem (McKenzie, 1999; Naderi, Abdullah, Aizan, Sharir, & Kumar, 2009; Türkbay, Özcan, Doruk, & Uzun, 2005). It consists of 10 items so that it is very easy to manipulate. It also has quite high reliability and its Cronbach's alpha value is .77-.88.

#### *Pet attachment and self-esteem*

From Doctor Pets, it disclosed the efficiency of the pets to help patients in therapy. Arehart-Treichel (1982) mentioned that pets have been as silent counselors, best friends and siblings to some adolescents (as cited in Alonso & Hinojosa, n.d.). It told people how close a



relationship can be between human and pets. Pets not only can be a best friend for owners, but also the attachment figure as well and a research showed that relationship with pets were more secure on every measure (Beck & Madresh, 2005). For Ainsworth's four-feature model of attachment figures, dogs have two salient features which are proximity maintenance and secure base (Kurdek, 2008). It implied that the owners feel comfortable when the dog is present and it seems to minimize any risks would happen. And the owners feel greatly enjoy the physical presence of their dogs. It seems that pets can really fill a specific role by providing a relatively controllable sense of security and give owners some positive results. Pet attachment provides manifest benefits to particular population such as divorced and widowed person, childless couples and empty-nesters (Johnson et al., 1992; Zheng et al., 2005).

With reference to Robins et al. (2002), self-esteem was dropped during adolescence. McKenzie (1999) also mentioned that adolescents and teenagers face new sources of self-consciousness and self-doubt which can put self-esteem at risk. When they aware of how much is expected of them such as academic achievement in school, they may feel unworthy and it interferes the healthy development definitely. Therefore, self-esteem is seen as an important developmental task during adolescence.

This study is interested in the relationship of pet attachment and self-esteem among adolescents in Hong Kong. As self-esteem in adolescence was seen as the lowest in the life cycle and family support and peer relationship should have the most crucial influence of it. At

the moment, pet offers love, emotional support and unconditionally accepted as the friend and family member (Endenburg & Baarda, n.d.). If there is a pet in the household, parents and adolescent frequently share about how taking care of the pet well which not only improves the family relationship, the adolescent would aware their competent of nurturing the pet and a strong sense of “pet owner” identity would be conceived. Hence, self-esteem should be enhanced. A similar research of Bierer (2000) about pet bonding, self-esteem and empathy had been done. Subjects were fifth-grade students with the age of 10 to 12 from Albuquerque metropolitan area. Both male and female completed a demographic survey, a self-esteem measure, an empathy measure and a pet bonding measure. The results confirmed that both male and female preadolescents with dogs had statistically significant higher in self-esteem and empathy than that without dogs.

From the review of literature, it is clear that research that addresses the link between pet attachment and self-esteem among adolescents is limited and no study about these two variables is conducted in Hong Kong. The hypotheses of this study are that adolescent pet owners who score higher on pet attachment scale showed significantly higher score on the self-esteem scale while adolescent pet owners who score lower on pet attachment scale showed significantly lower score on the self-esteem scale. And the adolescent pet owners would score higher on self-esteem scale than that of the adolescent non pet owners.

*A brief overview of methodology*

Regarding to this study, the subject would be the adolescent of 12 to 18 years old and they are studying form one to form six. The questionnaires of Lexington of Attachment to Pet Scale (LAPS), Rosenberg's Self-Esteem Scale (RSE) and a demographic survey will be distributed in two secondary schools. The data of pet owners of cats and dogs and non pet owners will be collected at the same time.

## CHAPTER THREE

### Method

#### *Participants*

The participants in this study were 422 secondary school students from form 1 to form 6. They were from T.W.G. Hs. Li Ka Shing College and United Christian College, located in Fanling and Shek Kip Mei. There were 250 girls and 171 boys ranging from the age of 12-18 years old. There were 181 participants are from form 1 to form 3 (age range: 12-14 years old) and 238 participants are from form 4 to form 6 (age range: 15-18 years old). Regarding pets owning, 346 participants were non pet owners and 76 were pet owners.

#### *Measures*

The instruments chosen for this research includes Lexington Attachment to Pet Scale (LAPS) and Rosenberg's Self-Esteem Scale (RSE). In addition to those questionnaires, a demographic survey was included. It obtained the general information about participants including gender, age, form, average scores of the previous examination, number and occupation of family members, number of close friends and parental marital status. After that, one more question was asked about did they own pet before and which type was it. For pet owners, they were asked about the types of pets, number of pets, owning duration and playing times with pets per day as well.

The Lexington Attachment to Pet Scale was used to measure an owner's attachment to

cats and dogs (Johnson et al., 1992). It has 23 items such as “I believe my pet is my best friend” and “I feel that my pet is a part of my family”. The response to each question was recorded on a four-point Likert scale from strongly disagree to strongly agree in order to avoid neutral response. The questions were scored by assigning a number value to the four possible choices: (0) strongly disagree, (1) somewhat disagree, (2) somewhat agree or (3) strongly agree. Oppositely, the scoring of two reversed items was reversed. High score indicated strong attachment and the sum of the score measures the overall strength of attachment. It has a good reliability as well (Alpha coefficient = .928) (Johnson et al., 1992).

The Rosenberg’s Self-Esteem Scale was used to measure self-esteem and the degree to which the respondents are satisfied with their lives and feel good about themselves (Türkbay et al., 2005). It has 10 general statements such as “I feel that I have a number of good qualities” and “I take a positive attitude toward myself”. The response to each question was recorded on a 4-point Likert scale from strongly disagree to strongly agree. The questions were scored by assigning a number value to the four possible choices: (1) strongly disagree, (2) disagree, (3) agree or (4) strongly agree. Oppositely, the scoring of five reversed items was reversed. Higher score reflects higher self-esteem. As the original sample for which the scale was developed consisted of 5024 high school juniors and seniors from 10 randomly selected schools in New York state, it has a good reliability (Cronbach's alpha = .77 -.88) (as cited in University of Maryland, n.d.).

### *Procedure*

The instruments were distributed in the classrooms of the secondary schools and the instructors handed the participants a set of questionnaires. All of them signed an informed consent that is on the first page. They were informed that the purpose of the research and all data was kept in confidential. After the informed consent was signed, they started to do the questionnaires. Other than dog owners and cat owners, they skipped Lexington Attachment to Pet Scale. At the end, the instructors handed a debriefing sheet when the participants finished the questionnaires which explained what the study was really about.

### *Pilot study*

In order to eliminate wording bias, the Lexington Attachment to Pet Scale was translated into Chinese. After the back translation process, both English and Chinese version will be handed to 10 participants as a pilot study whose ages are within 23 to 33 years old. The result of the pilot study showed the Chinese version of Lexington Attachment to Pet Scale has a high reliability (Cronbach's alpha = .97).

### *Data analysis*

Statistical package SPSS was used to analyze the data. For demographic variables, Descriptive statistics will be used to perform data.

The relationship between pet attachment and self-esteem was analyzed using the Pearson r correlation analysis. This statistical procedure is used to determine the relationship between

two or more variables which are belonging to the same group of people. Also, it determines the strength of that relationship if any was found. Results were considered significant at  $p$  is equal to or less than 0.05.

Difference of self-esteem between pet owners and non pet owners was analyzed using Independent-samples T test. It is used to compare the mean of two variables and results were considered significant at  $p$  is equal to or less than 0.05 too.

## CHAPTER FOUR

### Results

In this chapter, descriptive analysis, hypothesis testing and other analysis are portrayed one by one. All statistics were performed using SPSS.

#### *Descriptive analysis*

Throughout the data collection from two secondary schools, the response rate is 91.7%. There were 422 participants including pet owners and non pet owners. The participants consist of 346 non pet owners (80%) and 76 pet owners (18%). There were 172 males (40.6%) and 250 females (59.4%). Age of the participants has divided into two groups which are 12 to 14 years old and 15 to 18 years old. Because of two missing values, only 419 participants were calculated. There were 181 participants (43.2%) in the former group and 238 participants (56.8%) in latter group. About parental marital status, one participant (0.2%) without parent, 49 participants (11.6%) have single parent and 372 participants (88.1%) have dual parents.

Among pet owner, there were 22 males (28.9%) and 54 females (71.1%). Pet owners with 12 to 14 years old have 30 (39.5%) and those with 15 to 18 years old have 46 (60.5%). There were 51 dog owners (67.1%), 20 cat owners (26.3%) and 5 owners own both dog and cat (6.6%). For parents working condition, 38 pet owners' (50%) parents are working, 32 pet owners' (42.1%) one of the parents is working and 6 pet owners' (7.9%) parents are not



working now. Average score of previous examination is divided into five groups that are less than 50, 50 to 60, 61 to 70, 71 to 80 and above 80. The first group has 5 pet owners (6.6%), the second group has 35 pet owners (46.1%), the third group has 18 pet owners (23.7%), the fourth group has 17 owners (22.4%) and the fifth group has 1 pet owner (1.3%). The above demographic data were showed in Table 1.

**Table 1.**  
*Descriptive statistics of pet owners' demographic*

	N	Percentage (%)
<b>Gender</b>		
Male	22	28.9
Female	54	71.1
<b>Age</b>		
12-14	30	39.5
15-18	46	60.5
<b>Pet type</b>		
Dog	51	67.1
Cat	20	26.3
Both dog and cat	5	6.6
<b>Parents working condition</b>		
Parents work	38	50
One parent work	32	42.1
Parents not working	6	7.9
<b>Average score of previous examination</b>		
<50	5	6.6
50-60	35	46.1
61-70	18	23.7

71-80	17	22.4
>80	1	1.3

Among non pet owners, there were 137 (40.9%) owned pets before and 198 (59.1%) did not own pets before apart from 11 missing values. Owned cat has 4 non pet owners (1.2%), owned tortoise has 33 non pet owners (9.9%), owned fish has 53 non pet owners (15.8%), owned hamster has 21 non pet owners (6.3%), owned dog has 24 non pet owners (7.2%) and owned bird has 2 non pet owners (0.6%). It was showed in Table 2.

**Table 2.**  
*Descriptive statistics of non pet owners' demographic*

	N	Percentage (%)
<b>Owned pets before</b>		
Cat	4	1.2
Tortoise	33	9.9
Fish	53	15.8
Hamster	21	6.3
Dog	24	7.2
Bird	2	0.6

For the Lexington of Attachment to Pet Scale, scores for this variable ranged from 24 to 60 for this sample of secondary school students. The overall mean score for it in the present study was 46.6 with a standard deviation of 8.6.

For the Rosenberg Self-Esteem scale, scores for this variable ranged from 13 to 37 for this sample of secondary school students. The overall mean score for it in the present study

was 26.6 with a standard deviation of 5.3.

*Hypotheses testing: Research question one*

In order to answer research question one and the one relevant hypothesis, the Pearson r correlation statistic was employed. Research question one asked is self esteem of Hong Kong adolescent linked with the intensity of attachment to the pets. According to this research question, one hypothesis was formulated which is the adolescent pet owners who score higher on pet attachment scale showed significantly higher score on the self esteem scale while adolescent pet owners who score lower on pet attachment scale showed significantly lower score on the self esteem scale. However, the result did not confirm this hypotheses,  $r = -.008$ ,  $p = .976 > .05$ . To illustrate with it, the time spent in playing with pets was examined. It showed that there were 26 pet owners (34.2%) play with their pets for less than one hour a day, 29 pet owners (38.2%) play with their pets for one to two hours a day, 9 pet owners (11.8%) play with their pets for two to two and half hours a day, 5 pet owners (6.6%) play with their pets for two and half hours to three hours a day, 3 pet owner (3.9%) play with their pets for three hours to three and half hours a day, no pet owner (0%) play with their pets for three and half hours to four hours a day and 4 pet owners (5.3%) play with their pets for more than four hours a day. Moreover, the result showed that the pet owners expressed that they have quite many close friends. 5 pet owners (6.6%) mentioned they have less than one close

friend, 11 pet owners (14.5%) mentioned they have two to three close friends and 60 pet owners (78.9%) mentioned they have three or above close friends. It was showed in Table 3.

**Table 3.**

*Descriptive statistics of non pet owners' close friend number*

	N	Percentage (%)
<b>Playing times with pets</b>		
<1	26	34.2
1-2	29	38.2
2-2.5	9	11.8
2.5-3	5	6.6
3-3.5	3	3.9
3.5-4	0	0
>4	4	5.3
<b>Close friends Number</b>		
0-1	5	6.6
2-3	11	14.5
>3	60	78.9

*Hypotheses testing: Research question two*

The research question two asked could owning pets enhance adolescents' self-esteem. Based on this question, one hypothesis was developed which is the adolescent pet owners would score higher on self-esteem scale than that of the adolescent non pet owners. Here, Independent-samples T-test was employed and the result showed that the adolescent pet owners score higher on self-esteem scale ( $M = 26.8$ ,  $SD = 3.8$ ) than that of the adolescent non pet owners ( $M = 26.5$ ,  $SD = 5.5$ ),  $t(420) = -.451$ ,  $p = .652 > .05$ . It was showed in Table 4.

Nevertheless, the result did not confirm this hypothesis because  $p$  is more than 0.05.

**Table 4.**  
*Self-esteem score by pet owners and non pet owners*

Measure	Mean		<i>t</i> value
	Pet owners	Non pet owners	
<b>Self-esteem</b>	26.8	26.5	-.451

*Other analysis*

Although two hypotheses were rejected, gender differences of pet attachment were explored. In these cases, analysis of Independent-samples T-test was used. The results showed that females have higher pet attachment score ( $M = 46.9$ ,  $SD = 8.8$ ) than males ( $M = 45.7$ ,  $SD = 8.3$ ),  $t(74) = -.562$ ,  $p = .575 > .05$ . Equally, there was no gender difference found as well because  $p$  is more than 0.05. Details were exhibited in Table 5.

**Table 5.**  
*Gender difference of pet attachment*

Measures	Mean		<i>t</i> value
	Females	Males	
<b>Pet attachment</b>	46.9	45.7	-.562

Besides, one significant situation was found. The result showed that the time spent in playing with pets significantly correlated with pet attachment. Adolescent pet owners spent more time to play with their pets a day score significantly higher on pet attachment scale

while they spent less time to play with their pets a day score significantly lower on pet attachment scale,  $r=.303$ ,  $p=.008 < .05$ .

Last, analysis of Person r correlation was employed to explore the relationship between average scores of previous examination and pet attachment. The result showed that there was a trend that the higher the average score obtained, the higher the pet attachment and it was showed in figure 1. To look into more, analysis of Person r correlation was employed once more to see the relationship between pet attachment and self esteem among pet owners with high average score of previous examination. Since there was only one pet owner have more than 80 average score, so that high average score refers to 71 to 80. Interestingly, it showed that pet owners with high average score who score higher on pet attachment scale showed significantly higher score on the self-esteem scale. In vice verse, pet owners with high average score who score lower on pet attachment scale showed significantly lower score on the self-esteem scale,  $r=.614$ ,  $p=.009 < .05$ . Nevertheless, the result showed that there was no correlation between the relationship between average score of previous examination and self-esteem,  $r=-.004$ ,  $p=.941 > .05$ .

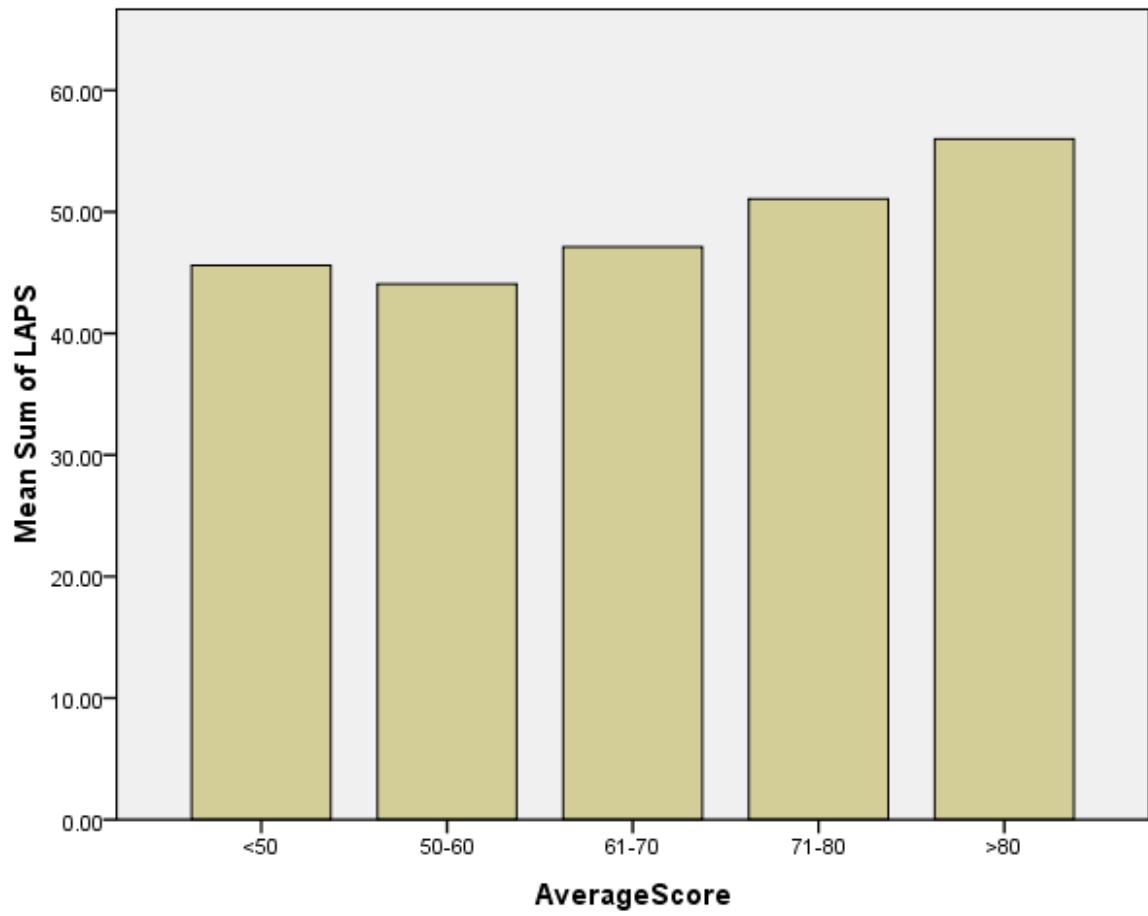


Figure 1. Bar chart of average score and pet attachment

## CHAPTER FIVE

### Discussion

The purpose of the current study was to examine the relationship between pet attachment and self-esteem among adolescents in Hong Kong. In this chapter, results for each hypothesis would be discussed first and the results for other analysis would be discussed then. At the end, there would be three parts which are limitations, suggestions for further study and conclusion.

#### *Hypothesis one*

The first hypothesis was hypothesized that the adolescent pet owners who score higher on pet attachment scale showed significantly higher score on the self esteem scale while adolescent pet owners who score lower on pet attachment scale showed significantly lower score on the self esteem scale. In the current study, these two variables were not significantly related.

One possible reason is pertaining pet attachment. Melson (1989) outlined four dimensions of human-pet attachment which includes time spent with and activities directed towards the pet, interest in and affect toward the pet, knowledge about the pet and its care and behavioral responsiveness to the pet and its needs (as cited in Sable, 1995). In the current study, the results failed to reflect one of the dimensions obviously which is the time spent with and activities directed towards the pet. Among adolescent pet owners, the result showed that most of them (72.4%) spend less than two hours to play with their pets a day. It implied that



there are not too many interactions between adolescent pet owners and their pets. As the involvement diminishes, their pet attachment diminishes as well. To the extent that pet attachment was not strong enough to indicate the relationship of it and self-esteem.

Another possible reason is pertaining self-esteem. According to Erickson's theory, adolescents have undergone the fifth developmental stage which is identity vs. identity confusion (Santrock, 2008). If adolescents explore roles in a healthy manner and achieve a positive path to follow in life, a positive identity acquired and it should be healthy for development. (Santrock, 2008). Dusek, Carter, and Levy (1986) suggested that the resolution of identity issue has important implications for self-esteem. However, adolescent pet owners may not contain a concrete and strong identity of "pet owner" in comparison of adults because adults are able to manage all the nurturing tasks for pets. This nurturing behavior triggers them to have a strong sense of an identity of "pet owner". Oppositely, adolescent pet owners lacks of abilities such as financial problems, to involve and engage in taking care of the pets because other elder family members in household dominate some nurturing tasks such as pay for visiting veterinarian when the pet is sick or purchasing pets' products. Hence, the identity of "pet owner" was not established strong enough to influence self-esteem among adolescent pet owners due to lesser involvement. Furthermore, adolescent pet owners expressed that they have quite many close friends which refers to about 60 of them (78.9%) mentioned they have three or above close friends. It implied that adolescent pet owners like to

go out to seek for friends and these relationships can somehow enhance their self-esteem, rather than pet attachment. This implication was consistent with the arguments of Harter (1990) and Clemes and Bean (1990) which are the relationships with peers are important sources of social support that contribute to adolescents' self-esteem and group provide an opportunity for students to build their self-esteem (as cited in Cornell University, 2003; as cited in McKenzie, 1999).

### *Hypothesis two*

The second hypothesis was hypothesized that the adolescent pet owners would score higher on self-esteem scale than that of the adolescent non pet owners. In the current study, this hypothesis was insignificant and it was contrast to the study of Bierer (2000). Bierer (2000) found that highly bonded dog owners scored significantly higher in self-esteem than non owners in Albuquerque.

One possible reason is pertaining different attitude towards pets in Western and Asian culture. Kikuchi, McBride, Reilly, and Marvin (2007) found that the attitude towards pet of Japan pet owners was different from that of UK pet owners. Japanese conceived their dogs as a predominately projective role and that means they owned dogs because magazines portrayed dogs as useful and were accessories in projecting a successful and appropriate image. Whereas UK pet owners conceived dogs as close companions. This finding yielded the pets owning attitude between Western pet owners and Asian pet owners was different. Furthermore,

the chairman of Hong Kong Dog Recue, a charity with the aim of rescuing, rehabilitating and re-homing as many of the thousands of abandoned and unwanted dogs and puppies as possible, claimed that teenagers owned a puppy as a token of their love and as a 'pretend baby' (Andersen, 2006). Both implied that the attitude towards pets of Hong Kong adolescents may not be conceived their pets as companions and would not be their owner until the pets die. This implication generated them failed to establish a strong pet attachment and somehow influence self-esteem.

#### *Gender difference of pet attachment*

The finding yielded that there was no gender differences in pet attachment, as female pet owners did not score significantly higher than males on Lexington Attachment to Pet Scale. This was consistent with most of the previous research. It implied that both female and male of adolescents gave their affectionate love to their pets when they own pets.

#### *Time spent in playing with pets and pet attachment*

Surprisingly, the finding showed that time spent in playing with pets was significantly related to pet attachment. It represented adolescent pet owners spent more time to play with their pets a day score significantly higher on pet attachment scale while they spent less time to play with their pets a day score significantly lower on pet attachment scale. This finding implied that the time spent in interacting with pets was a very crucial element to strengthen pet attachment again. In this study, adolescent pet owners did not perform well in this element

and so that pet attachment may not be strong enough to manipulate self-esteem. It was manifest for enhancing pet attachment by increasing the time spent in interacting with pets.

Followed by rising the interaction time with pets, self-esteem would be enhanced when adolescent pet owners created a higher pet attachment.

#### *Average scores and pet attachment*

According to the result, there was a trend between average scores and pet attachment and it showed the higher the average score obtained, the higher the pet attachment. One possible explanation is self-discipline. Self-discipline is the ability to reject instant gratification in favor of something better which is to give up of instant pleasure and satisfaction for a higher goal and it consequently to happiness and satisfaction (Sasson, n.d.). Also, Tracy (n.d.) suggested that the quality of self-discipline is something that you can learn by continuous practice until you master it. The study of Laitsch (2006) suggested that self-discipline play an important role in learning and academic achievement. Students with a high degree of self-discipline spent more time on homework and watched less television. The adolescent pet owners with high average scores may extend their self-discipline on taking care of their pets. They spent more time on the interaction with their pets, wanted to be a good owner by continuous practice until they master all the nurturing tasks and they felt so delighted as a result. In sum, adolescent pet owners with high self-discipline which come from their academic achievement would engage much in taking care of their pets and hence pet

attachment would be well-built. On the other hand, self-discipline of adolescent pet owners may be come from pet attachment and it extended to their studies. Thus, the adolescent pet owners obtained a good result in examination.

### *Limitations*

As in most studies, the current study has limitations that need to be considered.

*Sample size.* First, the sample size of adolescent pet owners was not large enough to replicate the results well. Then, the sample size of adolescent pet owners and non pet owners in the current study were unequal. It might limit the ability to draw solid conclusions on the comparison of self-esteem between pet owners and non pet owners.

*Measures.* In the current study, Lexington Attachment to Pet Scale measures the general attachment. The typical dimensions of human-pet attachment were not explored which includes time spent with and activities directed towards the pet, interest in and affect toward the pet, knowledge about the pet and its care and behavioral responsiveness to the pet and its needs (as cited in Sable, 1995).

*Type of pets.* The types of pets in the current study were dogs and cats only and it may limit the investigation of pet attachment with different kinds of pets of Hong Kong people. Due to the limited space of Hong Kong, many people may choose to own the small pets or the pets which are convenient and easy to own, such as fish, hamster and tortoise.

### *Suggestions for further study*

Based on the limitations of this study, three recommendations were suggested. First, future study may try to recruit more adolescent pet owners in Hong Kong and maintain the equal size of pet owners and non pet owners. Second, future study may try to widen the measurements of pet attachment that is to insert more scales in investigating different dimensions of pet attachment in order to figure out which dimensions that Hong Kong adolescent pet owners are weak in and somehow influence pet attachment and self-esteem mostly. Last, future study may try to manipulate fish and tortoise owners as well as the results showed that about 25.7% of non pet owners owned fish and tortoise before.

Besides, in the current study, one interesting result revealed that pet owners with high average score who score higher on pet attachment scale showed significantly higher score on self-esteem scale. In vice verse, pet owners with high average score who score lower on pet attachment scale showed significantly lower score on the self-esteem scale. Although there was a trend between average scores and pet attachment, nevertheless, this finding may be just a coincident. Because the result showed that there was no correlation between the relationship between average score and self-esteem among this group of adolescent pet owners. Pullmann & Allik (2008) cited two possible reasons for explaining no relationship between academic achievement and self-esteem. They are students have a more critical viewpoint on their persons when they are achieved academically success and students with additional limited academic capacities compensate their academic lack by uplifting their general esteem (Naderi

et al., 2009). Thus, future research may try to focus on the relationship of pet attachment, self-esteem and academic achievement among adolescent pet owners.

### *Conclusion*

Although the two hypotheses of the current study were rejected, the findings revealed that peers played a very critical role for the development of adolescence. And the study reflected a realistic phenomenon in Hong Kong which refers to the parents in Hong Kong are very busy. About 50% of adolescent pet owners' dad and mum have to leave home to work to earn money. Additionally, the trend of academic achievement and pet attachment can be slightly represented that the higher pet attachment may generate higher academic achievement. Thus, it is worthy to continuously study the benefits of pets in Hong Kong adolescents.

## References

- Alonso, V., & Hinijsa, S. (2005). The health benefits that growing up with pets can provide to college students. *2005 senior thesis projects*. Retrieved October 5, 2009, from <http://psych.hanover.edu/research/Thesis05/AlonsoHinojosa.pdf>
- Andersen, S. (2006). 5th Sep. Journal. Retrieved April 5, 2010, from <http://hkdr.mysinablog.com/index.php?op=ViewArticle&articleId=256055>
- Beck, L., & Madresh, E. A. (2005). Romantic Partners and Four-Legged Friends: An Extension of Attachment Theory to Relationships with Pets. *Anthrozoö*. Retrieved October 10, 2009, from [http://www.brynmawr.edu/aschcenter/lisabeck/AZ%2021\(1\).E-Print-Beck-1.pdf](http://www.brynmawr.edu/aschcenter/lisabeck/AZ%2021(1).E-Print-Beck-1.pdf)
- Bierer, R. E. (2000). The relationship between pet bonding, self-esteem and empathy in preadolescents. *The University of New Mexico*, 1-138. Retrieved December 10, 2009, from ProQuest database.
- Bowlby, J. (1982). *Attachment* (2<sup>nd</sup> ed.). New York: Basic Books inc.
- Census and Statistic Department. (2006). *Thematic household Survey Report No. 26*. Hong Kong: Census and Statistic Department.
- Chan, C. M. A., Cheung, K. W. K., & Lo, L. F. (2007). An exploratory study of pet raising and health of the elderly people in Hong Kong [Electronic version]. *Asia-Pacific Institute of Ageing Studies*, 12, 23-27.
- Cheong, S. K., Teoh, H. J., & Ng, L. O. (2005). The effects of owning a pet on self-esteem and self-efficacy of Malaysian pet owners. *Sunway Academic Journal*, 2, 85-91.
- Cornell University. (2003). Research facts and findings: Adolescent Self-Esteem. Retrieved November 29, 2009, from [http://www.actforyouth.net/documents/june\\_self\\_esteem.pdf](http://www.actforyouth.net/documents/june_self_esteem.pdf)
- Dusek, J., Carter, O. B., & Levy, G. (1986). The Relationship between Identity Development and Self-Esteem during the Late Adolescent Years: Sex Differences [Abstract]. *Journal of Adolescent Research*, 1(3), 251-265.



- Endenburg, N., & Baarda, B. (n.d.). The Roles of Pets in Enhancing Human Well-being: Effects on Child Development. Retrieved October 10, 2009, from <http://www.deltasociety.org/Document.Doc?id=25>
- Enderburg, N., Hart, H.'t., & Bouw, J. (1994). Motives for acquiring companion animals [Abstract]. *Journal of Economic Psychology*, 15(1), 191-206.
- Foehrkolb, C. (2005). Quality of Family Life as a Factor or Self-Esteem. Retrieved October 5, 2009, from <http://faculty.mckendree.edu/scholars/summer2005/foehrkolb.htm>
- Garrity, T. F., Stallones, L., Marx, M. B., & Johnson, T. P. (1989). Pet ownership and attachment as supportive factors in the health of the elderly. *Anthrozoos*, 3(1), 35-44.
- Herzog, H. A. (2007). Gender Differences in Human-Animal Interactions: A Review. *Anthrozoos*. Retrieved October 6, 2009, from <http://paws.wcu.edu/herzog/Gender.pdf>
- James, R. L. (n.d.). Correlation between adolescent self-esteem, empathy, religiosity, and perceived family support. Retrieved November 28, 2009, from <http://clearinghouse.missouriwestern.edu/manuscripts/247.php>
- Johnson, T. P., Garrity, T. F. & Stallones, L. (1992). Psychometric evaluation of the Lexington Attachment to Pets Scale. *Anthrozoos*, 5(3), 160-175.
- Kienlen, L. P. (2007). 5 ways to find your true identity. Retrieved November 5, 2009, from [http://psychology.suite101.com/article.cfm/how\\_to\\_find\\_your\\_true\\_identity](http://psychology.suite101.com/article.cfm/how_to_find_your_true_identity)
- Kikuchi, M., McBride, E.A., Reilly, J. & Marvin, G. D. (2007). A comparison of attitudes towards dogs: a study of articles and advertisements in Japan and UK dog magazines [Abstract]. Retrieved April 5, 2010, from <http://eprints.soton.ac.uk/55002/>
- Kurdek, L. A. (2008). Pet dogs as attachment figures. *Journal of Social and Personal Relationships*, 25, 247.
- Laitsch, D. (2006). Self-Discipline and Student Academic Achievement. Retrieved April 7, 2010, from <http://www.ascd.org/publications/researchbrief/v4n06/toc.aspx>

- Lake, S. J., & Eastwood, C. (n.d.). Significant influencers and early adolescents: a literature review. Retrieve November 29, 2009, from <http://www.aare.edu.au/04pap/lak04460.pdf>
- Lewis, A., Krageloh, C. U., & Shepherd, D. (2009). Pet Ownership, Attachment and Health-Rated Quality of Life in New Zealand. *Electronic Journal of Applied Psychology: General Articles*, 5(1), 96-101.
- MacDonald, N. O., Steger, K. E., Adams, G. R., & Marshall, S. (n.d.). Child-rearing Behaviors and Adolescent Self-esteem: An Examination of Reciprocal Effects. Retrieved November 28, 2009, from <http://www.uoguelph.ca/~gadams/Theses/MacDonald-Adolescent-Self-Esteem.pdf>
- Marks, S. G., Koepke, J. E., & Bradley, C. L. (1994). Pet attachment and generativity among young adults. *The Journal of Psychology*, 128(6), 641-650.
- McKenzie, J. K. (1999). Correlation between self-efficacy and self-esteem in students. Retrieved November 12, 2009, from <http://www.uwstout.edu/lib/thesis/1999/1999mckenzie.pdf>
- Naderi, H., Abdullah, R., Aizan, H. T., Sharir, J., & Kumar, V. (2009). Self esteem, gender and academic achievement of undergraduate students. *American Journal of Scientific Research*, 3, 26-37.
- Nauert, R. (2008). Pets relieve college stress. Retrieved November 29, 2009, from <http://psychcentral.com/news/2008/12/24/pets-relieve-college-stress/3555.html>
- Nunley, K. F. (2001). The relationship of self-esteem and depression in adolescence. Retrieved November 24, 2009, from <http://help4teachers.com/depression.htm>
- Owens, T. J., Stryker, S., & Goodman, N. (2001). Extending Self-esteem Theory and Research. Retrieved November 29, 2009, from <http://www.self-esteem-international.org/content/5a-research.htm>
- Robins, R. W., Trzesniewski, K. H., Tracy, J. L., Gosling, S. D., & Potter, J. (2002). Global Self-Esteem Across the Life Span. *Psychology and Aging*, 17(3), 423-434.

- Sable, P. (1995). Pets, Attachment, and Well-Being across the Life Cycle. *Social Work, 40*(3), 334.
- Santrock, J. W. (2008). *Life-span Development* (11<sup>th</sup> ed.). New York: McGraw-Hill.
- Sasson, R. (n.d.). Self discipline, its benefits and importance. Retrieved April 7, 2010, from [http://www.successconsciousness.com/self\\_discipline.htm](http://www.successconsciousness.com/self_discipline.htm)
- Shore, E. R., Douglas, D. K., & Riley, M. L. (2005). What's in it for the companion animal? Pet attachment and college students' behaviors towards pets. *Journal of applied animal welfare science, 8*(1), 1-11.
- Tracy, B. (n.d.). Self-discipline for success. Retrieved April 7, 2010, from <http://netprofitstoday.com/blog/self-discipline-for-success/>
- Türkbay, T., Özcan, C., Doruk, A., & Uzun, O. (2005). Consequences of identity confusion on adolescents' psychiatric symptoms and self-esteem. *Psychiatry in Türkiye, 7*(3), 92-97.
- University of Maryland. (n.d.). The Rosenberg self-esteem scale. Retrieved February 5, 2010, from <http://www.bsos.umd.edu/socy/Research/rosenberg.htm>
- Vidovic, V., Stetic, V. V., & Bratko, D. (1999). Pet ownership, type of pet and socio-emotional development of school children. *Anthrozoos, 12*(4), 211-217.
- Voeks, S. K., & Glickman, L. T. (2001). Epidemiologic features of pet evacuation failure in a rapid-onset disaster. *JAVMA, 218*(12), 1898-1904.
- Wickliffe, J. A. (2000). Why juveniles commit crimes [Electronic version]. Connecticut: Yale-New Haven Teachers Institute.
- Zheng, R., Fu, N., & Headey, B. (2005). Pet dogs' effects on the health and life satisfaction of empty nester's parents. *Psychological science (China), 28*(6), 1297-1300.

## Appendix 1

## Informed consent form

## 有關寵物依戀與青少年自尊心的關係之間卷調查

## 研究同意書

此乃香港浸會大學心理學系學生之學術研究。此研究旨在探討寵物依戀與青少年自尊心的關係。懇請您抽出大概10-15分鐘填寫這份問卷。

參與是次研究純屬自願性質，你有權隨時退出。是次研究並不為閣下提供個人利益，但所搜集的數據將對寵物依戀與青少年自尊心的關係提供寶貴資料。

本研究所收集的資料只作研究用途，閣下的個人資料將絕對保密。此問卷乃不記名問卷調查，並附上此份同意書以保障閣下的私隱。而所收集資料及本同意書將於研究完成後半年內銷毀。

如你對是項研究有任何查詢，歡迎與研究員及其導師聯絡。

研究員：  
香港浸會大學社會科學學院  
心理學系學生  
陳曉盈  
電話：6097 2310  
電郵：08637296@hkbu.edu.hk

導師：  
香港浸會大學社會科學學院  
心理學系講師  
張少琼博士  
電話：3411 3069  
電郵：k\_cheung@hkbu.edu.hk

---

若閣下對是次研究沒有任何疑問並且同意參與這項研究，請在下面簽署。若閣下亦希望獲得一份本研究的簡短報告，可於下面填上你的電郵地址。

簽署： \_\_\_\_\_

電郵地址： \_\_\_\_\_ (如閣下不欲收到有關本研究的報告，則無須填寫。)

日期： \_\_\_\_\_

## Appendix 2

## Questionnaire of Rosenberg's Self-Esteem Scale

**第一部份****羅斯伯自尊感指標**

請仔細閱讀以下十句有關形容你對自己感受的句子並選擇最適合的回應。這裡沒有對或錯的答案，填寫此量表時只需要誠實作答。

	1. 很同意	2. 同意	3. 不同意	4. 很不同意
1. 整體來說，我滿意自己。				
2. 有時我會覺得自己一點好處都沒有。				
3. 我覺得自己有不少優點。				
4. 我能夠做到與大部份人的表現一樣好。				
5. 我認為自己沒有什麼可以值得自豪。				
6. 有時我十分覺得自己毫無用處。				
7. 我覺得自己是個有價值的人，最低限度我與其他 人有一樣的價值。				
8. 我希望我能夠多一些尊重自己。				
9. 從各方面看來，我是較傾向覺得自己是一個 失敗者。				
10. 我能用正面的態度看自己。				

## Appendix 3

## Questionnaire of Lexington Attachment to Pet Scale

**第二部份** 〈如果你沒有飼養狗或貓，請不需要填寫此部份，直接填寫第三部份。〉

**Lexington 寵物依戀量表**

請仔細閱讀以下二十三句有關你對寵物的感受的句子並選擇最適合的回應。填寫此量表時，請專注想著你的寵物。

	十分贊成	贊成	不贊成	十分不贊成
1. 我的寵物相比我任何一位朋友更為重要。				
2. 我經常與我的寵物傾訴心事。				
3. 我認為寵物應擁有與家人相等的權利和特權。				
4. 我認為我的寵物是我最好的朋友。				
5. 我對別人的感受，經常會受到他如何對待我的寵物而影響。				
6. 我愛我的寵物因為他/她相比我生命中認識的大部份人還要忠誠。				
7. 我享受與別人展示我寵物的照片。				
8. 我認為我的寵物只是一隻寵物。				
9. 我愛我的寵物因為他/她從不批評我。				
10. 當我感到不愉快時，我的寵物會知道。				
11. 我經常與別人談及有關我的寵物。				
12. 我的寵物了解我。				
13. 我認為愛我的寵物能幫助我保持健康。				
14. 寵物同樣與人一樣值得人的尊重。				
15. 我與我的寵物擁有非常親密的關係。				
16. 我會盡力付出一切來照顧我的寵物。				
17. 我經常與我的寵物玩。				
18. 我認為我的寵物是我重要的同伴。				
19. 我的寵物令我感到開心。				
20. 我覺得我的寵物是我家人的一份子。				

21. 我不是非常依戀我的寵物。				
22. 擁有寵物加添了我的快樂。				
23. 我認為我的寵物是我的朋友。				

## Appendix 4

## Demographic survey

**第三部份：個人資料**

1. 性別：  男             女
2. 年齡： \_\_\_\_\_
3. 年級：  中一         中二         中三         中四         中五  
           中六         中七
4. 最近一次考試平均分： \_\_\_\_\_
5. 同住家庭成員人數〈不包括自己〉：  1-3     4-6     6個以上
6. 同住家庭成員狀況：  爸爸：\_\_\_\_個         媽媽：\_\_\_\_個  
                                   哥哥：\_\_\_\_個         弟弟：\_\_\_\_個  
                                   姐姐：\_\_\_\_個         妹妹：\_\_\_\_個  
                                   其他〈請列明成員和數量〉： \_\_\_\_\_
7. 需要出外工作之家庭成員：  爸爸         媽媽  
   其他〈請列明成員和數量〉： \_\_\_\_\_
8. 好朋友的數量：  0-1 個         2-3 個         3 個以上
9. 曾經養過寵物：  有〈請列明種類和數量〉： \_\_\_\_\_         沒有

如有寵物者，請填以下10-13題：

10. 家中寵物的種類：  狗             貓
11. 家中寵物的數量：  0-1 隻         2-3 隻         3 隻以上
12. 飼養寵物多久： \_\_\_\_\_年\_\_\_\_\_個月
13. 每天與寵物嬉戲的時間：  1 小時以下  
   1-2 小時  
   2-2.5 小時  
   2.5-3 小時  
   3-3.5 小時  
   3.5-4 小時  
   4 小時以上

~ 謝謝完成此問卷 ~



## Appendix 5

### Debriefing note

#### **Debriefing note**

此研究旨在探討香港青少年飼養貓狗者與非飼養貓狗者的自尊心會否有所不同；而且亦希望從而找出寵物依戀的程度會否與自尊心的程度有正面或反面的關係。此研究的對象是中一至中六生，藉著問卷收集數據。