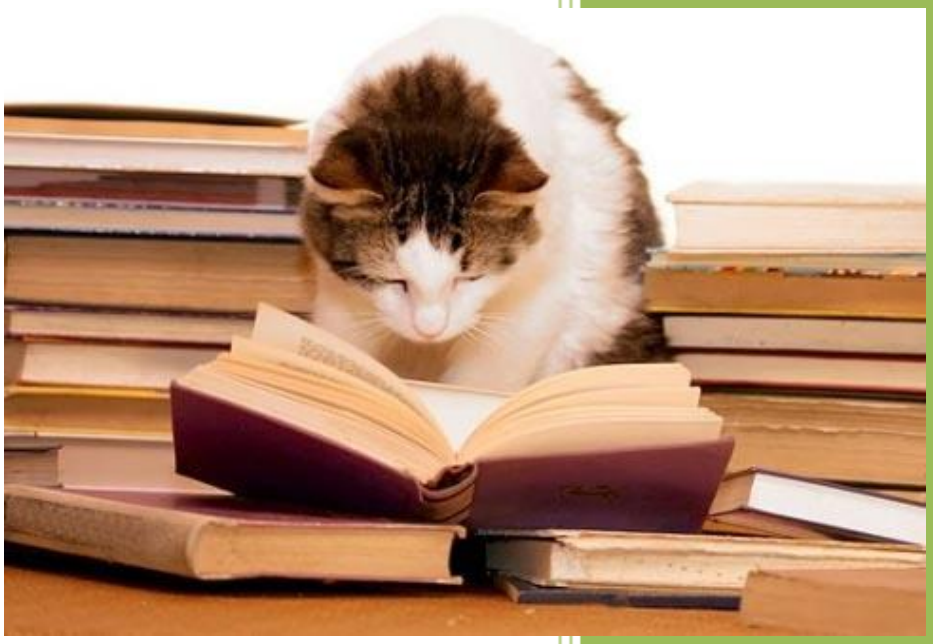
2014

Research report: The relationship between education and age on pet ownership in the Netherlands



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Title page

The picture on the front page is made by the ''Hobart cat centre'' at New Town, Tasmania. This centre helps with missing cats, adoption and cat boarding. The Hobart cat centre is comparable with an animal shelter in the Netherlands *(Hobart cat centre, 2014)*.

Abstract

Pet owners had fewer years of education compared with non-pet owners according to *Parslow et al, 2004.* This research was done in Australia and used respondents between 60 and 64 years old. However, another study showed that pet owners have significantly more years of education than non-pet owners *(Parslow and Jorm, 2003)*. The main reason for this study was to settle this contradiction. It aimed to look at the relationship between level of education and age on pet ownership. The focus in this study was on adults in the Netherlands. This study also focussed on the influence of education on feed given to a pet. According to *Cutler and Lleras-Muney (2006)*, increasing levels of education lead to different thinking and decision-making patterns.

A survey was made and spread to look at the relationship between educational level and age on pet ownership. It was filled in 169 times. The survey was analysed using a GLM and was presented as means ± SD. The level of statistical significance was pre-set at $p<0.05$. 15 interviews were conducted. The interview consisted of questions focussed on feed given to pets. They were analysed using ATLAS and descriptive statistics.

This study showed that lower educated persons between 36-45 years old were most likely to have pets. GLM showed a significant interaction between education and age on pet ownership and a LSD showed that age category 36-45 years old had significantly more pet owners then age categories 18-25,46-55 and >65 years old. According to *Poresky and Daniels (1998)* 71% of all pet owners in U.S. were between 36-45 years old. However, raising a child would cost more money than having a pet and a pet would interfere less with persons their career *(Bibiana, 2014)*, besides high educated persons go to school for a longer period and so would be more focussed on their careers. This led the hypothesis that young adults (between 18 and 35 years old) with a higher education are more likely to have pets than lower educated persons from all age categories. A reason for the results not corresponding with the hypothesis was that lower educated persons without pets maybe did not respond to the call to fill in the survey. The flyer with the call for respondents had the subject: Pets in the Netherlands. This could have led to a lower response of lower educated persons without pets.

In the interviews respondents showed with their answers that there could be a relation between education and feed given to pets. However, this was not significantly proven. Higher educated persons said that they mainly switched feed because of knowledge gained during a study. However, both educational levels were giving a certain feed because of knowledge gained during school. Other findings were that 3 out of the 6 lower educated persons lowered the feed proportions of their pet because of overweight. Finally the lower educated persons were less interested in the available information on animal nutrition. In the end the higher educated persons in this study are more critical towards animal nutrition besides that, there were less high educated persons with pets that suffered from overweight, or did so in the past.

In conclusion education and age had a significant effect on pet ownership in this study. To generalize this result to the Netherlands, more respondents were needed. The interviews showed that there could be a relation between education and feed given to the pet. However, in the future a study is needed with more respondents in total and a more equal amount of males and females.

Table of content

1. Introduction

Nowadays it is more common to go to the university compared to the 30's and 40's. This is due to the Second World War, after the war there were more opportunities to go to college *(Demko, 2014)*. Because of college, women were getting children at a higher age. In the Netherlands college takes normally four to seven years. However, sometimes women are not getting any kids. This is due to the fact that women with a higher educational level use contraception more effectively to avoid pregnancy *(Kirby, 2002)*. Reasons for not having children are: children are interfering with a woman's education, work or inability to take care of the child *(Finer et al., 2007)*. Economical reasons also play their part, on average raising a child in the Netherlands will cost between 50.000 to 55.000 euros until the age of twelve is reached *(Bibiana, 2014)*. However, children could be combined with pets, if people can afford it. Nowadays more than half of the households in the Netherlands have a pet (56%; *Baden, 2007*). There are 2.9 million cats and 1.5 million dogs in the Netherlands. According to *Albert and Bulcroft, 1988*, remarried people, people with children and families in the ''middle'' stages of the life cycle are most likely to have pets for different reasons. Although these categories are most likely to have pets, they are not most attached to their pets. Divorced, widowed, childless couples, newlyweds and empty-nesters are most attached to their pets *(Albert and Bulcroft, 1988)*. Past research showed that pet owners had fewer years of education compared with those without pets, this research was done in Australia with people between 60 and 64 *(Parslow et al., 2004)*. Another research showed that pet owners have significant more years of education than non-pet owners. In this research a pet was defined as cat, dog or a companion animal they could touch or talk to *(Parslow and Jorm, 2003)*. This contradiction is the reason that the aim of this study is to look at the relationship between educational level and age on pet ownership. The focus in this study is on adults in the Netherlands.

Is the presence of a pet in a household related to education and age of the pet owners?

The hypothesis among this question is that young adults (between 18 and 35 years old) with a higher education are more likely to have pets than lower educated persons from all age categories. Previous research showed a contradiction, but this study aims that higher educated people are more likely to have pets to fulfil their needs. Because of the high costs of a child compared to the on average lower costs of a pet (the costs depend on species) and less interference with young adults their careers and last but not least young adults are (most of the time) in the middle or start of their career.

The presence of pets in a household is studied by the use of sub-questions:

1. Is there a difference in species owned between educational levels?
2. Is the number of pets different between educational levels?
3. Is the number of pets different between different age categories?
4. Is there a difference in number of different pet species between educational levels and different age categories?
5. Are higher educated people more attached to their pet? How far will they go for their pet? And how much time do they spend interacting with their pet?
6. Are older people more attached to their pet? How far will they go for their pet? And how much time do they spend interacting with their pet?
7. What are the reasons for having or not having a pet?
8. Is there a relation between number of children and number of pets?

There is a significant difference in health status between low educated and high educated people. In America the mortality rate of low educated people was twice as high compared with high educated people who went to college (*Arias, et al., 2003*). Health is also decreased by having a depression. This depression could be influence by education according to *Colleta, 2012*. In the Netherlands, people who are low educated had twice as much chance to get a depression compared to higher educated people *(Trimbos-instituut, 2010)*. According to *Cutler and Lleras-Muney (2006)*, increasing levels of education lead to different thinking and decision-making patterns, which could influence the health status. This means that high educated people potentially could have a better health status. However, do these high educated people reflect their better health on their pets by the way they feed their pets taking into account the animals' natural behaviour?

Has the educational level influence on feed given to the pets?

Due to past research the hypothesis is that educational level indeed influences the feed given to the pets. Because higher educated people also watch their own health, they might faster succeed in raising a healthy pet.

To answer this question the following sub-questions were formulated:

1. What are the common health diseases related to pets in humans on each educational level?
2. Is the activity of the pet comparable with the activity of the pet owner?
3. What kind of feed is given to the pet(s) on each educational level?
4. What are the reasons for feeding this feed to the pet(s)?
5. What kind of information sources do pet owners use to select the best feed for their pet?
6. Is the sort of feed supplied to the pet(s) changed in time?

This study focussed on the relationship between education and age on pet ownership. The study also takes animal nutrition into account. Previous research was evaluated and used for the discussion and conclusions. The literature study was done via Google Scholar. The searching criteria were the headlines of each paragraph. Pet- and non-pet owners were polled by a survey, more information can be found in chapter 3: Material and Methods. Besides that a qualitative research was done to investigate the feed supply to the pets. This leads to a conclusion and recommendations for the future.

2. History and the influences of pet ownership

The first domestic pet was a dog. The pet ownership which emerged from a connection between a pet and a human was raised around 14,000 before Christ *(Serpell, 1995)*. References to cats as pets are found since 10,000 before Christ *(Zax, 2007)*. Cats and dogs are seen as the most common pets.

2.1 Pet

In the Netherlands the number of pet is decreased with 14% from 2006 until 2010 (34.5 million pets in 2006; 29.6 million pets in 2010; *Borst et al., 2011*). Nowadays there are 2.9 Million cats, 1.5 Million dogs, 2 Million birds and 6.6 million aquarium fish. The decrease in pets is due to the economic status of families in the Netherlands *(Borst et al., 2011)*. Besides that a pet is a big responsibility, which can lead to conflicts in the future, for example when people want to have children. A new baby is one of the main reasons why people in the United States bring their cat to the animal shelter. Allergies are also a reason. With dogs the most common reason is lack of time for the dog *(Scarlett et al., 1999)*. *Scarlett et al.* also showed that the gender of the person has an influence on relinquishment of cats and dogs. Females were more likely to relinquish dogs. Relinquishment of a pet is mostly due to the lack of knowledge about the care and feed of the animal. In conclusion pets cost money, take up a lot of time and can cause irritation if there is a new born. However, pets have a good effect on health of people. Because they diminish perceptions of stress and reduce symptoms of attention deficit hyperactivity disorder *(Allen et al., 2002)*. Pets are also good companion animals. Almost every pet owner talks to his or her pet. People also say that they talk to their pet as if they are human. Pets fulfil needs to express and be social. Humans see pets as part of their own family, they even get the left-over's *(Beck and Katcher, 1996)*. Moreover, keeping a pet is better for the knowledge of children. Children who had two or more vertebrates at home had higher scores in tests based on animal physiology. There was a lack of information about invertebrates. Most children thought that invertebrates were vertebrates. There was a gender difference; girls were keeping more pets at home and had more knowledge about pets than boys *(Prokop et al., 2008)*.

Previous research has also shown that children with fewer or no siblings were having more pets of their own. This is due to the fact that pets can play the role of companions and playmates for the children and therefore help to compensate for the lack of siblings *(Blue, 1986; Bossard, 1944; Covert et al., 1985; Davis and Juhasz, 1985; Kidd and Kidd, 1985; Leeuwen, 1981; Salomon, 1981)*.

The choice for pet ownership was explained by the theory of choice at risky situations by *Tversky (1972)*. The theory said that choice is a process of successive eliminations. This theory is a theory which combines the choice models of *Luce (1959) and Restle (1961),* which were random utility models. These models assumed that the utility or the value or each alternative undergoes random fluctuations and the alternative with the highest momentary value was chosen. While *Tversky* said that choice were made because people eliminated poorer alternatives, in the end the best choice is made. *Tversky* used in his research a lot of formulas to distinguish the difference between choice. Choosing is a sociological and psychological process, which is different per person. In *1975 Ranyard* did research on *Tversky* theory of choice. *Ranyard* concluded that the elimination by aspects (done by *Tversky*) cannot hold unless the aspects are independent. Most aspects are not independent so according to *Ranyard (1975)* can successive eliminations not account or choosing behaviour. People use a variety of decision rules depending on the kind of choice alternatives and the choice situation instead of eliminating aspects *(Ranyard, 1975)*.

2.2 Education

As mentioned before previous research showed that pet owners have significantly more years of education than non-pet owners. In this research a pet is defined as cat, dog or a companion animal they could touch or talk to *(Parslow and Jorm, 2003)*. This is in contradiction with previous mentioned information which showed us that pet owners had fewer years of education compared to non-pet owners in an age category of 60-64 years old *(Parslow et al., 2004)*. No other research is done on pet ownership influenced by education.

Education is linked to social class and taste which is described in the theory of *Bourdieu*. *Bourdieu (1977)* was the founder of the theory of practise. He argues that class plays a crucial role in the consumption of symbolic goods. Some examples of symbolic goods are cars, art and pets can also be considered as symbolic goods. The consumers link their consumption to their skills, competences and literacy (also called cultural capital). High cultural capital results in more consumption of symbolic goods. Previous research showed that cultural needs are the product of upbringing (by certain culture) and education, cultural practises and literacy preferences are linked to education *(Bourdieu et al., 1965; Bourdieu and Darbel, 1966)*. Class is produced by social practises (known as hierarchy of consumers; *Bourdieu, 1998*). A class could also be formed by taste. Taste is developed by the senses of a human, which is created by education. Education is the basis for cultural capital such as competences and also for the personal taste (habitus) and consumption of symbolic goods. (Figure 1)

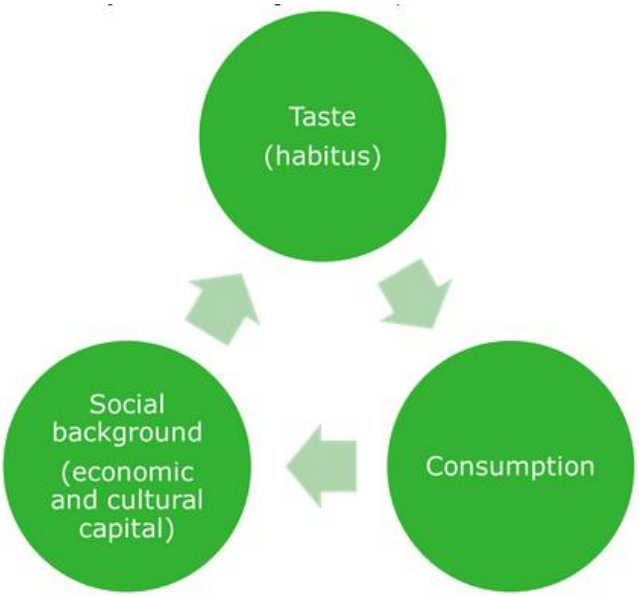

Figure 1 The relation between habitus, consumption and social background/culture *(Horst, van der, 2014).*

2.3 Age

Research from *Marx et al., 1988* showed no significant differences of pet ownership between different age categories. Although in the age category 51-64 only 53.1 % of the persons had a pet, while the average in the other categories is 65%. This study also showed that in each age category there were more pet owners than non-pet owners. Another study which was also conducted in the U.S. showed that 54% of 18-25 year-olds had pets, 71% of the 36-45 year-olds had pets and only 37% of the >65 year olds had pets *(Poresky and Daniels, 1998).* Overall the percentage of pet owners is the lowest with older people. In the two previous conducted studies children were not included. However, pets have a big influence on children their lives. *Vidovic et al., 1999*, showed that 54.4% of the children in fourth, sixth and eighth grade were pet owners, this study was conducted in Croatia. Children which were raised at a farm with livestock had reduced risks of developing atopy related diseases compared to children which did not grow up with pets. Pet's allergens help to create a protective direction towards pets *(Riedler et al., 2000; Ehrenstein et al., 2000; Kilpelainen et al., 2000).* The exposure to dogs in early life is positive correlated with early-life bronchial obstruction because it is more infectious than an atopic condition and keeping dogs increases the risk of contracting infections *(Nafstad et al., 2001).*

Life course theory can explain the differences in decision-making in a certain period of time in our lives. Individual lives are influenced by historical context; this causes new patterns and dynamics in every day's life *(Elder, 1998)*. The life course theory is evolved since the 1960's *(Elder, 1998; Elder et al., 2003)*. This theory is based on social change, individual development and behavioural change. Social development is very important in decision-making. Besides that, life transitions such as going to college are also part of the social development of humans. The interaction between different types of social beings can influence the behaviour of humans, for example, young children are very social, so they meet a lot new people, they get friends and a lot of these friends have companion animals at home. The children can then be social and behavioural influenced by the companion animals of their friends. This can lead to convincing the parents to buy a pet or in later life they can decide to buy a pet for themselves. *Elder, 1998* wrote that ''life choices are contingent on the opportunities and constraints of social structure and culture''. Social structure could be a reason that older people have fewer pets (based on research from *Poresky and Daniels, 1998*). As mentioned before, historical change also has a big influence on the life course of humans. Changes such as war, economic crisis and personal crisis can change your emotional mind-set but also your attitude towards other humans or material or pets. For instants if people know from the past that animals cost a lot of money and there is an economic crisis than they could choose not to buy an animal because of historical events that took place. But a war could also show them that animals need food even if there is not enough food for the family, animals also need to eat. This could change humans perspective on have pets on a latter age. However, children most of the time do not make a decision regarding of having pets. This explains why children are not included in studies about pet ownership. Children cannot buy the animals by themselves because of their age, so the choice of having a pet is also correlated with age, this is described by the life course theory.

2.4 Attachment

Our pets can go on a vacation with humans. Eleven of the twenty three-star restaurants in the United States were willing to serve pets. Most pets can sleep with us on the bed or the couch. People see pets as a part of their family (*Beck and Katcher, 1996*). *Tilly and Scott (1987)* raised the suggestion that care and attachment to pets is influenced by gender. Because in the early days it was common that the women of the household was taking care of all the people in the household including pets. A study of *Kidd and Kidd (1989)*, showed that women were more attached to persons, pets and materials than men. They also showed singles were more attached to persons, pets and materials than married persons.

Attachment could be linked to care. According to *Tronto (2013)*, the definition of care is ''a species activity that includes everything we do to maintain, continue and repair our 'world' so that we can live it as well as possible, whereas world is our bodies, ourselves and our environment''. She defined the five phases of care:

1. Care about, A pet owner cares about the health of their pet
2. Taking care of, The pet owners takes care of the feed and other care which is needed to fulfil the needs of the pet
3. Care giving, Giving the care such as proving feed to the pet.
4. Care receiving, The pet shows affection towards the owner, examples are cuddling with the owner.
5. Caring with, Caring about all the pets and thinking if the needs of the pets are fulfilled.

Basic care is needed for every pet. This care leads to a social interaction such as affection of the pet towards the pet owner. This affection you get from a pet can help a non-pet owner to choose to get a pet or not.

2.5 Health

Health can be divided into two parts. First you have the effect of pets on human health and second is the effect of humans on pet's health.

2.5.1 Effect of pets on human health

Pets can have a direct and an indirect effect on human health. They have a positive direct effect on human health because they provide non-judgemental companionship and physical contact with another living being and as cited before, pets can diminish perceptions of stress *((Friedmann and Thomas, 1995; Allen et al., 2001; Allen et al., 2002)*. This can lower the chance of cardiovascular diseases, an indirect effect of having pets. The mortality rate of heart patients with pets was one third of that of the patients without pets *(Beck and Katcher, 1996)*. Moreover, there is a better 1-year survival rate after acute myocardial infarction and lower blood pressure responses to psychological stress. Later research showed that there was no evidence that pet ownership per se is associated with cardiovascular health benefits *(Parslow and Jorm, 2003).* However, dog owners walked significantly longer than non-pet owners and pet owners had significantly lower serum triglycerides than non-pet owners, which suggest that pets may be good for the health *(Dembicki and Anderson, 1996).*

However, another study associated pet ownership with *Multiple Sclerosis (M.S; Cook and Dowling, 1997)*. *Cook and Dowling (1977)* said that there were significantly more small pets within a household with M.S. patient. The pets were there at least one year earlier when the diagnoses of M.S occurred. However, in this study they mention the lack of research on animal viruses which could cause M.S. Nowadays research showed that pets can carry zoo noses which can make humans ill. Dogs are often called excellent sentinels for human infections, which indicated that dogs can infect humans without getting ill themselves. The most common bacteria in companion animals are *Bartonella* spp. but dogs are more likely to be accidental hosts,

while cats carry these bacteria most of the time *(Chomel et al., 2006).* These bacteria can cause several diseases in humans: 1 Carrion's disease, 2 trench fever, 3 cat scratch disease, 4 bacillary angiomatoris, 5 bacteremia, 6 endocarditis *(Rolain et al., 2004)*.

2.5.2 Effect of humans on pet health

Obesity is a problem most common in the developed countries of the world. Obesity in pets is still increasing every year. 5-8% of all dogs in the Netherlands suffer from obesity *(LICG, 2013).* Pets could also be poisoned by human food, for example chocolate, medicine, poison for mice or rats and poisoned plants. It depends on the pet which products are making them ill or even lead to the dead of the pet. A study with reptiles showed that 30,6% of all health problems with pets were caused by a lack of knowledge and good information about pets and the care for pets *(Christianen and Schollen, 2013)*. In the end this studies show that ignorance among pet owners is dangerous for pets.

2.6 Research questions

This study focussed on relation of education and age on pet ownership. This study answers the following questions:

1. *Is the presents of a pet in a household related to education and age of the pet owners?*
2. *Has the educational level influence on feed given to the pets?*

3. Material and Methods

This study took place in the Netherlands in the period from May 2014 until December 2014. The study was divided in two parts: Quantitative research focused on pet ownership, age and education and Qualitative research, which focussed on feed and education.

3.1 Terminology

In this study low educated was classified as MBO diploma or lower education, such as no diploma and high educated was classified as a bachelor diploma or higher educated such, as a Master title. Pets were classified as every animal which lives in a created environment in the household, created by people from the household, examples are dogs, horses, sheep and birds.

3.2 Quantitative research

To investigate whether education and age had an influence on pet ownership, a survey was conducted among different kinds of people with different educational levels and differing ages (annex 1).

This survey was made in ''google drive''. And was sent out trough different social media (such as facebook) and posted on www.licg.nl (website for owners of companion animals in the Netherlands). In addition, the survey was printed to conduct it at the local supermarket. To get more publicity, a folder was made and spread in public places such as supermarkets and schools all over the country (annex 2). The survey was divided in four categories: Personal information, pets, care for pets and feelings for pet. The goal of this survey was to get an inventory of the pet market and to identify different types of pet owners. At least 100 surveys had to be filled in to get a representative group for the Netherlands. In the survey the living location of residents was asked to see if there was a difference in place were types of pet owners came from and because it contributed to having a representative group for the whole of the Netherlands.

3.3 Qualitative research

The influence of educational level on feed given to pets was addressed by the use of interviews (annex 3). The interview was conducted with 15 persons. They were asked what they were feeding their pets and their reasons for providing this feed. The goal of these interviews was to get insight on how people reflection their own life on the pet. Besides that, this information could be used for additional research in the future. The persons were recruited in the personal environment of the author and via the survey held on the internet.

3.4 Analyses

The survey was analysed with SPSS and Excel. In SPSS, GLM (General Linear Model) and multiple mean analyses were performed to analyse the relationship between different variables. If possible a post hoc test: LSD (Least Significant Difference) test was done. All results were presented as mean ± SD (if possible). The level of significance was pre-set at $p<0.05$. The interviews were analysed by the use of the computer program: ATLAS, which categorizes different opinions of the respondents. The codes for Atlas were formulated after taking the interviews. All interviews were coded completely. After complete coding they were coded in separated codes (Annex 5). All these analyses took place at the University of Wageningen. In the end the survey and interviews were compared to the literature study done during this study.

4. Results

In this chapter the results are presented with descriptive statistics and analytical statistics. The results are presented as mean ± SD (if possible). Categories used with each result are described in annex 4.

4.1 Survey

Figure 2 Number of respondents per province of the Netherlands

In total the survey was filled in 169 times. In figure 2 gives an overview of the province of residence of the respondents. Most respondents were living in the province of Gelderland or in the province of Noord-Brabant. Ten respondents did not fill in their place of residence.

An overview of the number of respondents per age category can be seen in figure 3. Age category 1 was represented the most with 71 of 169 respondents, while age category 6 was represented the least with three respondents.

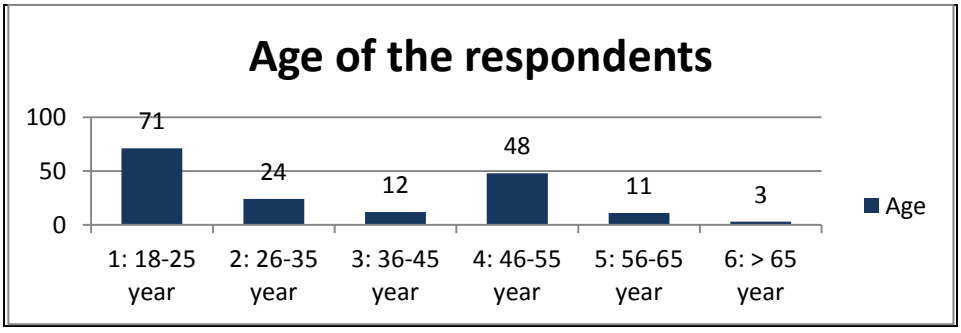

Figure 3 Number of respondents in each age category

Table 1 shows the general information of the respondents, such as gender and pet ownership. More than half of the respondents were higher educated (97 vs. 72). Most of the respondents were female (138 is 81.7%) and 42 respondents (24.9%) did not have a pet. In comparison with the higher educated persons, there were less lower educated persons without pets (19.4% vs. 28.8% of the total of each education group).

Table 1 Age, education, gender and pet ownership of respondents

		Low educated								High educated								Total	
		Pet				No pet				Pet				No pet					
		Male		Female		Male		Female		Male		Female		Male		Female			
		Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	**Number**	**%**
Age	*1: 18-25*	2	2.8%	20	28.2%			3	4.2%	1	1.4%	29	40.8%	5	7.0%	11	15.5%	**71**	**100.0%**
	2: 26-35	2	8.3%	8	33.3%			1	4.2%	2	8.3%	7	29.2%	3	12.5%	1	4.2%	**24**	**100.0%**
	3: 36-45			7	58.3%							5	41.7%					**12**	**100.0%**
	4: 46-55	2	4.2%	14	29.2%	3	6.3%	4	8.3%	3	6.3%	16	33.3%	5	10.4%	1	2.1%	**48**	**100.0%**
	5: 55-65	1	9.1%	2	18.2%			3	27.3%	1	9.1%	4	36.4%					**11**	**100.0%**
	6: >65											1	33.3%	1	33.3%	1	33.3%	**3**	**100.0%**
Total		**7**	**4.1%**	**51**	**30.2%**	**3**	**1.8%**	**11**	**6.5%**	**7**	**4.1%**	**62**	**36.7%**	**14**	**8.3%**	**14**	**8.3%**	**169**	**100.0%**

4.1.1. Age, education, gender and pet-ownership

The interaction between age, education, gender and pet-ownership did not show a significant difference in this study (p=0.64). Also the interaction between age and gender of the respondents did not influence the pet ownership (p=0.19). However the education in combination with gender had a significant influence on pet ownership in this study (p= 0.01). With these respondents it also is proven that the interaction effect between age and education had a significant effect on pet ownership in the Netherlands (p= 0.04). The main factors had no effect on pet ownership in this study. A LSD test (= Least Significant Difference) on the age categories showed that respondents from age group 3 were significant more pet owner than age group 1, age group 4 and more than age group 6 (p=0.03, p=0.03, p=0.01).

The number of pets was not influenced by the interaction effect of age, education and gender in this study (P=0.08). The female respondents who had a low education and were within age category 2 were having the most pets per person (16.12 ± 25.59). However the male respondents within age category 4 and low educated were having the least number of pets per person (1.50 ± 0.71; categories with 0 or 1 respondent were excluded). Higher educated persons had on average a higher number of pets per person compared with lower educated persons, but this was not a significant difference (p=0.09; low: 7.12 ± 12.59 vs. high: 8.97 ± 16.44). Although age had no significant influence on number of pets, persons within age category 2 were having the most pets (p=0.13; 1: 7.87± 15.99 vs. 2: 13.16± 20.53 vs. 3: 4.92± 5.71 vs. 4: 7.89± 13.00 vs. 5: 4.63± 2.77 vs. 6: 1± -). The age in combination with the gender influenced the number of pets (p= 0.01). A LSD could not be performed because age group 6 had insufficient respondents.

An overview of pet species per age, education and gender showed that only the female respondents had horses and ruminants such as sheep. Most male respondents had a dog, while the female respondents mostly had cats (9 of 14 males vs. 52 of 113 females). Fish and reptiles were equally owned by male and female respondents (3 of 14 vs. 22 of 113; 1 of 14 vs. 9 of 113). The males had on average 1.6 pet species per person and the females had on average 1.8 species per person. The persons with on average the most pet species within this study were low educated females in age category 5, high educated males in age category 1 and high educated males in age category 5 (on average 3 pet species per person; table 2).

Table 2 Pet species per category age, education and gender

Pet species -->				Dog	Cat	Bird	Rodent	Fish	Reptile	Horse	Goat	Scheep	**Total**	**Total respondents**	**pet species per person**
			Number	2				1					**3**		
		Age 1	%	3.4%				4.0%					**1.3%**	2	1.5
			Number		1		1	1					**3**		
		Age 2	%		1.7%		2.3%	4.0%					**1.3%**	2	1.5
			Number										**0**		
		Age 3	%										**0.0%**	-	-
			Number	2									**2**		
		Age 4	%	3.4%									**0.9%**	2	1.0
			Number	1									**1**		
		Age 5	%	1.7%									**0.4%**	1	1.0
			Number										**0**		
	Male	Age 6	%										**0.0%**	-	-
			Number	10	6	3	12	3	2	2			**38**		
		Age 1	%	16.9%	10.3%	15.8%	27.3%	12.0%	20.0%	28.6%			**16.9%**	20	1.9
			Number	5	7		2	2					**16**		
		Age 2	%	8.5%	12.1%		4.5%	8.0%					**7.1%**	8	2.0
			Number	6	3		1	3					**13**		
		Age 3	%	10.2%	5.2%		2.3%	12.0%					**5.8%**	7	1.9
			Number	8	8	4	2	2	1	1			**26**		
		Age 4	%	13.6%	13.8%	21.1%	4.5%	8.0%	10.0%	14.3%			**11.6%**	14	1.9
			Number	1	2	1				1	1		**6**		
		Age 5	%	1.7%	3.4%	5.3%				14.3%	50.0%		**2.7%**	2	3.0
			Number										**0**		
Low educated	Female	Age 6	%										**0.0%**	-	-
			Number		1			1	1				**3**		
		Age 1	%		1.7%			4.0%	10.0%				**1.3%**	1	3.0
			Number	1	2								**3**		
		Age 2	%	1.7%	3.4%								**1.3%**	2	1.5
			Number										**0**		
		Age 3	%										**0.0%**	-	-
			Number	2	1	1	1						**5**		
		Age 4	%	3.4%	1.7%	5.3%	2.3%						**2.2%**	3	1.7
			Number	1	1	1							**3**		
		Age 5	%	1.7%	1.7%	5.3%							**1.3%**	1	3.0
			Number										**0**		
	Male	Age 6	%										**0.0%**	-	-
			Number	7	9	3	13	6	5	2	1	1	**47**		
		Age 1	%	11.9%	15.5%	15.8%	29.5%	24.0%	50.0%	28.6%	50.0%	100.0%	**20.9%**	29	1.6
			Number		3	1	4	2					**10**		
		Age 2	%		5.2%	5.3%	9.1%	8.0%					**4.4%**	7	1.4
			Number	2	2		4						**8**		
		Age 3	%	3.4%	3.4%		9.1%						**3.6%**	5	1.6
			Number	9	10	5	4	4					**32**		
		Age 4	%	15.3%	17.2%	26.3%	9.1%	16.0%					**14.2%**	16	2.0
			Number	1	2				1	1			**5**		
		Age 5	%	1.7%	3.4%				10.0%	14.3%			**2.2%**	4	1.3
			Number	1									**1**		
High educated	Female	Age 6	%	1.7%									**0.4%**	1	1.0
			Number	**59**	**58**	**19**	**44**	**25**	**10**	**7**	**2**	**1**	**225**	**127**	**33.7**
Total			**%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

The low educated respondents in this study had on average 1.5 different species of animals. In comparison with the higher educated persons, they had on average 1.2 different species. The dog was the most popular species with the lower educated persons while the higher educated respondents had more cats. In total the dog and cat were both very popular (table 3).

Table 3 Pet species vs. education

		Low educated		*High educated*		***Total of all respondents with pets***	
		Number	*% of total*	*Number*	*% of total*	***Number***	***% of total***
Pet species	*Dog*	35	48.6%	24	24.7%	**59**	**46.5%**
	Cat	27	37.5%	31	32.0%	**58**	**45.7%**
	Bird	8	11.1%	11	11.3%	**19**	**15.0%**
	Rodent	18	23.6%	26	26.8%	**43**	**33.9%**
	Fish	12	16.7%	13	13.4%	**25**	**19.7%**
	Reptile	3	4.2%	7	6.2%	**9**	**7.1%**
	Horse	4	5.6%	3	3.1%	**7**	**5.5%**
	Goat	1	1.4%	1	1.0%	**2**	**1.6%**
	Scheep			1	1.0%	**1**	**0.8%**
Total		**108**	**150.0%**	**117**	**120.6%**	**225**	**177.2%**

4.1.2. Profession and pets

in this study the profession of the respondents had no influence on pet ownership (p= 0.25). But the LSD test showed that persons who were searching for a job had significantly less pets than house wife/men (p=0.05).

Profession had also no influence on the number of pets in this study (p=0.61).

House wives/men had the most pet species per person (2.3). However part-time workers had the least pet species per person (1.6). Most participating students were having rodents. Full-time workers were more likely to have dogs, but the part-time workers mostly had cats (table 4).

Table 4 Pet species vs. profession

		Pet species											
		Dog	*Cat*	*Bird*	*Rodent*	*Fish*	*Reptile*	*Horse*	*Goat*	*Scheep*	***Total***	***Total respondents with pets***	***Pet species per person***
Profession	*Full-time work*	16	14	5	15	7	2	2			61	35	1.7
	Part-time work	18	20	6	8	5	1	2	1	1	62	39	1.6
	Student	8	9	3	13	8	6	1			48	27	1.8
	Job searcher	3	3	1	3	3					13	7	1.9
	House wife/men	7	7	3	5	1	1	2	1		27	12	2.3
	Pensioner	2	1	1							4	2	2.0
	Government payment	5	4			1					10	5	2.0
Total		**59**	**58**	**19**	**44**	**25**	**10**	**7**	**2**	**1**	**225**	**127**	**1.8**

4.1.3. Family composition and pets

The family composition was divided into four categories. The family composition had an influence on pet ownership (p=0.03). The LSD test showed that family composition 1 had significantly less pets than family composition 2 (p=0.00). Family composition 2 had significantly more pets than family composition 4 (p=0.05). 40 of the 169 respondents had children and pets. The number of children had no influence on the number of pets in this study (p= 0.30). Respondents with two children had the least number of pets (3.89 ± 3.60). Though respondents with three children had the highest number of pets (13.63 ± 17.30). However these averages were not significant.

Two partners with their children (family composition 4) had on average the most pet species per person, while persons living alone (family composition 1) had on average the least pet species per person (2 vs. 1.3). Family composition 1 had mostly rodents and cats. The rodents were also popular with single parents (composition 3). Single parents in this study only had dogs, rodents and fish. Unlike couples (family composition 2) and two partners with children (family composition 4) had a more diverse selection of pet species (table 5).

Table 5 Pet species vs. family composition

		Family composition								
		1		2		3		4		
		Number	%	Number	%	Number	%	Number	%	**Total**
Pet species	Dog	4	14.3%	26	26.0%	4	40.0%	25	28.7%	**59**
	Cat	8	28.6%	34	34.0%			16	18.4%	**58**
	Bird	3	10.7%	9	9.0%			7	8.0%	**19**
	Rodent	8	28.6%	14	14.0%	5	50.0%	17	19.5%	**44**
	Fish	2	7.1%	8	8.0%	1	10.0%	14	16.1%	**25**
	Reptile	2	7.1%	6	6.0%			2	2.3%	**10**
	Horse	1	3.6%	2	2.0%			4	4.6%	**7**
	Goat			1	1.0%			1	1.1%	**2**
	Scheep							1	1.1%	**1**
Total		**28**	**100.0%**	**100**	**100.0%**	**10**	**100.0%**	**87**	**100.0%**	**225**
Total respondents with pets		**22**		**56**		**6**		**43**		**127**
Total pet species per person		**1.3**		**1.8**		**1.7**		**2.0**		**1.8**

4.1.4. Attachment to pet

126 out of the 127 pet owners said they were attached to their pet. Only one higher educated person said he or she was not attached to the pet. The one person who was not attached to the pet belonged to age category 4. Almost all respondents were attached, so age, education and gender did not influenced the attachment to a pet ($p_{interaction}$= 0.96).

The reasons for attachment to pets were divided into 6 categories. Most respondents showed a lot of love and care for the animals (44.9%; category 3). Quotes within this category were ''by talking. cuddling and playing with my pet I am showing my attachment to my pet'' and '' by cuddling, talking and making pictures of my pet I am showing my attachment to my pet''. Male respondents were equally distributed over 4 categories (categories 0, 2, 3 and 4). Yet category 3 was mostly answered by female respondents. A GLM (General Linear Model) showed that gender had a significant influence on reasons for attachment to pets (p= 0.01). Overall age, education and gender had no influence on reason for attachment to pets (p= 0.24).

Table 6 Showing attachment per age, education and gender category.

			Showing attachment															
			No answer		*Be there for the pet*		*Taking care and time for the pet*		*Show love and affection and worries about the pet*		*Will do everything for the pet*		*From pets point of view*		*Open answer*		***Total***	
			Number	*%*	*Number*	*%*	*Number*	*%*	*Number*	*%*	*Number*	*%*	*Number*	*%*	*Number*	*%*	***Number***	***%***
Low educated	*Male*	*Age 1*									2	8.3%					**2**	**1.6%**
		Age 2	1	9.1%					1	1.8%							**2**	**1.6%**
		Age 3															**0**	**0.0%**
		Age 4					1	5.6%	1	1.8%							**2**	**1.6%**
		Age 5	1	9.1%													**1**	**0.8%**
		Age 6															**0**	**0.0%**
	Female	*Age 1*					5	27.8%	9	15.8%	2	8.3%	4	30.8%			**20**	**15.7%**
		Age 2	1	9.1%			1	5.6%	3	5.3%	3	12.5%					**8**	**6.3%**
		Age 3	1	9.1%			1	5.6%	2	3.5%	2	8.3%			1	50.0%	**7**	**5.5%**
		Age 4	2	18.2%	1	50.0%			7	12.3%	3	12.5%	1	7.7%			**14**	**11.0%**
		Age 5							1	1.8%			1	7.7%			**2**	**1.6%**
		Age 6															**0**	**0.0%**
High educated	*Male*	*Age 1*					1	5.6%									**1**	**0.8%**
		Age 2	1	9.1%					1	1.8%							**2**	**1.6%**
		Age 3															**0**	**0.0%**
		Age 4					2	11.1%			1	4.2%					**3**	**2.4%**
		Age 5							1	1.8%							**1**	**0.8%**
		Age 6															**0**	**0.0%**
	Female	*Age 1*	1	9.1%	1	50.0%	5	27.8%	16	28.1%	3	12.5%	3	23.1%			**29**	**22.8%**
		Age 2					1	5.6%	2	3.5%	1	4.2%	3	23.1%			**7**	**5.5%**
		Age 3							2	3.5%	2	8.3%	1	7.7%			**5**	**3.9%**
		Age 4	3	27.3%					9	15.8%	4	16.7%					**16**	**12.6%**
		Age 5					1	5.6%	2	3.5%					1	50.0%	**4**	**3.1%**
		Age 6									1	4.2%					**1**	**0.8%**
Total		***Number***	**11**	**100.0%**	**2**	**100.0%**	**18**	**100.0%**	**57**	**100.0%**	**24**	**100.0%**	**13**	**100.0%**	**2**	**100.0%**	**127**	**100.0%**
		%	**8.7%**		**1.6%**		**14.2%**		**44.9%**		**18.9%**		**10.2%**		**1.6%**		**100.0%**	

Gender had an influence on how people see their pets, such as ''part of the family'' or ''as a child of their own'' (p= 0.00). Education also had an influence on how people see their pets (p= 0.03). Age as main factor and in combination with the other two factors had no influence on the way people see their pets (p= 0.06 seen as trend vs. p=0.363). Table 7 showed that male respondents mostly see their pets as a friend, while female respondents see their pet mostly as part of the family. One female respondent said that it differs between pet species but she did not specify it per pet species (described as ''Vague'').

Table 7 How people see their pet vs. Gender

		Male		*Female*		***Total***	
		Number	*%*	*Number*	*%*	***Number***	***%***
How people see their pet	*Part of the Family*	4	28.6%	62	54.9%	**66**	**52.0%**
	Child of respondent	1	7.1%	14	12.4%	**15**	**11.8%**
	As a friend	6	42.9%	26	23.0%	**32**	**25.2%**
	Als function pet	1	7.1%	1	0.9%	**2**	**1.6%**
	For a hobby	2	14.3%	8	7.1%	**10**	**7.9%**
	As a burden	0	0.0%	0	0.0%	**0**	**0.0%**
	Little bit of everything	0	0.0%	1	0.9%	**1**	**0.8%**
	Vague	0	0.0%	1	0.9%	**1**	**0.8%**
Total		**14**	**100.0%**	**113**	**100.0%**	**127**	**100.0%**

Both high and low educated persons mostly saw their pet as part of their family. But two higher educated respondents saw their pet also as function pet and not as hobby or family. The higher educated persons also saw pets more as a hobby compared to low educated persons in this study (11.6% vs. 3.4% ; table 8).

Table 8 How people see their pet vs. education

		Low educated		*High educated*		***Total***	
		Number	*%*	*Number*	*%*	***Number***	***%***
How people see their pet	*Part of the Family*	34	58.6%	32	46.4%	**66**	**52.0%**
	Child of respondent	7	12.1%	8	11.6%	**15**	**11.8%**
	As a friend	15	25.9%	17	24.6%	**32**	**25.2%**
	Als function pet	0	0.0%	2	2.9%	**2**	**1.6%**
	For a hobby	2	3.4%	8	11.6%	**10**	**7.9%**
	As a burden	0	0.0%	0	0.0%	**0**	**0.0%**
	Little bit of everything	0	0.0%	1	1.4%	**1**	**0.8%**
	Vague	0	0.0%	1	1.4%	**1**	**0.8%**
Total		**58**	**100.0%**	**69**	**100.0%**	**127**	**100.0%**

The age, education and gender as an interaction influenced the time spent on a pet (p=0.03). Most respondents spent between 1-2 hours per day on their pet. Male respondents were equally distributed over the categories: < 1 hour, 1-2 hour and 3-5 hour spent on pet per day. Yet most female respondent spent 1-2 hours per day on their pet. Lower educated respondents spent most time on their pet (9 of out 14 in > 5 hours per day spent on pet; table 9).

Table 9 Time spent on pet vs. education, gender and age

			Time spend on pet per day									
			< 1 hour		*1-2 hour*		*3-5 hour*		*> 5 hour*		***Total***	
			Number	*%*	*Number*	*%*	*Number*	*%*	*Number*	*%*	***Number***	***%***
Low educated	*Male*	*Age 1*			2	4.0%					**2**	**1.6%**
		Age 2	2	8.0%							**2**	**1.6%**
		Age 3									**0**	**0.0%**
		Age 4					2	5.3%			**2**	**1.6%**
		Age 5	1	4.0%							**1**	**0.8%**
		Age 6									**0**	**0.0%**
	Female	*Age 1*	3	12.0%	9	18.0%	3	7.9%	5	35.7%	**20**	**15.7%**
		Age 2	1	4.0%	1	2.0%	5	13.2%	1	7.1%	**8**	**6.3%**
		Age 3			2	4.0%	4	10.5%	1	7.1%	**7**	**5.5%**
		Age 4	3	12.0%	4	8.0%	5	13.2%	2	14.3%	**14**	**11.0%**
		Age 5			1	2.0%	1	2.6%			**2**	**1.6%**
		Age 6									**0**	**0.0%**
High educated	*Male*	*Age 1*			1	2.0%					**1**	**0.8%**
		Age 2	1	4.0%					1	7.1%	**2**	**1.6%**
		Age 3									**0**	**0.0%**
		Age 4	1	4.0%	1	2.0%	1	2.6%			**3**	**2.4%**
		Age 5					1	2.6%			**1**	**0.8%**
		Age 6									**0**	**0.0%**
	Female	*Age 1*	5	20.0%	16	32.0%	5	13.2%	3	21.4%	**29**	**22.8%**
		Age 2	4	16.0%	3	6.0%					**7**	**5.5%**
		Age 3	1	4.0%	3	6.0%	1	2.6%			**5**	**3.9%**
		Age 4	3	12.0%	5	10.0%	7	18.4%	1	7.1%	**16**	**12.6%**
		Age 5			2	4.0%	2	5.3%			**4**	**3.1%**
		Age 6					1	2.6%			**1**	**0.8%**
Total		***Number + %***	**25**	**100.0%**	**50**	**100.0%**	**38**	**100.0%**	**14**	**100.0%**	**127**	**100.0%**
		% of total	**19.7%**		**39.4%**		**29.9%**		**11.0%**		**100.0%**	

The age and gender as main factors and as an interaction all had an influence on ''talking to the pet'' (P=0.00; P=0.00 vs. P=0.00). In survey was asked if the pet eats the same feed as the owner, this variable was not influence by all factors ($p_{interaction}$= 0.09). If a pet would sleep in the bedroom was also no influence by age, education and gender (P=0.46). Whether pets go along on a holiday with their owners was influenced by age, gender and education as main factors (p=0.01; p=0.03; p=0.01).

One person did not fill in if he or she talked to their pet. Female respondents talk significantly more to their pet than male respondents in this study (P=0.00; 99.1%). Some Respondents from age category 1.2 and 4 did not talk to their pet. A LSD test could not be performed because of insufficient respondents in several categories (table 10).

Table 10 Talking to the pet vs. gender and age

		Talking to the pet											
		No				*Yes*				***Total***			
		Number	*%*	*Number gender*	*% of all respondents with a pet of specify gender*	*Number*	*%*	*Number gender*	*% of all respondents with a pet of specify gender*	***Number***	***%***	***Number gender***	***% of all respondents with a pet of specify gender***
Male	*Age 1*					3	2.5%			**3**	**2.4%**		
	Age 2	2	50.0%			2	1.6%			**4**	**3.2%**		
	Age 3												
	Age 4	1	25.0%			4	3.3%			**5**	**4.0%**		
	Age 5					2	1.6%			**2**	**1.6%**		
	Age 6			3	21.4%			11	78.6%			**14**	**100.0%**
Female	*Age 1*	1	25.0%			48	39.3%			**49**	**38.9%**		
	Age 2					15	12.3%			**15**	**11.9%**		
	Age 3					12	9.8%			**12**	**9.5%**		
	Age 4					29	23.8%			**29**	**23.0%**		
	Age 5					6	4.9%			**6**	**4.8%**		
	Age 6			1	0.9%	1	0.8%	111	99.1%	**1**	**0.8%**	**112**	**100.0%**
Total	***Number***	**4**	**100.0%**	**4**	**22.3%**	**122**	**100.0%**	**122**	**177.7%**	**126**	**100.0%**	**126**	**200.0%**
	%	**1**	**100.0%**	**1**	**100.0%**	**1**	**100.0%**	**1**	**100.0%**	**1**	**100.0%**	**1**	**100.0%**

One respondent did not fill whether he or she would take her pet on a holiday. Age had a significant influence on the choice of a person to take their pet on a holiday (p=0.01). ''Not taking the pet'' or ''sometimes taking the pet'' on holiday was mostly answered by age category 1 (52.2% and 41.7%). Although ''yes, if possible'' and ''yes, always'' was mostly answered by age category 4 (38.1% and 50.0%; table 11).

Table 11 Taking pet on holiday vs. age

		Pet on a holiday									
		No		*Sometimes. depends on type of holiday*		*Yes. if possible*		*Yes. always*		***Total***	
		Number	*%*	*Number*	*%*	*Number*	*%*	*Number*	*%*	***Number***	***%***
Age	*Age 1*	35	52.2%	10	41.7%	4	19.0%	2	14.3%	**51**	**40.5%**
	Age 2	12	17.9%	1	4.2%	5	23.8%	1	7.1%	**19**	**15.1%**
	Age 3	4	6.0%	4	16.7%	1	4.8%	3	21.4%	**12**	**9.5%**
	Age 4	13	19.4%	7	29.2%	8	38.1%	7	50.0%	**35**	**27.8%**
	Age 5	3	4.5%	2	8.3%	2	9.5%	1	7.1%	**8**	**6.3%**
	Age 6					1	4.8%			**1**	**0.8%**
Total	***Number + %***	**67**	**100.0%**	**24**	**100.0%**	**21**	**100.0%**	**14**	**100.0%**	**126**	**100.0%**
	% of total	**53.2%**		**19.0%**		**16.7%**		**11.1%**		**100.0%**	

Gender had a significant influence on taking a pet on a holiday (p=0.03). Male respondents would rather take their pets on a holiday compared to female respondents (28.6% vs. 8.9%). Both male and female mostly did not take their pet on a holiday (table 12).

Table 12 Taking pet on a holiday vs. gender

		Pet on a holiday									
		No		*Sometimes. depends on type of holiday*		*Yes. if possible*		*Yes. always*		***Total***	
		Number	*%*	*Number*	*%*	*Number*	*%*	*Number*	*%*	***Number***	***%***
Gender	*Male*	6	42.9%	1	7.1%	3	21.4%	4	28.6%	**14**	**100.0%**
	Female	61	54.5%	23	20.5%	18	16.1%	10	8.9%	**112**	**100.0%**
Total	***Number + %***	**67**	**97.3%**	**24**	**27.7%**	**21**	**37.5%**	**14**	**37.5%**	**126**	**200.0%**
	% of total	**53.2%**		**19.0%**		**16.7%**		**11.1%**		**100.0%**	

More than half of the higher educated respondents would not take their pet on a holiday (63.2%). In comparison with the higher educated respondents, low educated persons were more likely to take their pet more on a holiday (8.8% vs. 13.8%). Therefore in this study lower educated persons significantly take their pet more on a holiday compared to higher educated persons (p=0.01; table 13).

Table 13 Taking a pet on holiday vs. education

		Pet on a holiday									
		No		*Sometimes. depends on type of holiday*		*Yes. if possible*		*Yes, always*		***Total***	
		Number	*%*	*Number*	*%*	*Number*	*%*	*Number*	*%*	***Number***	***%***
Education	*Low educated*	24	41.4%	12	20.7%	14	24.1%	8	13.8%	**58**	**100.0%**
	High educated	43	63.2%	12	17.6%	7	10.3%	6	8.8%	**68**	**100.0%**
	Number + %	**67**	**104.6%**	**24**	**38.3%**	**21**	**34.4%**	**14**	**22.6%**	**126**	**200.0%**
Total	***% of total***	**53.2%**		**19.0%**		**16.7%**		**11.1%**		**100.0%**	

Most people within each pet species category would not take their pet on a holiday, except for dog owners they mostly filled in that they ''sometimes'' or ''yes, if possible'' take their pet on a holiday (17 out of 58 and 16 out of 58). 4 of the 7 horse owners take their horse on a holiday sometimes. There were also respondents who took their fish, bird or rodent on a holiday (table 14). Overall most respondents did not take their pet on a holiday.

Table 14 Taking a pet on a holiday vs. pet species

		Pet on a holiday				
		No	*Sometimes. depends on type of holiday*	*Yes. if possible*	*Yes. always*	***Total***
Pet species	*Dog*	12	17	16	13	**58**
	Cat	35	9	11	3	**58**
	Bird	9	6	3	1	**19**
	Rodent	27	7	5	4	**43**
	Fish	14	3	5	3	**25**
	Reptile	6	2	2	0	**10**
	Horse	2	4	1	0	**7**
	Goat	1	1	0	0	**2**
	Scheep	1	0	0	0	**1**
Total	***Number***	**107**	**49**	**43**	**24**	**223**

4.1.5. Care for pet

3 of the 59 dog owners did not go to the vet. Most respondents went one time a year to the vet. However 28 respondents never went to the vet (table 15).

Table 15 Going to the vet vs. pet species

		Going to the vet						
		0 times a year	*1 time a year*	*2 times a year*	*3 times a year*	*4 or more times a year*	*varied*	***Total***
Pet species	*Dog*	3	24	16		5	11	**59**
	Cat	8	24	10	1	5	10	**58**
	Bird	3	4	5		2	5	**19**
	Rodent	8	16	9		5	6	**44**
	Fish	5	9	4		2	5	**25**
	Reptile		7	1		1	1	**10**
	Horse	1	3	3				**7**
	Goat		2					**2**
	Scheep		1					**1**
Total	***Number***	**28**	**90**	**48**	**1**	**20**	**38**	**225**

The price respondents pay for the vet stands in relationship with the times they go to the vet per year. 4 of the 127 respondents did not fill in what they on average spent on veterinary costs. Most respondents spent between 1-100 euro per year on their pet (table 16). 29 out of 113 respondents used this money for vaccines or dewormer. Others used it for a sterilisation or castration, an operation, the dentist, a medicine or a general check-up for the pet.

Table 16 Going to the vet vs. money spent on vet

		Going to the vet						
		0 times a year	*1 time a year*	*2 times a year*	*3 times a year*	*4 or more times a year*	*5: varied*	***Total***
Money spent on vet	*0 euro*	14	1				1	**16**
	1-100 euro	4	34	11		4	11	**64**
	101-200 euro	1	7	10		3	3	**24**
	201-500 euro	0	5	2	1	2	2	**12**
	> 500 euro	0	1	3	0	0	3	**7**
Total		**19**	**48**	**26**	**1**	**9**	**20**	**123**

Age, education and gender had no influence on the maximum amount of money spent on an operation (p=0.08). The family composition had also no influence on maximum amount of money spent on an operation (p=0.45). Most respondents would spend a maximum amount of smaller than 500 euro on an operation (33 out of 121 respondents). However, 30 out of 121 would spend more than 1500 euro. Only 5 of the 121 respondents would spend 1001-1500 euro on an operation.

In the survey the respondents were asked what they would do if an operation of 800 euro could save the life of their pet. 35 of the 126 respondents would approve the operation. However 15 of the respondents would put the pet down. The remaining respondents could not decide, their answer depended on the characteristics and the consequences for the pet such as age of pet and chance of success. Education had an influence on choice made by the respondents on this statement (p=0.03). More higher educated persons would put the pet down compared to the lower educated persons (13.2% vs. 10.3%). While lower educated respondents rather would approve the operation (34.5% vs. 22.1%; table 17).

Table 17 Education vs. choices for statement

		Education					
		Low educated		High educated		Total	
		Number	%	Number	%	Number	%
Statement	Approve the operation	20	34.5%	15	22.1%	35	27.8%
	Put the pet down	6	10.3%	9	13.2%	15	11.9%
	Depends on the characteristics	32	55.2%	44	64.7%	76	60.3%
Total		58	100.0%	68	100.0%	126	100.0%

4.1.6. Non pet owners

42 of all 169 respondents did not have pets. Most people had no pet because of lack of interest, no time or spending too much time away from home (8 vs. 11 vs. 22 respondents). 3 respondents said that their pet recently passed away. In the future, 22 of them would like to have a pet. Only 7 would not want a pet in the future. The rest is not sure if they would like to have a pet in the future.

4.1.7. Additions and recommendations respondents

Two respondent mentioned that time and money is needed in order to successfully own a pet, because a operation could be included in the future. An addition from someone else was that people need to be conscious that they have a living animal that cannot be left alone for the weekend without fresh feed. Besides that they need to exhibit their natural behaviour. A female respondent said that she had a professional aquarium and that she got attached to the fish and that it hurts when they die or get sick. Two people said that pets were better friends than humans or even better as children. However some people also said that a pet is an animal and not a human. Training and enrichment is a positive contribution to the relationship with your pet according to a respondent. A recommendation from a respondent was that their need to be more personal information about rodents in general in the pet shop. Because at the moment of buying the rodent the owners know little about the animal. An addition was that even veterinarians do not know a lot about rodents. This person did not see a bright future for the rodents and rabbits in particular. Two respondents said that the survey did not include differences between pets. According to them every pet needs other attention.

4.2 Interview

15 respondents were interviewed. Three males were interviewed and 12 females were interviewed. 6 persons were low educated and 9 respondents were high educated. The three men were all higher educated.

4.2.1. Codes

All codes used are in annex 5, examples are ''hoog opgeleid'' (high educated), ''laag opgeleid'' (low educated) or ''Merk: eet huisdier goed'' (Brand: the pet eat it well). The made codes-primary documents tables made per following paragraph are in annex 6. How the codes are formulated is written down in the ''Material and Methods'' section.

4.2.2. Activity pet and owner

In this study the lower educated persons had more animal species than the higher educated persons. However this were mostly the companion animals such as cats and dogs (1.83 vs. 1.44) and higher educated persons in this study owned more exotic animals such as reptiles. The activity of the lower educated interviewees was higher than the activity of higher educated interviewees in this study (5 out of 6 respondents >6 hour movement vs. 1 out of 9 respondents >6 hours movement). Unlike the persons, the pets of the higher educated persons in this study were more active than the pets of lower educated persons participating in this study(5 out of 9 respondents > 6 hours movement vs. 2 out of 6 respondents > 6 hours movement). Overall there was no relationship found between the weight and activity of the person and the weight and activity of their pets.

4.2.3. Attachment to pet

All persons this study were attached to their pets. However, higher educated interviewees were mostly attached while the lower educated interviewees were very attached and cannot be without their pet (5out of 9 interviewees attached vs. 3 out of 6 interviewees very attached). All men said that their pet is an enrichment to their family. The half of the lower educated persons said that their pets always take away the stress during the day. However, 6 of the higher educated respondents said that the pets take away the stress only temporally. One lower educated person told that her pet did not take away the daily stress at all and one higher educated person told that his rabbit causes stress because of chewing on the wires.

The higher educated interviewees mostly spend between one and three hours a day on their pets (7 out of 9 respondents), while the lower educated persons were more divided between one and three hours, three and halve and six hours and more than six hours (2 out of 6 respondents vs. 2 out of 6 respondents vs. 2 out of 6 respondents). There is no relation between attachment and time spent on pet on lower educated level in this study. However 4 out of 5 higher educated persons who told that they were attached to their pet, all spend one to three hours per day on their pets.

4.2.4. Allergy for pets

Two higher educated persons who were interviewed were allergic. one respondent was allergic for all companion animals and one only for rodents and dogs. These two persons were also the two persons who grew up with no pets at their home. The other interviewees were mostly grown up with all companion animals and other exotic animals (12 out of 13 respondents).

4.2.5. Animal nutrition

The higher educated persons gave more reasons for using a specific brand than the lower educated persons in this study (2.11 vs. 1.17 reasons). The higher educated persons gave reasons such as: on own opinion or

on animal demand but also because it is cheap feed. One person said that he fed his pets feed without fish because it should be more sustainable. The lower educated interviewees said that it was easy to give a certain feed because of the accessibility. Both educational levels give a feed because the pets eat it very well and due to the knowledge gained during school.

Almost all respondents switched between feeds during the pets life (13 out of 15 interviewees). The higher educated persons mainly switched because of knowledge gained during a study and on account of finance (finance is divided into the codes: more money to spent and cheap feed). Lower educated persons on average switched because visible and vital problems of the pets such as teeth problems and kidney problems. Both groups also switched feed because the pets stopped eating the given feed. Two respondents also said that they changed the feed because of too much salt and sugar in the feed.

The feed proportions were giving at its discretion on both educational levels (High: 5 out of 9 respondents vs. Low: 3 out of 6 respondents). Other grounds were based; on the feed instructions on the feed wrapper, on physical condition of the pet or on advice of a vet or breeder. 5 of the higher educated respondents did not change the feed proportions in time. While 3 of the lower educated persons lowered the feed proportions of their pet because of overweight. Two respondents of both groups also changed the feed proportions based on age and life stadium.

4.2.6. Additions and recommendations respondents

Overall the lower educated persons in this study were less interested in the available information on animal nutrition on the market (3 out of 6 was not interested). The others thought the available information was good. However, the higher educated persons were more critical on the research and information. Some of them said the information is misleading and confusing. Besides that they said that different information sources say different things and some information is hard to find. The higher educated persons advised to get more awareness about care and feed of a pet and more informative feed wrappers would help.

5. Discussion & conclusion

The two questions of this study were:

1. *Is the presence of a pet in a household related to education and age of the pet owners?*
2. *Has the educational level influence on feed given to the pets?*

5.1 Presence of a pet

Is there a relationship- and what is the relationship between education, age and pet ownership? The expectation was that young adults (between 18 and 35 years old) with a higher education are more likely to have pets than lower educated persons from all age categories. This research showed that with these respondents, lower educated persons within age category 3 (36-45 years old) were most likely to have pets. GLM showed a significant interaction between education and age on pet ownership and a LSD showed that age category 3 had significant more pet owners then age category 1,4 and 6. This result is not corresponding with my hypothesis. A reason for this could be the small sample size. 169 persons filled in the survey on the internet. But the Netherlands has 16,906,892 persons *(CBS, 2014),* as such the survey is not representative for all people of the Netherlands. The result with regard to the education could be explained by the reason that lower educated persons without pets did not respond to the call to fill in the survey. The flyer with the call for respondents had the subject: Pets in the Netherlands. This could have led to a lower response of lower educated persons without pets. The age category 3 who were most likely to have pets (36-45) is consistent with the research done in the U.S. which showed that 71% of the 36-45 had pets, while 54% of 18-25 years and 37% of the older than 65 year had pets (*Poresky and Daniels, 1998).* In the end people try to maximize their utility or personal well-being by balancing a lifetime stream of earnings with a lifetime pattern of consumption, in which pets are consumption *(Crown, 2002).*

Gender was added as a factor. The hypothesis was that females would have more pets because they would be more attached to their pet. Previous research showed that girls were more attached to their pet than boys *(Vidovic et al., 1999).* Gender as a main factor had no influence. However, gender in combination with education showed that higher educated females had the most pets. As such, this research confirmed my hypothesis.

The hypothesis was that males from age category 3 had the highest number of pets. Since previous research showed that males on average have the most leisure time within the weekends. During the week there is not a big difference between male and female *(Shaw, 1985).* Unfortunately there were insufficient respondents within age category 6, so the study confirmed that age in combination with gender had a significant influence on the highest number of pets but not between which age groups there is a difference. Also each animal was counted, which showed that people with aquaria were having the most pets. However, fish can be fed faster than a dog for instance.

Males would have the highest number of pets, which could show that there are more fish owners among the males. However this research did not show a significant difference between different species. The reason for this is that my data could not be used to test this difference, because more pet species per person need to be filled in without adding extra respondents, so a better statistical set-up was needed.

The hypothesis was that lower educated respondents would have less different pet species compared to higher educated respondents. Since lower educated respondents then can focus on one or two species, while educated persons could experiment with different species, especially people with a biology background. However, this research has shown that lower educated respondents had on average 0.3 species

more than higher educated respondents. A reason for this could be that they buy multiple pets in one shop all at ones, because they cannot resist the temptation to buy a sweet pet or good looking pet for example. It could be that lower educated persons are easier to convince to consume a certain product.

5.1.1. Profession

The expectation was that respondents who worked part-time were more likely to have pets, because previous research in Sweden showed that part-time workers were more likely to be a pet owner *(Müllersdorf et al., 2009).* However, in this study there was no significant difference between respondents with different professions. An explanation for this could be that most participating students were following a study at the Wageningen University. It could be that other students without pets were not responding or did not see the survey. A possibility was that part-time workers were part of a family with full-time workers, where the part-time worker would take care for the pets or children. If so, this would make no difference if they were a part-time worker or a fulltime worker because they were all part of the same family. It is not certain whether this was the case in this study.

The hypothesis was that part-time workers would have the most dogs and that students would have more rodents and other small pets, which resulted in a higher number of pets for students compared to other professions. There was no significant difference in number of pets compared to profession, though a reason could be that there were not that many pensioners, job searchers and house wives/men participating in the survey. Besides students could be very busy with their study and mostly are going home in the weekends, so if they have a lot of pets they would have to bring them all along on the trip or they need to look for a sitter. This study showed that part-time workers mostly had cats and fulltime workers mostly had dogs. Family composition could have an influence on species of pet within a profession. Respondents living alone would rather have cats because cats can be by themselves during the day.

5.1.2. Family composition

The expectation was that respondents living with their partners and children would rather have pets than respondents without children. Research showed that people with children were more likely to have pets *(Albert and Bulcroft, 1988).* In this study it was significantly shown that respondents living with their partner without children had significantly more pets. The results are contradicting with my expectation a reason for this could be that respondents without children have more leisure time because of the lack of children and pets would less interfere with respondents their career than children. However, people living alone were not having the most pets. A reason for this could be that they spend a lot of time away from home because of work or leisure. Most people who live alone have no ties that bound them to home, so they are more free to go. In this case pets can be a burden because of the care and time you need for them.

People living alone were having the least pet species per person. This confirms my thought that people who live alone on average spend a lot of time away from home. However, respondents with children had on average the most pet species per person. A reason could be that pets are healthy for children. It can prevent allergies if they grow up with pets. If children are confronted with different pet species, they could be less allergic and learn more about all kind of pet species *(Prokop et al., 2008, Riedler et al., 2000; Ehrenstein et al., 2000; Kilpelainen et al., 2000)*. Although this information, the influence of family composition on the number of pet species per respondent was not statistical proven.

5.1.3. Attachment

The hypothesis was that all respondents feel attached to their pets. All respondents in this study were attached according to themselves except for one respondent. A reason for this attachment is, that people would not have pets, if they do not want to connect to them. The respondent, who said he or she was not attached to his or her pet, could have this pet because of his family, maybe he or she has children or a partner who wanted this or these pet(s).

The expectation was that female will do everything for their pet, while males will do what is needed for the pet. Females are seen as head of the family within the socio-cultural domain. They care for everyone and everything without getting paid, examples of this work are making diner and doing the laundering. This care for the pet and the family is influenced by taste *(form of corporeal domain; Allen and Sachs, 2007)*. Previous research also showed that females are the primary care-givers of the pets *(Edmondson and Galper, 1998).* This study showed that females mostly showed their attachment in love and affection and worries about the pet. Males were equally distributed over all categories, probably because if they were living together with a partner, it could be that females will spend more time caring for the pets because of their caring nature.

Females would see their pet as a part of the family that was the hypothesis. This study showed that females mostly see their pet as part of the family, while males see their pet as a friend. A reason for this can be that the Dutch culture is alike with the U.S.: societies contain emotion cultures, meaning the long-standing and widely held belief that women are more emotional than men *(Simon and Nath, 2004).* However, men can be emotional too but it could be that they are hiding it more for society. Men could hide it behind the stories about technique aspects of cars for instants.

The expectation was that more low educated people would own a pet for a hobby compared to higher educated people. Horses are the pet which are most owned for hobby, since previous research showed that horses were mostly owned by people with middle socio-economic status, such as lower educated persons *(ZKA Consultants and Planners, 2006)*. However, in this study it is shown that higher educated persons see their pet more as a hobby compared to lower educated persons. A reason for this could be that some of the participating horse owners have Icelanders. These horses are mostly owned by higher educated persons, because these horses are rarely used within riding schools, so respondents need to buy these horses by themselves and they costs more money than buying another horse *(Casimir, 2007)*.

The hypothesis was that females above the age of 55 would spend the most time on their pet. Overall older persons have more leisure time, because of retirement and females were more emotional attached to their pet. However, in this study low educated females within age category 1 (18-25 year) were spending the most time on their pet. An explanation could be that most respondents in this category are students, who maybe not have to go that often to school. This results in more leisure time to spend time on the pet.

Older females would talk more to their pet than young males, was the expectation. Previous research showed that pets were seen as every day company for an older person who lives alone. However, all females talked to their pets, expect for one respondent within age category 1, since there were only a couple of older females who participated in the study. It means that all age categories with exception of category 1 with gender female were talking the most to their pets. A reason for this could be that females see their pets as part of the family, no matter if they are young or old.

The expectation was that lower educated people would rather feed their pet the same feed as they eat compared to higher educated persons. People with lower education have lower income. This could result in

less money available for special pet feeds, which is why pets would eat the leftovers from their owner. However this study did not show a significant difference between education, age, gender and whether the pets were eating the same feed as the owner. One reason for this could be that they all care about the pet but still sees it as a pet and not as a child. This could lead to separate meals for pet and owner.

Low educated, older females would take their pets on a holiday rather than high educated, young males. The reason for this is that lower educated people can maybe not afford a pension for their pet. Besides that, older females maybe will not leave their pet home alone. However in this study there was no interaction effect but all factors as an individual were influencing the choice to take a pet on a holiday, young respondents were on average not taking their pet, while middle age respondents usually were taking their pet on a holiday. Also gender had an influence on taking a pet on holiday. Males would rather take their pet on a holiday than females. Education had also an influence on taking a pet on holiday. Lower educated persons were more likely to take their pet on a holiday. A reason for this could be that young people go abroad more often, while middle age persons will stay in the Netherlands because of children or family. In the Netherlands it is easier to take a pet than to go abroad with your pet. A reason for males to take their pet on a holiday is that most males had a dog, which is easier to take on a holiday than put in pension because of the cost for a pension and they have to bring the dog to the pension and pick it up after the holiday, which takes a lot of time. This could be seen as a burden. Besides that there was only one question about taking your pet on a holiday, while some respondents had more than one pet species. This means my results were focussing on all pet species and could not be separated per pet species. This study as such, confirmed lower educated persons would rather take their pet on a holiday.

5.1.4. Care

The hypothesis was that respondents with all animal species except for fish would go to the vet once a year. In this study most respondents were going to the vet once a year. However, in this study, one answer per respondent was given. This resulted in persons answering the questions based on their first pet, mostly dogs, cats or rodents. Respondents with fish probably gave answer for their first animal species.

As expected the price that respondents pay was in relation with number of times they go to the vet, because the more they go to the vet the more they have to pay, because even a consult costs money.

It was expected that higher educated respondents would spend more money on an operation. However age, education, gender and family composition had no influence on money spent on an operation. The family composition could have an influence because respondents with children could spend more money on daily things, which means that less money is left for unexpected things such as an operation for the pet. The reason why these factors had no effect could be that a lot of higher educated respondent were students, who in general do not have a lot money because they do not work yet. This question was also an 'if' question, which means that there was asked what you would spend if it is necessary.

The hypothesis was that higher educated people would rather look at the consequences of an operation, than to approve an operation of which they do not know the damage. In this study both educational levels mostly would look at the characteristics of the pet and consequences for the pet. However, education had an influence on the choice to approve an 800 euro operation or not. Higher educated persons would rather put the pet down than lower educated persons. A reason for this could be that higher educated persons are more rational in a sense that they think about the consequences for them if they would spend the money.

5.2 Feed of a pet

The influence of education on feed, the expectation was that educational level indeed influences the feed given to pets, because higher educated people also watch their own health, they might faster succeed in raising a healthy pet. In these interviews respondents showed with their answers that there could be a relation between education and feed given to the pet. However, this was not significantly proven, since this was not the purpose of the interviews. Higher educated persons said that they mainly switched feed because of knowledge gained during a study. Although both educational levels were giving a certain feed because of knowledge gained during school. Other findings were that 3 out of the 6 lower educated persons lowered the feed proportions of their pet because of overweight. Finally the lower educated persons were less interested in the available information on animal nutrition. In the end the higher educated persons in this study are more critical towards animal nutrition besides that there were less high educated persons with pets that had or have overweight.

The prediction was that higher educated females would pay more attention to the feed given to the pet, than higher educated males. The reason for this is that females normally pay more attention to their body size. Body size is part of the corporeal domain. The corporeal domain stands for how commodities such as food and pets influence our taste and body *(Allen and Sachs, 2007)*. Besides that feed can change the body of their pet. However, the influence of gender in combination with education on feed given to the pet could not be measured, because of the low number of males participating in this study (3 males).

Lower educated persons will look at the price of the feed that is the prediction. However, some higher educated persons said that the choice of a certain feed is based on finance. The reason for this could be that most high educated young adults were students. It is known that students in general have a money shortage. Some higher educated persons also switched feed because of the finance. Besides that it could be that higher educated persons are more conscious about money and how to spend money.

5.2.1. Activity

The expectation was that higher educated persons would be more physical active compared to lower educated persons, because higher educated persons normally pay attention to their physical status and in the Netherlands higher educated persons have less overweight compared to lower educated persons *(Bennekom, van, 2013).* However, the lower educated persons in this study said that they were more physical active than the higher educated respondents. A reason for this is that the lower educated persons were mostly working within the retail, which normally stands for days standing and walking on the workspace. The higher educated persons were having computer jobs or jobs were they would transport by car. This result is not representative for the whole of the Netherlands because of the small number of respondents.

The weight of the respondents would be correlated to the weight of the pets that was the prediction. However, there was only one respondent who had a little bit of overweight. The other respondents and all the pets were in perfect shape. This means that a relationship between weight of respondents and the weight of their pets is not proven.

5.2.2. Attachment to pet

As also was predicted in the survey (5.1.3), the expectation was that all respondents feel they are attached to their pets. All respondents in this study were attached according to themselves expect for one respondent. The same reasons could be applicable as mentioned in chapter 5.1.3. The difference between

the survey and the interviews was that the lower educated persons were very attached to their pets, while the higher educated persons were just attached. A reason for this could be that higher educated persons are more rational. They love their pet but it is not a human. This is also a quote mention in the survey.

The prediction was that lower educated persons would let their pet take away all their stress, because lower educated persons would be more attached to their pets. The results showed that 3 out of the 6 lower educated persons indeed said that all stress was taken away by the pet. However, one respondent said that their pet was not taking away any stress. A reason for this could be that the stress is very intents and not just the daily stress moments or that the person is not experiencing stress.

The expectation was that the level of attachment was correlated with the time spent on a pet. However in this study there was no relation found between level of attachment and time spent on a pet. The reason for that could be that respondents are very busy with other leisure or work activities, this does not mean they do not love their pet.

5.2.3. Allergy

The expectation was that if you grew up with pets, you would not have allergy towards pet in the future. Since previous research showed that children which were raised at a farm with livestock had a reduced risks of developing atopy related diseases compared to children who did not grow up with a pet *(Riedler et al., 2000; Ehrenstein et al., 2000; Kilpelainen et al., 2000).* In this study two respondents had an allergy towards pets and both of them did not grow up with pets. In this way, these respondents confirm the results from previous studies.

5.3. Conclusion and recommendations

Education and age have a significant effect on pet ownership in this study. To generalize this result to the Netherlands, more respondents are need. The interviews showed that there could be a relation between education and feed given to the pet. However, in the future a research is need with more respondents in total and a more equal amount of males and females, than the result could be significantly be proven. Further recommendations for the future will be:

- More focus on recruiting non pet owners in every category and pet owners within older age categories (> category 5).
- More specific question in the survey for a specific pet.
- More respondents in the older age categories, this could result in a significant difference on how people see their pet.
- Better statistical set up for testing whether age, education and gender have a significant influence on the choice off pet species.
- A study focussing on how the general information about animal nutrition and about rodents can be better accessible for pet owners and what do pet owners not know about their rodents and how can veterinaries and animal pet shop help to improve the knowledge of the owner and the welfare of the animals.
- Raising awareness about care and feed of a pet by doing a research on the credibility of feed wrappers.
- A study focussing on the differences between pet owners of each animal category. Within this future research they could look at differences between pet owners with different species and pet owners with only a certain pet species. This could give a theory on how people would react with more than one pet species and what the difference in mind set is between these people.
- A study about the way people think about their pet but then in time. For example, look at the influence of historical influences on pet ownership and the attitude towards pets or animals in general.

6. Acknowledgements

This study was part of my minor sociology of consumer households at Wageningen University, Wageningen as part of my master 'Animal Sciences'. Within this study I studied the relation between pets and sociology. I brought sociological theories together with pet ownership. However, for me it was really difficult to get a representative group of respondents. Furthermore I learned to apply the theories invented by different sociologists such as J. Tronto. I also learned to think above sciences. My previous HBO study was very practical. We did not work with theories which needed to be applied to the results. Though without the help of my first supervisor Dr. ir. G.J. Casimir I could not have done this study. Gerda Casimir thank you for your comments and guidance throughout this study. Besides that I would like to thank you for the opportunity to study my own ideas and the positive energy you showed to me, which resulted in more confidence in myself.

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8. Annex

8.1 Annex 1 Survey

Enquête: huisdierbezitter of niet? Help mee aan de inventarisatie van de huisdierensector!

Of u nu een dierenliefhebber bent of niet, weet u eigenlijk hoeveel huisdieren er zijn? En waarom mensen huisdieren hebben of juist geen behoefte hebben aan een huisdier? Ik ben voor mijn afstudeerscriptie aan de Wageningen Universiteit bezig met een inventarisatie van het aantal huisdieren, verzorging en redenen voor het hebben van een huisdier of geen huisdier. Deze enquête is dus niet alleen gericht op de dierliefhebbers maar ook op mensen die dieren hebben voor andere functies of op mensen die geen behoefte, tijd of geld hebben voor een huisdier. Wilt u mij allemaal helpen met mijn inventarisatie? Vul dan deze enquête in. De enquête neemt maar 5 minuten van uw tijd in beslag. De resultaten van deze enquête zullen anoniem verwerkt worden. Uw gegevens zijn bestemd voor deze afstudeerscriptie en zullen niet voor andere doeleinden worden gebruikt en niet aan derden worden verstrekt.

Bij voorbaat dank!
Melissa Schollen. Master studente aan Wageningen Universiteit

Algemeen

*Vereist

1. Wat is uw leeftijd? *

_____

2. Wat is uw geslacht? *

- Man
- Vrouw

3. Wat is uw woonplaats?

_____

4. Wat is uw hoogst genoten opleiding? *

- Middelbare school
- MBO
- HBO
- Universitaire studie
- Anders, namelijk .....

5. Wat is uw huidige professie? *

- Fulltime baan
- Parttime baan
- Gepensioneerde
- Huisvrouw of huisman
- Baanzoekende
- Student(e)
- Anders. namelijk .....

6. Wat is uw huidige gezinssamenstelling? *

Uitwonende kinderen staat voor kinderen die voor hun studie deels van de week uitwonend zijn.
Studenten die voor de studie deels van de tijd ergens anders wonen kunnen hun gezinssamenstelling bij de ouders aangeven.

- Alleenwonend
- Samenwonend met partner
- Wonend met partner en inwonende kinderen
- Wonend met partner en uitwonende kinderen
- Wonend met partner en in- en uitwonende kinderen
- Wonend bij 1 ouder met broers of/en zussen (Door naar vraag 9)
- Wonend bij 1 ouder (Door naar vraag 10)
- Wonend bij beide ouders met broers of/en zussen (Door naar vraag 9)
- Wonend bij beide ouders (Door naar vraag 10)

7. Heeft u kinderen die u zelf groot brengt of heeft gebracht? Nee gaat u door naar vraag 10

- Ja
- Nee

8. Hoeveel kinderen heeft u?

_____

9. Hoeveel broers en/of zussen heeft u?

_____

Huisdieren

Definitie van huisdieren in deze enquête: Dieren waarvan de leefomgeving gecreëerd is door de mens. die niet worden gebruikt voor broodwinning. Voorbeelden zijn hond. paard. schaap. vissen en konijnen.

10. Heeft u huisdieren? * Ja gaat u door naar vraag 13

- Ja
- Nee

11. Waarom houdt u geen huisdieren?

Meerdere antwoorden mogelijk

- Geen interesse
- Geen tijd
- Financiën
- Allergieën
- Te veel afwezig van huis
- Geen faciliteiten of ruimte
- Anders namelijk: .....

12. Zou u in de toekomst wel een huisdier(en) nemen mocht uw situatie veranderen?

Einde enquête voor mensen zonder huisdieren

- Ja
- Nee
- Misschien

13. Welke soorten en aantallen huisdieren houdt uw huishouden op dit moment?

Geef per soort aan hoeveel dieren u hiervan in bezit heeft

SOORT	AANTAL

Zorg voor huisdier(en)

14. Hoeveel uur besteedt uw huishouden gemiddeld per dag aan uw huisdier (per huisdier)?

- < 1 uur
- 1-2 uur
- 3-5 uur
- > 5 uur

15. Hoe is de bestede tijd aan uw huisdier verdeeld over activiteiten?

Voorbeelden van activiteiten zijn eten geven. wandelen of spelen met uw huisdier

ACTIVITEIT	AANTAL UUR	DIERSOORT

16. Hoeveel keer per jaar ziet uw huisdier een dierenarts?

- Niet
- 1 keer
- 2 keer
- Meer dan 2 keer per jaar, namelijk: .....

17. Hoeveel geld geeft u gemiddeld uit aan de dierenarts per jaar per huisdier?

- 0 euro
- 1-100 euro
- 101-200 euro
- 201-500 euro
- > 500 euro

18. Voor welke behandelingen wordt dit geld gebruikt?

Meerdere antwoorden mogelijk

- Castratie of sterilisatie
- Vaccinaties of ontwormingskuren
- Operaties bij ziekte of een ongeluk
- Anders. Namelijk: .....

19. Hoeveel zou u maximaal aan een operatie uitgeven?

- < 500 euro
- 500 euro
- 501-800 euro
- 801-1000 euro
- 1001-1500 euro
- > 1500 euro

20. Stelling: Uw huisdier is ernstig ziek en gewond. Hij kan beter worden gemaakt. maar dit kost u 800 euro. U heeft de keuze om uw huisdier te helpen voor 800 euro of u laat hem inslapen.
Wat zou u doen?

- Behandeling goedkeuren (Door naar vraag 22)
- In laten slapen (Door naar vraag 22)
- Afhankelijk van eigenschappen van en de gevolgen voor het dier

21. Naar welke eigenschappen van een dier en de operatie kijkt u als u een keuze moet maken tussen behandelen of inslapen?
Meerdere antwoorden mogelijk

- Leeftijd van het dier
- Kans van slagen van de operatie
- Invloed van de operatie op uw vrijetijdsbesteding (vooral betrekking op sport dieren)
- Gevolgen van de operatie voor het dier
- Anders, namelijk:.....

Gevoel over huisdier

22. Hoe ziet u uw huisdier(en)?

- Als een deel van de familie
- Als een kind van uzelf
- Als een vriend, die er altijd voor u is
- Als een functiedier (bewaken van het huis etc.)
- Als een vrijetijdsbesteding (sport)
- Als een last waar u het liefste vanaf wilt
- Anders. Namelijk: .....

23. Praat u tegen uw huisdier(en)?

- Ja
- Nee

24. Eet uw huisdier(en) mee met uw eten?

- Ja
- Nee
- Soms. afhankelijk van het eten

25. Slaapt uw huisdier(en) bij u op de slaapkamer?

- Ja
- Nee

26. Gaan uw huisdier(en) mee met vakantie?

- Ja. altijd
- Ja. als het mogelijk is
- Soms. afhankelijk van type vakantie
- Nee

27. Bent u gehecht aan uw huisdier(en)?

- Ja
- Nee

28. Hoe uit u dat u gehecht bent aan uw huisdier(en)?

_____
_____
_____
_____
_____

29. Zijn er nog dingen die u kwijt wil met betrekking tot verzorging en gevoel voor uw huisdier(en)?

_____
_____
_____
_____
_____

30. Bent u geïnteresseerd in de uitslag van dit onderzoek?
Laat dan hier uw mailadres achter

_____

Nogmaals ontzettend bedankt voor uw deelname aan deze enquête!

8.2 Annex 2 Folder

8.3 Annex 3 Interview

Interview: huisdierbezitters

Naam: ..... **M/V**

Leeftijd: ..... *Woonplaats*: .....

Hoogst genoten opleiding: ..... *Beroep*: .....**Parttime/fulltime**

Eigen eerste indruk van huisdierbezitter en zijn of haar huisdier(en) (Uiterlijk huisdier, uiterlijke verzorging huisdierbezitter en gewicht van beide)

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

Huisdieren

Definitie van huisdieren in deze enquête: Dieren waarvan de leefomgeving gecreëerd is door de mens. die niet worden gebruikt voor broodwinning. Voorbeelden zijn hond. paard. schaap. vissen en konijnen.

1. Welke soorten en aantallen huisdieren houdt u op dit moment?

Diersoort	Aantal

2. Wat voor voeding geeft u uw huisdieren?

	Voeding					
	Ochtend		Avond		Tussendoor	
Diersoort	Merk	Hoeveelheid	Merk	Hoeveelheid	Merk	Hoeveelheid

3. Hoeveel geld geeft u gemiddeld per maand uit aan voeding voor uw huisdier(en)?
Per huisdier opgeven

_____
_____
_____
_____
_____
_____

4. Waarom gebruikt u deze merken? (voorbeelden zijn: voorlichting winkel. aanbevolen door vrienden. reclames)

_____
_____
_____
_____
_____
_____

5. Waarom voert u deze hoeveelheden? (Voorbeelden zijn: voedingsschema op product. opgelegd door dierenarts. eigen inzicht. boeken)

_____
_____
_____
_____
_____
_____

6. Welke informatiebronnen gebruikt u om een optimaal voedingsschema op te stellen voor uw dier(en)?

- ☐ Vanuit eigen kennis
- ☐ Met behulp van informatie van andere huisdierhouders (persoonlijk of forums)
- ☐ Met behulp van (populair) wetenschappelijke literatuur (artikelen)
- ☐ Met behulp van boeken
- ☐ Met behulp van internetsites
- ☐ Met behulp van informatie van dierenartsen
- ☐ Met behulp van informatie van fokkers
- ☐ Met behulp van informatie van algemene dierenspeciaalzaken
- ☐ Met behulp van een vereniging of club gericht op uw huisdier
- ☐ Anders. namelijk:

_____
_____

7. Ben u in het verleden gewisseld van merk voer? Waarom wel of waarom niet.

_____
_____
_____
_____
_____
_____

8. Heeft u in het verleden de hoeveelheid voer verhoogd of verlaagd? Waarom? (voorbeelden voor verandering zijn: overgewicht. ondergewicht. advies van dierenarts)

_____
_____
_____
_____
_____
_____

9. Wat vind u van de beschikbare informatie over diervoeding? (Zijn er nog onderwerpen die u mist of waar u nog informatie over wil maar het niet kan vinden?)

_____
_____
_____
_____
_____
_____

10. Hoeveel uur besteedt u gemiddeld per dag aan uw huisdier (per huisdier)?

- < 1 uur
- 1-3 uur
- 3.5-5 uur
- > 5 uur

11. Hoe is de bestede tijd aan uw huisdier verdeeld over activiteiten?
Voorbeelden van activiteiten zijn eten geven. wandelen of spelen met uw huisdier

ACTIVITEIT	AANTAL UUR	DIERSOORT

12. Hoeveel uur per dag is uw huisdier actief in beweging?

- >1 uur
- 1-3 uur
- 3.5-6 uur
- > 6 uur

Eigen gezondheid

13. Hoeveel uur per dag bent u actief in beweging?

- < 1 uur
- 1-3 uur
- 3.5-6 uur
- > 6 uur

14. Heeft u last van chronische ziektes die invloed hebben op uw lichamelijke beweging? Zo ja welke ziektes? (Voorbeelden zijn: longaandoeningen. Chronische ziekten kunnen worden veroorzaakt door de afwezigheid van huisdieren)

_____
_____
_____
_____
_____
_____

15. Heeft u last van allergieën? Zo ja welke allergieën?
Een huisdier kan namelijk invloed hebben op allergieën.

_____
_____
_____
_____
_____

16.Uit onderzoek is gebleken dat huisdieren een depressie kunnen voorkomen. Herkent u dit? Vind u het vervelend om lange tijd weg te zijn van uw huisdier? (Waaraan herkent de geïnterviewde dit?)

_____
_____
_____
_____
_____

17. Heeft u het idee dat uw huisdier uw stress wegneemt? (Hoe uit zich dit volgens de geïnterviewde)

_____
_____
_____
_____
_____

18. Bent u opgegroeid met huisdieren? Zo ja welke huisdieren? (Minder kans op allergieën als de geïnterviewde opgegroeid is met huisdieren)

_____
_____
_____
_____
_____

19. Zijn er dingen die u kwijt wil met betrekking op de huisdieren en hun voeding?

_____
_____
_____
_____
_____
_____

20. Bent u geïnteresseerd in de uitslag van dit onderzoek?
Laat dan hier uw mailadres achter

_____

8.4 Annex 4 Categories survey

Table 18 Categories from answers survey

Categories age in years	
1	18-25
2	26-35
3	36-45
4	46-55
5	56-65
6	> 65

Family composition	
1	Living alone
2	Living together and children living away from home
3	One parent with children living at home
4	Two parents with children living at home

Attachment to a pet	
0	No answer
1	Be there for the pet
2	Taking care and time for the pet
3	Show love and affection and worries about the pet
4	Will do everything for the pet
5	From pets point of view
6	Open answer

8.5 Annex 5 Codes ATLAS

Table 19 Exact codes formulated within ATLAS

Codering ATLAS	
Honden	Mens beweging: < 1 uur
Katten	Mens beweging: 1-3 uur
Knaagdieren	Mens beweging: 3.5-6 uur
Reptielen	Mens beweging: > 6 uur
Vissen	Merk: Bevat geen vis. duurzaam
Vogels	Merk: Eet HD goed
Hoog opgeleid	Merk: Op eigen inzicht
Laag opgeleid	Merk: Gemakzucht
Besteding HD[1]: < 1 uur	Merk: Goedkoop
Besteding HD: 1-3 uur	Merk: Op behoefte van HD
Besteding HD: 3.5-6 uur	Merk: Op voorraad in dierenwinkel
Besteding HD: > 6 uur	Merk: Opleidingskennis
Diervoeding: Eenzijdig	Merk: Via fokker
Diervoeding: Geen interesse	Opgegroeid: Geen HD
Diervoeding: Misleidende informatie	Opgegroeid: Gezelschapsdieren en andere HD
Diervoeding: Onduidelijke richtlijnen. veel verschillen	Opgegroeid: Vissen
Diervoeding: Onduidelijke informatie	Stress wegnemen: Altijd. wanneer nodig
Diervoeding: Goed zoeken voor informatie	Stress wegnemen: Tijdelijk
Diervoeding: Goed	Stress wegnemen: Nee
Gewisseld: Aanraden van bekende	Stress wegnemen: HD levert stress op
Gewisseld: Door financiële situatie.	Verhoogd voer: Ondergewicht
Gewisseld: Faillissement voedingsbedrijf	Verhoogd voer: Op de groei en leeftijd
Gewisseld: Meer vermogen	Verlaagd voer: Overgewicht
Gewisseld: Eet de HD beter	Verlaagd voer: Preventief
Gewisseld: Gemakzucht	Verlaagd voer: Ziekten HD
Gewisseld: Goedkoper	Hoeveelheden niet veranderd door tijd
Gewisseld: HD at voer niet	HD en voeding: Betere en informatievere etiketten nodig
Gewisseld: Nier problemen	HD en voeding: Cursus bij aanschaf HD
Gewisseld: Niet goed voor HD	HD en voeding: Dieren hebben voldoende voeding en aandacht nodig
Gewisseld: Opleidingskennis	HD en voeding: HD goed voor gezelschap
Gewisseld: Te veel suiker	HD en voeding: Informatie en observatie verschillen veel
Gewisseld: Te veel zout	HD en voeding: Meer objectiviteit dierenwereld nodig
Gewisseld: Nee	HD en voeding: Meer voorlichting nodig
Hoeveelheden: Advies dierenarts	HD en voeding: Screening voor dat je aan een HD begint
Hoeveelheden: Advies fokker	HD en voeding: Te veel verschillende informatie
Hoeveelheden: Boeken. onderzoek	Allergie: Alle gezelschapsdieren
Hoeveelheden: Eigen inzicht	Allergie: Knaagdieren en hond

[1] HD= Huisdier (NL), Pet (EN)

Hoeveelheden: Fysieke toestand observeren	Attachment: Kan goed zonder HD
Hoeveelheden: Voedingsschema verpakking	Attachment: Verrijking van het gezin
HD beweging: 1-3 uur	Attachment: Gehecht
HD beweging: 3.5-6 uur	Attachment: Zeer gehecht
HD beweging: > 6 uur	

8.6 Annex 6 Codes-primary documents tables

Table 20 Codes-primary documents table: Activity pet and owner

	Hoog opgeleid	Laag opgeleid	HD beweging: 1-3 uur	HD beweging: 3.5-6 uur	HD beweging: > 6 uur	Mens beweging: < 1 uur	Mens beweging: 1-3 uur	Mens beweging: 3.5-6 uur	Mens beweging: > 6 uur	Honden	Katten	Knaagdieren	Reptielen	Vissen	Vogels	TOTALS:
P 1: Interview _tessa.docx	1			1		1						1	1			5
P 2: Interview_ carja.docx	1		1					1		1						4
P 3: Interview_ esther.docx		1			1			1			1	1		1		6
P 4: Interview_ Ilse.docx	1			1	1		1					1	1			6
P 5: Interview_ jolanda.docx	1			1			1					1				4
P 6: Interview_ maaike.docx		1	1						1	1						4
P 7: Interview_ welmoed.docx	1				1		1								1	4
P 8: Interview_hester.docx	1			1			1				1					4
P 9: Interview_karel.docx	1				1			1							1	4
P10: Interview_martin.docx	1				1				1			1				4
P11: Interview_remco.docx	1				1			1			1		1	2		7
P12: Interview_rita.docx		1	1						1	1		1				5
P13: Interview_willeke.docx		1	1						1	1						4
P14: Interview_gina.docx		1	1						1		1					4
P15: Interview_Lesley.docx		1			1				1	1		1		1		6
TOTALS:	9	6	5	4	7	1	4	4	6	5	4	7	3	4	2	71

Table 21 Codes-primary documents table: Attachment to pet

	Hoog opgeleid	Laag opgeleid	Attachment: kan goed zonder HD	Attachment: Verrijking op het gezin	Attachment: Gehecht	Attachment: zeer gehecht	Besteding HD: < 1 uur	Besteding HD: 1-3 uur	Besteding HD: 3.5-5 uur	Besteding HD: > 6 uur	Stress: altijd. wanneer nodig	Stress: Tijdelijk	Stress: levert ook stress op	Stress: Nee	TOTALS:
P 1: Interview _tessa.docx	1				1			1				1			4
P 2: Interview_ carja.docx	1					1			1		1				4
P 3: Interview_ esther.docx		1				1		1				1			4
P 4: Interview_ Ilse.docx	1				1			1				1			4
P 5: Interview_ jolanda.docx	1				1			1			1				4
P 6: Interview_ maaike.docx		1				1			1		1				4
P 7: Interview_ welmoed.docx	1				1			1			1				4
P 8: Interview_hester.docx	1				1		1					1			4
P 9: Interview_karel.docx	1			1				1				1			4
P10: Interview_martin.docx	1			1				1				1	1		5
P11: Interview_remco.docx	1			1				1				1			4
P12: Interview_rita.docx		1			1				1		1				4
P13: Interview_willeke.docx		1	1					1						1	4
P14: Interview_gina.docx		1				1				1		1			4
P15: Interview_Lesley.docx		1			1					1	1				4
TOTALS:	9	6	1	3	7	4	1	9	3	2	6	8	1	1	61

Table 22 Codes-primary documents table: Allergy for pet

	Hoog opgeleid	Laag opgeleid	Allergie: Alle gezelschapsdieren	Allergie: knaagdieren. hond	opgegroeid: geen HD	Opgegroeid: Gezelschapsdieren en andere	Opgegroeid: Vissen	TOTALS:
P 1: Interview _tessa.docx	1					1		2
P 2: Interview_ carja.docx	1						1	2
P 3: Interview_ esther.docx		1				1		2
P 4: Interview_ Ilse.docx	1					1		2
P 5: Interview_ jolanda.docx	1		1		1			3
P 6: Interview_ maaike.docx		1				1		2
P 7: Interview_ welmoed.docx	1					1		2
P 8: Interview_hester.docx	1					1		2
P 9: Interview_karel.docx	1					1		2
P10: Interview_martin.docx	1					1		2
P11: Interview_remco.docx	1			1	1			3
P12: Interview_rita.docx		1				1		2
P13: Interview_willeke.docx		1				1		2
P14: Interview_gina.docx		1				1		2
P15: Interview_Lesley.docx		1				1		2
TOTALS:	9	6	1	1	2	12	1	32

Table 23 Codes-primary documents table: Animal Nutrition. Brands

	Hoog opgeleid	Laag opgeleid	Merk: bevat geen vis. duurzaam	Merk: eet goed	Merk: eigen inzicht	Merk: Gemakzucht	Merk: goedkoop	Merk: op behoefte van HD	Merk: op voorraad winkel	Merk: opleidingskennis	Merk: Via fokker	Gewisseld: Aanraden van bekende	Gewisseld: door financiële situatie	Gewisseld: eten ze beter	Gewisseld: faillissement	Gewisseld: gemakzucht	Gewisseld: Goedkoper	Gewisseld: HD at voer niet	Gewisseld: Meer vermogen	Gewisseld: Nier problemen	Gewisseld: Niet goed voor HD	Gewisseld: Opleidingskennis	Gewisseld: tandproblemen	Gewisseld: te veel suiker	Gewisseld: te veel zout	Gewisseld: Nee	TOTALS:
P 1: Interview tessa.docx	1			1					1	1												1					5
P 2: Interview carja.docx	1									1					1												3
P 3: Interview esther.docx		1								1										1			1				4
P 4: Interview Ilse.docx	1			1	1					1											1						5
P 5: Interview jolanda.docx	1			1			1											1									4
P 6: Interview maaike.docx		1		1														1					1				4
P 7: Interview welmoed.docx	1						1			1							1										4
P 8: Interview hester.docx	1									1									1					1	1		5
P 9: Interview karel.docx	1			1							1															1	4
P10: Interview martin.docx	1				1																1						3
P11: Interview remco.docx	1		1				1	1		1		1	1														7
P12: Interview rita.docx		1		1														1									3
P13: Interview willeke.docx		1				1																	1		1		4
P14: Interview gina.docx		1		1										1		1											4
P15: Interview Lesley.docx		1		1						1																1	4
TOTALS:	9	6	1	8	2	1	3	1	1	8	1	1	1	1	1	1	1	3	1	1	2	1	3	1	2	2	63

Table 24 Codes-primary documents table: Animal Nutrition. Quantities

	Hoog opgeleid	Laag opgeleid	Hoeveelheden: advies dierenarts	Hoeveelheden: advies fokker	Hoeveelheden: Boeken. onderzoek	Hoeveelheden: eigen inzicht	Hoeveelheden: fysieke toestand meten	Hoeveelheden: Voedingsschema verpakking	Hoeveelheid gelijk gebleven	Verhoogd: ondergewicht	Verhoogd: op de groei en leeftijd	Verlaagd: overgewicht	Verlaagd: Preventief	Verlaagd: ziekten	TOTALS:
P 1: Interview _tessa.docx	1			1		1	1			1					5
P 2: Interview_ carja.docx	1						1	1					1		4
P 3: Interview_ esther.docx		1			1	1	1					1			5
P 4: Interview_ Ilse.docx	1			1		1	1		1						5
P 5: Interview_ jolanda.docx	1				1						1			1	4
P 6: Interview_ maaike.docx		1				1	1		1						4
P 7: Interview_ welmoed.docx	1					1					1				3
P 8: Interview_hester.docx	1					1			1						3
P 9: Interview_karel.docx	1					1			1						3
P10: Interview_martin.docx	1					1			1						3
P11: Interview_remco.docx	1					1			1						3
P12: Interview_rita.docx		1	1					1				1			4
P13: Interview_willeke.docx		1				1					1				3
P14: Interview_gina.docx		1				1					1				3
P15: Interview_Lesley.docx		1				1						1			3
TOTALS:	9	6	1	2	2	12	5	2	6	1	4	3	1	1	55

Table 25 Codes-primary documents table: Additions and recommendations respondents

	Hoog opgeleid	Laag opgeleid	Diervoeding: eenzijdig	Diervoeding: geen interesse	Diervoeding: goed	Diervoeding: goed zoeken voor informatie	Diervoeding: Misleidende informatie	Diervoeding: onduidelijke richtlijnen. veel verschillen	Diervoeding: onduidelijkheid informatie	HD en voeding: Beter en informatievere etiketten	HD en voeding: Cursus bij aanschaf HD	nodig	HD en voeding: HD goed voor gezelschap	HD en voeding: Informatie en observatie verschillen veel	HD en voeding: Meer objectiviteit nodig	HD en voeding: Meer voorlichting nodig	HD en voeding: Screening voor het hebben van HD	HD en voeding: te veel verschillende informatie	TOTALS:
P 1: Interview tessa.docx	1		1					1										1	4
P 2: Interview carja.docx	1								1		1								3
P 3: Interview esther.docx		1					1									1			3
P 4: Interview Ilse.docx	1							1							1				3
P 5: Interview jolanda.docx	1						1									1			3
P 6: Interview maaike.docx		1			1									1					3
P 7: Interview welmoed.docx	1				1		1												3
P 8: Interview hester.docx	1				1	1				1						1			5
P 9: Interview karel.docx	1				1							1							3
P10: Interview martin.docx	1					1										1			3
P11: Interview remco.docx	1						1		1	1									4
P12: Interview rita.docx		1			1								1						3
P13: Interview willeke.docx		1		1															2
P14: Interview gina.docx		1		1													1		3
P15: Interview Lesley.docx		1		1															2
TOTALS:	9	6	1	3	5	2	4	2	2	2	1	1	1	1	1	4	1	1	47