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VETERINARY ALTERNATIVE THERAPIES, AN OWNER'S PERSPECTIVE

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1. INTRODUCTION

The current explanation of complementary and alternative medicine (CAM) is described as being situated outside of western conservative medicine as a natural, eccentric or holistic therapy, although the expression "integrative medicine" has been promoted to explain its partnership to conservative medicine, rather than as an alternative to (Bergenstrahle & Nielsen, 2015).

CAM refers to healing methods that have increased in popularity in all ages as their approach addresses the "individual" as a whole. The basis behind such therapy is that they are believed to influence the energy of one's body and its effect on health and disease, to help conduct this energy into easing emotional and physical signs and treating underlying causes of a disease (Budgin & Flaherty, 2013) (Raditic & Bartges, 2014). CAM therapies comprise of acupuncture, aromatherapy, chiropractic, massage, phytotherapy and many others that those with chronic conditions tend to inquire about to improve quality of life and perhaps also their treatment plan, as often seen in oncology patients as they are mainly extremely safe to use (Raditic & Bartges, 2014) (Kidd, 2012).

It has been shown that statistically significant gender differences exist, with women having a far greater interest in complementary therapies then men who were more likely to have a negative attitude towards CAM, but age had no influence. In Europe, England carried the highest percentage (32%) of medical practitioners using complementary therapies as part of their practice followed closely by Germany. On the other hand, in Hungary, the number of CAM usage among hospital physicians is far less than average as only 18 out of 258 surgeons and anaesthesiologists (7%) claimed to use complementary therapies. Interestingly, 52.7% of partakers expressed interest in CAM, the main influential factors were the need for scientific evidence and personal experience (Soós et al., 2016).

A 2017 study researched the health-related and sociodemographic determinants of using CAM therapies in Europe and the differences among countries by using the European Social Survey (ESS). They distinguished that 25.9% of the general population had used a CAM therapy in the past year and frequently as a complementary treatment. The use of complementary therapies varied significantly between countries, with 10% in Hungary to 40% in Germany. Level of CAM use was greater among middle-aged women and those with higher education than the youngest and oldest age categories (Kemppainen et al., 2017).

In Hungary, research showed that in 2018 the following reasons were given by people for using CAM; 55% declared improvement to health when done alongside conservative treatments, 50% out of curiosity, 28% because conservative methods did not help, 26% due to CAM being suggested by their physician and 13% for the reason that western medicine being too costly. The survey established that people wanted to use alternative treatments as a complement to conservative medicine, rather than instead of. Typically, these people were mainly women, middle aged, well educated, higher income and city residents (Hegyi, 2018).

Despite the CAM therapies being categorized as non-traditional and heavily debated in Western practice, there is a steady increase in their usage by pet owners (Marziani, 2018). With this in mind, it is apparent that even for those individual veterinary practitioners who may or may not offer such services, a working knowledge of CAM is becoming obligatory in today's veterinary health care practice (Kidd, 2012). A study showed that 60% of veterinarians were in need of knowledge or skills related to alternative therapies on a regular basis (Raditic & Bartges, 2014) (Budgin & Flaherty, 2013).

As a general rule, emphasis on CAM is placed on a holistic attitude and in a veterinary approach it must not only take into consideration the human-animal connection but also the veterinarian-patient bond (Kidd, 2012). However, due to complementary and alternative therapies having such a different method of detecting, diagnosing, and prescribing compared to the conventional ways, as well as having only a small select veterinary educational facilities providing the knowledge to handle and understand CAM, has left many a relationship between a veterinarian and pet owner at an impasse (Kidd, 2012).

Pet owners have stated that when they have revealed their use of CAM their veterinarian responded in a negative manner thus feeling reprimanded and avoided mentioning the topic of CAM altogether when seeing other practitioners. Others believed their veterinarian was simply inexperienced and unable to inform them correctly leading to an unsupervised usage of alternative therapies by seeking advice from friends or the internet, which may provide sufficient yet inaccurate information (Marziani, 2018). Overall though, a study showed that pet owners are willing to communicate their need for their veterinarian to advise and support them with a range of therapy options (Bergenstrahle & Nielsen, 2015).

Over the last decade, there has been a substantial increase in interest towards complementary and alternative therapies, including an increased publication of literature concerning CAM, from twenty related articles in 2002 to over 22'000 by 2011 noticed by Medline, PubMed (Hegyi, 2018). Nevertheless, whether this general recognition and approval of CAM is

simply urged forward by consumer demand or the changes in attitude by medical practitioners is still being disputed (Bergenstrahle & Nielsen, 2015).

Pet owners are already inquisitive towards CAM and are likely to seek out their use for themselves and their pets more and more as the appeal grows when conventional medicinal proves to be too expensive, ineffective or linked with undesirable side effects (Budgin & Flaherty, 2013). Therefore, it is the veterinarian's duty to understand and not judge an owner's requests concerning complementary therapies, and to remember that even if the modality lacks research, does not make it taboo or unreasonable (Chauvet, 2019). With this at the forefront of one's mind, it is necessary to be aware of which factors may play a role with the owner's decisions towards their pet's treatment plan and consequently, providing the veterinarian the possibility to advise and guide in the most beneficial way for the owner's and the pet's well-being.

As seen in previous studies where the factors influencing a person's level of CAM use were determined, in this study, its objective is to determine the factors and personal reasons that may affect an owner's perspective on CAM for their pet. Hence, it is hypothesised that there are several factors that will affect an owner's perspective on the usage of complementary and alternative medicine therapies.

2. LITERATURE REVIEW

2.1 Acupuncture & Electroacupuncture

Acupuncture has been used for no less than 3000 years, with the first written text dating back to 620 B.C. (Koski, 2011). The International Veterinary Acupuncture Society describes the therapy as stimulating acupoints linked to neurologic, immunologic, and endocrine systems (Kidd, 2012). On a physiological level, via a sympathetic or parasympathetic output through spinal neurotransmitter adjustments it alters the body's homeostasis (Wright, 2019).

Multiple published studies suggest that acupuncture could be used for cancer patients, promoting pain management, gastrointestinal effects and higher quality of life, but there are currently few detailed studies in dogs and cats with cancer (Raditic & Bartges, 2014). However, in companion animals there are more than 150 acupoints with exact locations and effect found across their body (Chauvet, 2019). To enhance acupuncture, gentle electrical currents can be used to stimulate acupoints, termed electroacupuncture, or laser acupuncture for those patients who do not endure needle placement as seen in exotic animal such as birds (Fry et al., 2014) (Marziani, 2018).

Geriatric animals have shown to benefit the most from veterinary acupuncture when suffering from musculoskeletal, gastrointestinal, and respiratory issues. Other ailments such as cardiovascular, immune mediated, neurologic and dermatologic disorders have also been successfully handled (Kidd, 2012). A study on refractory epilepsy showed that a reduction by 50% in 9 out of 10 dogs occurred as well as a change from cluster to singular seizures and another had a 83% success rate in treating canine thoracolumbar intervertebral disc disease (Roynard et al., 2018).

In 102 performance horses, the scanning or palpation for acupoints for assessing lameness was performed across an equal distribution of both sound and lame individuals. The study concluded that acupuncture scanning had an 82.4% sensitivity and a 78.4% specificity in detecting lameness (Jeune et al., 2016).

2.2 Aromatherapy

Its use has been traced back to 6000 years ago in Ancient Egypt, Far East China, and Europe. Aromatherapy's main therapeutic agents are essential oils, comprised of concentrated ingredients from plant components, which are mixture of unsaturated and saturated esters,

alcohol and ketones to name a few thus producing a distinguishing odour (Ali et al., 2015) (Baldwin & Chea, 2018).

The medicinal properties of these oils have been recorded for nearly 250 years by the British Pharmacopoeia and noted under antibacterial, antispasmodic, antidepressant, analgesic or as a relaxant (Baldwin & Chea, 2018). The Basil essential oil displayed an antimicrobial potential as a bactericidal to *Aeromonas, Hydrophila* and *Pseudomonas fluorescens* as well as oral microbes such as *Fusobacterium nucleatum* and *Streptococcus mutans* (Ali et al., 2015). Other instances of antimicrobial properties have been seen in several oils especially sauce thyme and oregano against *Staphylococcus xylosus* (Huerta et al., 2016).

The evaluation of antiviral properties of essential oils composed of *Melaleuca ericifolia*, known as swamp paperbark and its fellow species on the herpes simplex type 1 virus on African green monkey kidney cells have shown remarkable successful results (>90%). If researched properly, many essential oils may be found to have synergistic effects with pharmacological drugs (Ali et al., 2015).

Essential oil not only have a topical and oral approach but also can be more easily inhaled, seen by a study concerning rats inhaling chamomile vapor, which help reduce stress levels (Baldwin & Chea, 2018). The equine industry could greatly benefit from methods that decrease the effects of acute stress thus a study was performed on the recovery time of horses under acute stress, which resulted in a statistically significant reduction in heart rate after treatment (Ferguson et al., 2013).

2.3 Bio-resonance

Bio-resonance is a biophysical treatment method that uses electromagnetic waves to change the individual's energy field thus improving their immunity and overall well-being. These electromagnetic waves are distributed through the non-invasive manner of placing electrodes on the skin that are attached to a Bicom machine to monitor the wavelengths emanating from the body and then counteracting negative frequencies to re-establish equilibrium (Karakos et al., 2019).

A study evaluating the thyroid gland function in 36 dogs, 7 were detected to have a decrease in function and 5 of those were proved with biochemical blood tests to have a reduced level of function. The other 2 dogs showed that their blood parameters fell within the normal range, which may imply that there is a concealed change to the gland that biochemical tests cannot assess (Bobrytska el al., 2018).

2.4 Chiropractic

A therapy that highlights the innate ability of the body to heal itself without the need for surgery or medication and focuses primarily on the spine and the nervous system. Chiropractic for companion animals was founded by Sharon Willoughby, DVM, DC, in 1988 followed one later by the American Veterinary Chiropractic Association that is a certifying and policing agency for chiropractic educational facilities and graduates (Kidd, 2012).

Special attention is given to the vertebral subluxation complex (VSC) during general examination of posture and gait, extremities, and neurological and orthopaedic assessments. Certain adjustments directed at specific articulations use a controlled thrust with high velocity by hand or instrument, while others require a light contact to attain desirable results. Overall, considered a safe technique yet there has been some apprehension about its possibility to cause side effects in people (Kidd, 2012).

For animals, an adapted form of the Gonstead technique is most used as it comprises of a thrust at high velocity but low impact at certain areas of hypomobility to slowly increase the range of motion (Pesch, 2014). When used as a complement therapy to rehabilitation, it has been seen to forestall the need for surgery (Chauvet, 2019).

2.5 Elastic kinesiology tape

Introduced by Dr Kenzo Kase in 1979 as an effective substitute to McConnell taping, wrapping techniques and compressive bandaging. Interestingly, it is a therapy that requires the approval and application by a veterinarian or trained professional. The Elastic Kinesiology Tape (EKT) is composed 100% of cotton elastic fibres that stretches to 140% of its resting length along its longitudinal axis comparable to the elasticity of skin. The tape colours are all hypoallergenic originating from plant extracts with no difference to the tape's physical properties although certain colours are used for specific treatments (Molle, 2016).

The tape affects major physiological systems like the skin, fascia, muscle, lymphatic including joints and so veterinary EKT is used for pain relief, improving blood circulation, lymphatic flow and muscle function, as well as supporting articulations. This method of treatment has increased in demand from equine veterinarians due to the improvement to injured muscles, biochemical and postural dysfunction as wells as aiding performance and recovery time (Equine Kinesiology Tape VetkinTape, 2020).

2.6 Homeopathy

Developed by Samuel Hahnemann, a German physician, in the 1800s who assumed the attitude that like treats like and in 1995 the Academy of Veterinary Homeopathy was founded. The term "homeopathy" has been often misused by clients and laypersons alike to simply label any alternative medicine or substances prepared in such a way to change their electromagnetic dynamics. Samuel Hahnemann created the term "homeopathy" to simply define a treatment that used medicines that caused similar signs as that of the disease, which would increase an imbalance of the homeostasis stimulating a healing response by the body to equilibrate (Pesch, 2014).

A study on hyperthyroid cats that were given customised homeopathic treatment showed a positive outcome when treated with *Thyroidinum* (Chapman, 2011). However, owing to the lack of scientific studies to validate its statements of therapeutic abilities and its contradictory theory that the more diluted a remedy is, the more potent it becomes has caused many critics to complain in Western medicine (Kidd, 2012).

2.7 Magnetic field therapy

Correctly labelled as Magnetic Field or as Pulsed Electromagnetic Field (PEMF) therapy is method of non-invasively treating tissues by sending out electric and magnetic fields with the use of inductive coils. Veterinarians and pet owners have stated much confusion in the past concerning the multiple types of equipment and the evidence supporting them (Gaynor et al., 2018).

Studies have shown that PEMF therapy causes vasodilation and influences the immune and nervous system and its use is beneficial to treat pain, bone fractures, arthritis, oedema, inflammation, and chronic injuries. The FDA has made painstaking research on the devices and has deduced them to be a safe treatment modality that has the ability to become a complementary or independent therapy used in veterinary care (Gaynor et al., 2018).

2.8 Massage

Implies the use of digital pressure to spinal lever points, to instigate relaxation in tense muscles and to restore normal muscle tone by removing irregular nerve conduction, easing pain and improving circulation thus returning the freedom of movement to the individual (Pesch, 2014). Generally used in patients with oedema, osteoarthritis, chronic pain and in

prolonged recumbency as well as to improve emotional and behaviour conditions (Corti, 2014).

An experiment conducted on rats to ascertain if postoperative ileus is affected by visceral massage. The results showed that the operated group that received massage treatment had an improved gastrointestinal transit time for the first faecal pellet discharge. Other comparisons also indicated a reduced total number of intraperitoneal inflammatory cells and protein levels (Chapelle and Bove, 2013). Other studies concerning the use of CAM therapies for pain relief have linked the release of serotonin and decreased serum cortisol levels with massage (Formenton et al., 2017).

2.9 Nutraceuticals

A term "Nutraceuticals" to describe any produce originating from one or multiple food source that have extra advantages to one's health as well as the regular nutritional value found in those feeds. The European Parliament assumed the "Directive on Food supplements" developed by the European Union in 2005 containing a list of accepted ingredients allowed in food supplements to safeguard consumers from possible side effects as nutraceuticals blur the line between drug and food category (Wynn & Fougére, 2007) (Food Supplements, 2020).

Research on pets with cancer discovered that calcitriol, the active form of vitamin D, has a broad in vivo and in vitro antineoplastic activity in multiple tumour model systems. Vitamin A was also evaluated for oncology treatment and protection, which showed a 42% response rate in dogs with cutaneous lymphoma and osteosarcoma cell lines (Raditic & Bartges, 2014).

For the treatment of otitis caused by ear mites or Malassezia otitis, almond oil and topically powdered probiotics have proved effective in such cases as well as soothing irritated tissues. Calendula is another example of a topically applied herbal non-alcoholic spray for antipruritic, antimicrobial and anti-inflammatory purposes. (Pesch, 2014) The vitamin B complex has proven to be particular useful for geriatric patients, thiamine (B1) for Parkinson's or Alzheimer's cases, cyanocobalamin (B12) in supporting the digestive system and pyridoxine (B6) and riboflavin (B2) are helpful in neuromuscular support (Chauvet, 2019).

2.10 Physiotherapy

Considered as a complementary therapy that is science based as it encompasses the holistic approach towards a patient and the techniques of massage combined with the study of exercise and movement. The National Association of Veterinary Physiotherapists (NASVP1) founded in 1985 promoted the use of professional use of physiotherapy that could be used in conjunction with long term veterinary care of neurologic or musculoskeletal disorders (Physiotherapy for Animals, 2020).

Physiotherapy use has increased significantly with pet owners, especially in the equine world, mainly because it can offer a broad range of therapies, from manual (massage, manipulations, stretches) to electrotherapies (laser, PEMF, stimulation) as well as corrective exercise programmes to improve mobility and welfare. Additionally, it provides the educative support for owners to understand and learn to handle their injured pet and how to modify their environment to aid the animal's rehabilitation (Bergenstrahle & Nielsen, 2015) (Physiotherapy for Animals, 2020).

2.11 Herbal medicine (Phytotherapy or Ethnomedicine)

An amalgamation of several fields such as botany, history, ethnomedicine and pharmacology, called sometimes as veterinary anthropology or ethnoveterinary medicine, which can be described as a study of holistic, cultural, and local knowledge used to improve the healthcare and development of livestock with the aim to protect consumers (Wynn & Fougére, 2007).

One of the easier CAM therapies for the conservative physician to understand as it relies on the active substances extracted from plants to aid the body in a healthy way. Studies have determined, from several cultures, 122 composites derived from plant sources that are used in day to day medicine. As a single plant may include a dozen of bioactive substance, which most of them are free from side effects, the Veterinary Botanical Medicine Association has dedicated itself to instruct and research responsible herbal medicine (Kidd, 2012).

Phytotherapy is an incredibly accessible form of CAM, which between 2003 and 2006 allowed more than half of the world's population to access it. In Europe, Germany and France lead in herbal production and use, while the herbal supplement sales in the United States of America surpassed $5.2 billion in 2010. Approximately 55% of use has been linked to cancer patients, which has helped fuel curiosity in the veterinary field whether or not they may help treat cancer in animals (Raditic & Bartges, 2014).

The study into the treatment of splenic hemangiosarcoma in 15 splenectomised dogs using *Coriolus versicolor* (cloud mushroom) described a decrease in proliferation and apoptosis of cancer cells thus delaying the progression or development of abdominal metastasis in comparison to those not receiving *C. versicolor* treatment. An in vitro study using alpha-mangostin, derived from mangosteen fruit, on canine osteosarcoma cells resulted in apoptosis (Raditic & Bartges, 2014).

The list of plants and their compounds are more than 12’000, linked to soothing alimentary canal and the gastrointestinal tract to stimulating phagocytosis or having a hypoglycaemic effect, even reducing inflammation of the respiratory tract during Kennel cough (Pesch, 2014).

3. MATERIAL & METHOD

This study uses a questionnaire of 23 questions, which was translated into English and Hungarian (see Appendix 1 and 2), followed by being published online to social media and sent by electronic mail through using Google Forms as well as being printed as paper copies. The paper copies, in both languages, were then distributed to the University of Veterinary Medicine Budapest Small Animal Clinic receptionist, who would ask clients to fill them out during the waiting time before their appointment.

The electronic and printed questionnaires were collected over a 476-day period, from May 2019 to September 2020. The presenting questions were translated, recorded, and tabulated into Microsoft excel. The answers to the questions concerning gender, education level, country of residence, age category, residence area and number of years with pets were inserted into the IBM Statistical Package for Social Sciences (SPSS) Software. Additionally, the answers to personal use, requirement for alternative therapies, using therapies without supervision, price per occasion and ability to use were also included into the above-mentioned software. The results to the other questions that were not included in the IBM SPSS Software, were further manually analysed using Microsoft excel to discover the frequency distributions of each category.

As the data listed in the IBM SPSS Software is qualitative and falls into the nominal and ordinal levels it was required to transform the data into code thus allowing the software to correctly analyse the figures given. The software began with analysing the frequency distribution per category for each question, identifying the mode as well as the Skewness and Kurtosis of the results to measure the degree and direction of symmetry along with the possibility of outliers in a distribution.

Secondly, The Chi-square test of independence, also known as the Pearson Chi-square test, and the Kruskal-Wallis test are useful multidimensional non-parametric statistical tests allowing to calculate for the potential relationship between an independent variable and several dependent variables.

The independent variables to be selected were the gender, education level, country of residence, age category, residence area and number of years with a pet(s). The dependent variables are the following: personal use, requirement for alternative therapies, using therapies without supervision, price per occasion and ability to use. With the data coded, the Chi-square and Kruskal-Wallis tests were used to help investigate any correlation between the selected independent variable and the 5 dependent variables.

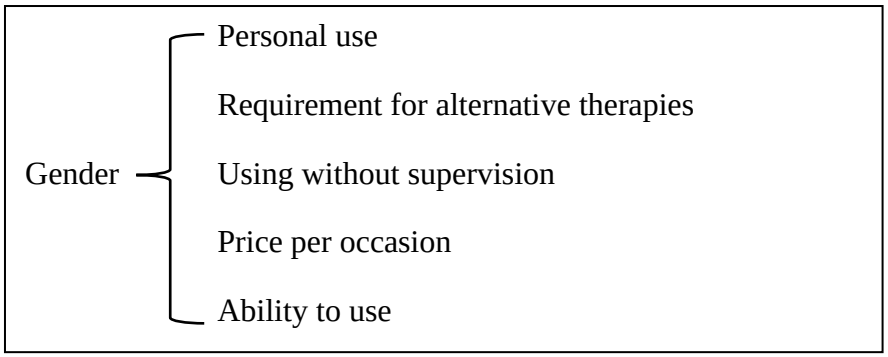

Figure 1. *Example of how the Chi-Square test of independence & Kruskal-Wallis test analyse the relationship between an independent variable and the dependent variables.*

4. RESULTS

4.1 Frequency Distributions

The following questions had their frequency distributions determined as well as their distribution's Skewness and Kurtosis, which concluded that it falls in the range of -1/+1 thus considered as approximately symmetric (see Appendix 3).

4.1.1 To which Gender identity do you most identify with?

	Answers	Percent
Female	177	68.9%
Male	70	27.2%
No Answer	10	3.9%
Total	257	100.0%

Table 1. *Frequency distributions of categorical data for Gender.*

The results analysed by IBM SPSS Software concerning this question showed the majority of the 247 people who answered that 68.9% identified themselves as female and only 27.2% were male.

4.1.2 Your Age group?

	Answers	Percent
<20	10	3.9%
21-30	79	30.7%
31-40	62	24.1%
41-50	50	19.5%
51-60	22	8.6%
>60	26	10.1%
No Answer	8	3.1%
Total	257	100.0%

Table 2. *Frequency distributions of categorical data for Age groups.*

From 249 responses, most owners were in 21-30 years category at 30.7% followed by the 31-40 years at 24.1%. The two with the least number of owners in said category came from the under 20s at 3.9% and the 51-60 years with 8.6%.

4.1.3 What is your highest level of Education?

	Answers	Percent
High School	20	7.8%
Undergraduate	84	32.7%
BSc	73	28.4%
MSc	78	30.4%
No Answer	2	0.8%
Total	257	100.0%

Table 3. *Frequency distributions of categorical data for Education level.*

Of the 255 owners who answered, the majority had an Undergraduate educational level at 32.7%, which was followed closely by those with a Master of Science degree at 30.4%. The minority to have answered were those with a High School education level of only 7.8%.

4.1.4 Do you live in Hungary?

	Answers	Percent
Hungary	157	61.1%
Other	95	37.0%
No Answer	5	1.9%
Total	257	100.0%

Table 4. *Frequency distributions of categorical data for Country of Residence.*

A total of 252 owners answered of which the majority, 61.1%, live in Hungary and only 37% live abroad (classified as “Other”).

4.1.5 Where do you reside?

	Answer	Percent
Capital	122	47.5%
City	44	17.1%
Town	55	21.4%
Village	8	3.1%
Countryside	23	8.9%
No Answer	5	1.9%
Total	257	100.0%

Table 5. *Frequency distributions of categorical data for Residence area.*

Of 252 answers the majority that reside in a Capital at 47.5%, followed by 21.4% that answered in a Town and the minority, at only 3.1%, live in a Village.

4.1.6 Do you personally use any CAM therapies?

	Answers	Percent
Yes	168	65.4%
No	89	34.6%
No Answer	0	0
Total	257	100%

***Table 6**. Frequency distribution of categorical date for Personal use.*

All 257 owners answered this question with 65.4% of them declaring that they use alternative therapies on themselves and only 34.6% do not use them personally.

4.1.7 How long have you had a pet(s)?

	Answers	Percent
<1	16	6.2%
1-5	27	10.5%
6-15	68	26.5%
>15	56	21.8%
Always	88	34.2%
No Answer	2	0.8%
Total	257	100.0%

***Table 7.** Frequency distribution of categorical date for Number of years with a pet/s.*

With 255 answers, the category with a majority at 34.3%, the owners declared of having always had pets. The range, which was selected least, was the less than 1 year at 6.2%.

4.1.1 Is there a requirement for veterinary practices to use CAM therapies?

	Answers	Percent
Yes	167	65.0%
No	13	5.1%
Maybe	77	30.0%
No Answer	0	0
Total	257	100%

***Table 8.** Frequency distribution of categorical data for Requirement of alternative therapies.*

A total of 257 answers showed the majority as 65% fell in the group agreeing that there is a requirement of alternative therapies in veterinary clinics and only 5.1% indicated that no requirement was needed.

4.1.2 Do you use any CAM therapies without veterinary supervision?

	Answer	Percent
Yes	75	29.2%
No	182	70.8%
No Answer	0	0
Total	257	100%

Table 9. *Frequency distribution of categorical data for Using without veterinary supervision.*

The greater number of owners, 70.8%, declared that they do not use alternative therapies without supervision.

4.1.3 If 'No', would you use CAM therapies for your pet if you had the ability to do so?

	Answers	Percent
Yes	78	30.4%
No	23	8.9%
Maybe	78	30.4%
No Answer	78	30.4%
Total	257	100.0%

Table 10*. Frequency distribution of categorical data for Ability to use.*

179 out of 182 from the previous question answered, 60.8% in total selected "Yes" or "Maybe" while only 8.9% stood by not using even with the ability to do so.

4.1.4 Which prices would you find acceptable for such treatments?

	Answers	Percent
1-3k	57	22.2%
4-6k	87	33.9%
7-10k	26	10.1%
10-15k	39	15.2%
Flexible	40	15.6%
No Answer	8	3.1%
Total	257	100.0%

Table 11. *Frequency distribution of categorical data for Price per occasion.*

At 33.9%, the 4000-6000 HUF/occasion was the category that the owners mainly selected. With 7000-10'000 HUF/occasion being the least with only 10.1% of owners selecting it.

4.2 Chi-square test of independence & Kruskal-Wallis test

4.2.1 Does the owner's gender affect their perspective on CAM therapies?

The Kruskal-Wallis test showed that gender significantly affects the personal use of alternative treatments, $H(1) = 3.84$, $p = 0.05$ *($p<0.05$)*. Females were more prone to using such therapies on themselves (68.9%) than males were (55%) (see Appendix 4).

For the other dependent variable categories there was no statistically significant differences *($p>0.05$)* (see Appendix 5-8). Interestingly, females (67.8%) and males (57.1%) both agreed that there was a requirement for alternative therapies in veterinary clinics, yet males (77.1%) were more likely to not use them without veterinary supervision unlike females (69.5%). However, if given the ability to use the therapies, females (47%) were more willing to use than males (36.5%), who were more likely to "maybe" using them (42%). When asked about an acceptable price for such treatments, the majority of females and males alike both accepted the 4-6k HUF/occasion (4000-6000 HUF/ occasion) (35-38.2%), followed by the cheapest category, 1-3k HUF/occasion (23.6-22%). Concerning the two highest price categories, females preferred the 10-15k HUF/occasion while males selected the flexible category where price has no importance.

4.2.2 Does the owner's age affect their perspective on CAM therapies?

The relationship between age and personal use showed a statistically significant correlation, $H(1) = 17.809$, $p = 0.003$ ($p<0.05$) (see Appendix 9). More than 75% of owners in the 21-30 and 41-50 years of age ranges were personally using, followed by 65% of owners using in the plus 60 category. The 31-40 years had 48.4% of owners personally using making it the group least likely to use alternative therapies on themselves.

The tests also showed a statistically significant relation between the owner's age and the price they deemed acceptable for an appointment, $H(5) = 20.091$, $p = 0.001$ *($p<0.05$)* (see Appendix 11). Age groups of under 20 and 21-30 showed to have a higher percentage in choosing the 10-15k HUF/occasion whilst the older categories were more prone to select the 4-6k HUF/occasion.

The correlation between age and the other variables showed no significant differences (see Appendix 10, 12 & 13). More than 53% of owners per age category thought the therapies should be a requirement and more than 65% in each range do not use them without veterinary supervision unless given the ability to do so.

4.2.3 Does the owner's country of residence affect their perspective on CAM therapies?

The correlation between the country of residence and personal use showed to be statistically significant, $H(1) = 14.848$, $p = 0.000$ ($p<0.05$) (see Appendix 14). The owners in Hungary that declared using these therapies on themselves were 57.3% while on the other hand, from abroad, "Other", 81.1% owners admitted to personally using them. Another significant relation was found between the country of residence and the price accepted for an appointment, $H(1) = 60.983$, $p = 0.000$ ($p<0.05$) (see Appendix 16). Those from Hungary, 44.7% chose 4-6k HUF/occasion, followed by 33.6% who selected 1-3k HUF/occasion. In comparison, 38.3% of owners from "Other" countries selected 10-15k HUF/occasion and subsequently 22.3% chose that price was of no importance.

No statistically significant differences were seen with the other variables. However, when comparing between countries of residence, Hungary had 68.8% more owners finding it a requirement to have such therapies at veterinary practices than those from abroad (59%). Nevertheless, both categories under country showed approximately the same number of owners not using therapies without supervision and wanting to use them if they had the ability.

4.2.4 Does the owner's education level affect their perspective on CAM therapies?

The results from the Chi-square and Kruskal-Wallis tests showed no statistical significance between education level and the 5 different variables (see Appendix 19-23). A larger number (>59%) of owners in each education level used alternative therapies and thought there was a need for them to be placed in veterinary clinics. Furthermore, owners of all ages were more likely to not use without supervision and would be willing to try such therapies if given the ability to use them.

4.2.5 Does the owner's residence area affect their perspective on CAM therapies?

The tests indicate that the residence area affects the owner's concept of what the price of an appointment should be in a statistically significant way, $H(4) = 32.773$, $p = 0.000$ ($p<0.05$) (see Appendix 26). The 3 most urban categories (Capital, City and Town) had the higher percentage of owners choosing 4-6k HUF/occasion while the Countryside owners chose 10-15k HUF/occasion. Owners from Village areas were split over 3 different price ranges: Flexible, 1-3k and 6-10k HUF/occasion.

The other variables showed no significant relationship when compared to the residence area (see Appendix 24, 25, 27 & 28). Those from the countryside had a higher percentage (82.6%) of owners personally using alternative treatments than those from a Capital (61%). Nevertheless, more owners in a Capital (69.7%) than in the countryside (56.5%) selected that there is a requirement for such therapies. As in the previous questions, owners from all categories were more likely not to use without supervision unless they had the ability to do so.

4.2.6 Does the number of years with pets affect their perspective on CAM therapies?

There were two statistically significant correlations seen, the first was between the number of years with a pet(s) and the price per appointment, $H(4) = 5.074$, $p = 0.049$ ($p<0.05$) (see Appendix 31). The highest percentage of owners having less than 1 year of experience with a pet had selected 1-3k HUF/occasion, while those with more than 1 year and above of experience had selected 4-6k HUF/occasion. Also, as the number of years with a pet/s increased, there was a higher amount of people selecting the option of "Flexible", which states that the price is of no importance.

The second relationship with significance was seen with the using without veterinary supervision, $H(4) = 9.524$, $p = 0.049$ ($p<0.05$) (see Appendix 32). A high percentage (87.5%) of owners with less than 1-year experience with a pet(s) declared that they have not used alternative therapies without supervision. As the number of years increase, using without supervision decreases concurrently, as seen in the "Always" category where only 68% do not use without veterinary supervision.

No other correlations were considered significant (see Appendix 29, 30 & 33). When compared to personal use, the owners with plus 15 years and above of having pets had the highest percentage although all categories had more than 50% of owners using alternative therapies. In addition, a higher percentage of owners in all categories selected a requirement for the therapies and would use if they had the ability to do so.

4.3 Frequency distributions

From the 257 questionnaires answered, the three highest categories of pets owned were the cat (66%), dog (49%), horse and other (7%) (see Appendix 35). Mainly pets were kept indoors (61%), followed by animals allowed access to both indoors and outdoors (32%) (see Appendix 36). Owners were more likely to feed their animals a special brand of pet food (53%) rather than a supermarket alternative (25%) or homemade with canned options (16%) (see Appendix 37).

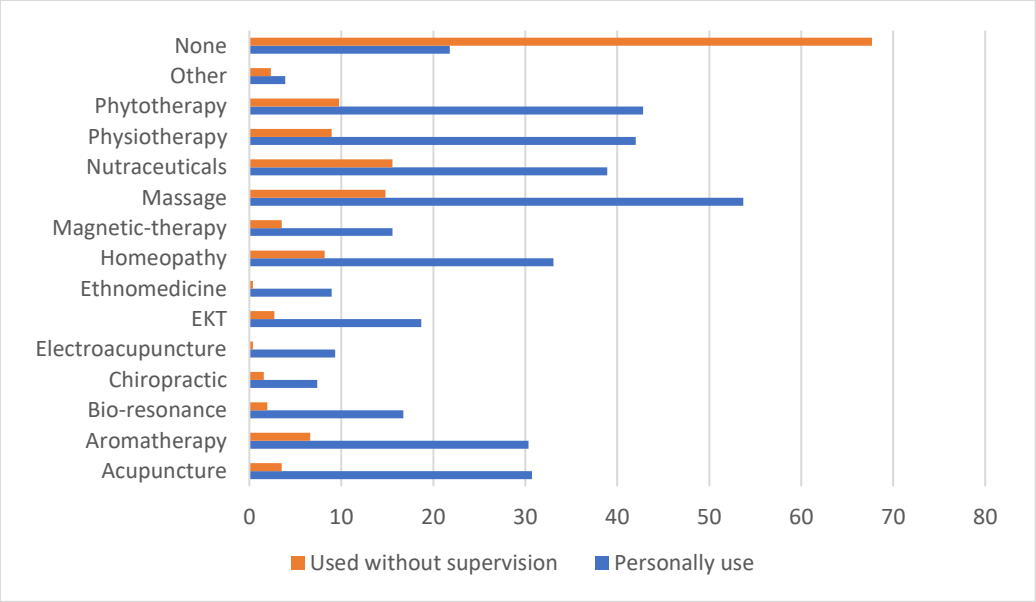

***Figure 2**. Comparison between which therapies owners use personally and therapies they use on their pets without supervision (in %).*

The therapies that the highest number of owners selected for personal use and for the ones they used without supervision were the same five treatments (see Figure 2.). Although, for using on oneself, massage (54%) was the highest followed by phytotherapy (43%), physiotherapy (42%), nutraceuticals (39%) and homeopathy (33%). Even though a large percentage of owners do not use any without supervision (68%), the therapies most likely to be used without veterinary guidance were nutraceuticals (16%), massage (15%), phytotherapy (10%), physiotherapy (9%) and homeopathy (8%).

A higher percentage of owners also believed that veterinary clinics should be offering CAM therapies alongside conservative medicine (67%) while others believed a specialised practice would be of more use (32%) and some selected that such therapies were unnecessary (2%).

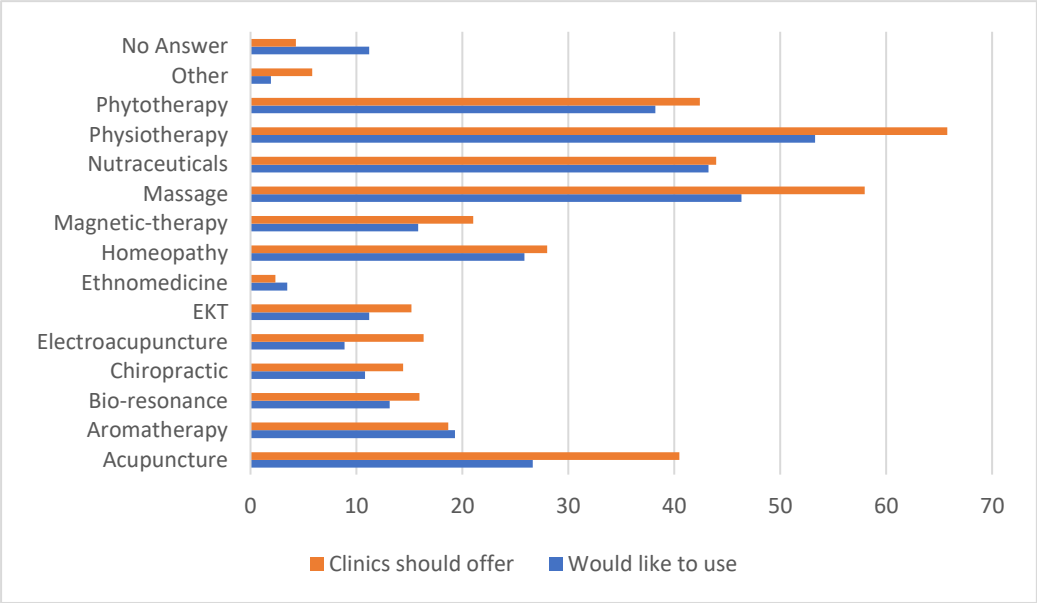

Figure 3. *Comparison between which therapies owners would like to use and which services veterinary clinics should offer (%).*

Most owners selected that physiotherapy would be the treatment they would like to use (53%) as well as the one that veterinary clinics should offer (66%) (see Figure 3). The ensuing 4 main selected categories were identical in both categories and these were massage, nutraceuticals, phytotherapy and acupuncture. Nonetheless, most owners showed to prefer to use these as a complementary therapy to conservative medicine (57%) rather than in cases involving chronic (53%) or acute (35%) cases (see Appendix 38).

Participants showed to prefer to use the internet (62%) to acquire knowledge for CAM therapies than enquiring advice from a veterinarian (46%). Books, family, and friends were the next possibilities to obtain information and only 14% use science-based articles to research the area of interest (see Appendix 39).

When asked the reason why an owner would use or choose to try an alternative therapy for their companion animal, 42% responded that it was due to them also using such treatments. The other four most selected reasons were out of curiosity (36%), the minimal side effects these treatments have (35%), simply inclined to use (24%) and that they do not want to treat their pets with poisonous chemicals (24%) (see Appendix 40).

On the other side, are the owners who do not intend to use such therapies on their pets mainly because they consider them as a trend and not scientifically based (9%). The other reasons that were selected the most afterwards are that these therapies are unproven (8%), a scam (6%), too new as well as not any better than conservative medicine (5%), unstructured and owner is pro-conservative medicine (4%) (see Appendix 41).

5. DISCUSSION

The results from this study indicate that the hypothesis stating that several factors will affect a pet owner's perspective on the use of complementary and alternative therapies can be retained. As established in this study and several others including by Soós et al. (2016), women show a far greater personal use level in using CAM therapies than men do. This may be due to women generally being more involved and apprehensive about their health than men do but also that many women may have found their healthcare system lacking in providing adequate treatment.

However, another cause for the higher percentage of use to be seen in women may simply be due to the psychology and behaviour of the genders. As Kristoffersen et al. (2014) discussed in their study comparing the use of CAM between genders is because men have accepted the notions of masculinity such as showing little weakness, while women show their femininity by seeking help. Also, the concept that men consider their body as machines are less likely to accept the holistic attraction of complementary and alternative therapies.

The findings of a strong correlation between age and personal CAM use is consistent with the study by Hegyi (2018). It was found that those between 21-30 years of age and those above 40 were apparently using CAM at a higher frequency than those between 31-40 years of age. In this study, it was seen that the 21-30 were mainly taken part in a undergraduate education or had a degree from a University, implying the likelihood that these owners were able to access information on CAM with far more ease. With this extra information it is possible that this age category felt more comfortable to use such therapies for themselves (Kristoffersen et al., 2014).

Nevertheless, other studies including Hegyi (2018), also noted that middle aged, 40-65 years of age, people were prone to use CAM more often than other categories. It can be speculated, that these owners have selected these therapies due to illnesses, disorders or simply milder issues that their healthcare will not cover or it is simply too expensive for them to follow the Western style medicine.

As age had a strong relation to the price owners chose for treatments, it is probable that the socioeconomic status of an individual plays a role in accepting a treatment (Kemppainen et al., 2017). As those below 30 year of age selected 10-15k HUF/occasion and older categories chose 4-6k HUF/occasion, perhaps a reflection on the access to a better career due to a degree, ability to travel further for employment thanks to modern technology or

simply by being young or in an era where the economy is far more expensive than the past. The ranges above 30 years of age possibly consider that they have a family to care for first and foremost and for those in the plus 60 are likely pensioners.

The variation between the owner's country of residence also proved to be a valid factor in affecting the personal use and the acceptable price for an appointment. Hungary had 57.3% of owners using CAM while those from abroad and mainly Western European countries easily surpassed that with 81.1%. This could be explained by either the regulations overseeing the use and inclusion of CAM in health insurance and medical practice, as seen by Soós et al. (2016) that very little medical practitioners supported CAM in Hungary.

For instance, Switzerland and Germany include complementary therapies in their insurance and in Austria physicians receive training for those modalities. Furthermore, culture and the state of the country's economy may play a part on peoples' acceptance of CAM, which interestingly shows that phytotherapy played a large part in Hungarian culture and still does today, whether due solely to cultural aspects or being economically accessible to all people (Kemppainen et al., 2017).

Additionally, the residence area will also affect the price range as does the number of years an owner has had pets. Interestingly, a majority of owners living in urban areas chose 4-6k and those in rural areas 10-15k HUF per occasion, which suggests maybe that those in urban zones take into consideration that there would be a market competition between professionals or simply wanting something cheap in their usually expensive everyday life. Rural regions choice of a higher price most likely due to not being aware of the current price ranges in a veterinary profession or consider CAM therapy as an exclusive addition to their pet's requirements therefore making it a grand expenditure.

The apparent increase in price range as the number of years of owning a pet increases is obviously due to the emotional bond that grows over time between an owner and their pet, as well as the knowledge that veterinary care is rarely inexpensive. The results do show that owners with less than 1 year experience selected the cheapest price for a treatment while as the years increased, owners who always had pets selected that price was of no importance and therefore flexible on cost. What is noteworthy also, is that as years with a pet increased, so did the use of CAM without veterinary supervision. Likely due to knowing the expenses brought on by veterinary care and confidence thanks to the experience of learning which therapies worked in the past.

This study illustrated the complementary and alternative therapies that were used by owners on themselves and used on pets without supervision were the same ones that veterinary clinics should provide them with. The therapies include physiotherapy, massage, nutraceuticals, phytotherapy, acupuncture and homeopathy, which are not surprising as they are all well-known therapies throughout the general population. Such a selection is highly linked with the owners' comfort zone as they have previously used them and found it to their liking but also because of curiosity for CAM and having minimal side effects, leaving the animal free of chemicals (Hegyi, 2018).

For those who do not wish to use complementary or alternative therapies stated that they do not find them scientifically based, not better than conservative medicine or simply a scam. These are all justifiable reasons as earlier discussed that only physiotherapy is a science-based therapy and others have a severe lack of clinical research to support their use. In that view, it is easily accepted that could not be more advantageous or medically useful than Western medicine. Unfortunately, the concept of CAM being considered a scam is also reasonable as far too many laypersons exist without proper training or inspection by the CAM's several educational organizations, resulting in misinformation for the owner and damage to a pet.

However, the concept that complementary and alternative therapies are too new or just a trend in today's world must be corrected as these therapies have been around for centuries if not millennia, which brings the focus on education. The majority disclosed that the knowledge they gather on CAM is from the internet rather than a trained professional or science-based books and articles thus highlighting the fact that there may be an unfathomable amount of information on the internet, it does not mean it is always correct.

Despite the large sample size, several limitations were visible in the study. First, the response rate for the questions varied as either the question was not answered, or several answers were selected when only one was asked for. Secondly, there was a far greater population in the 21-30 age category due to having the questionnaire submitted at a University small animal practice while only a small proportion people answered them online, which led to the imbalance of numbers between those who live in Hungary and abroad, and education level. For future reference, the independent variables should be controlled to have a normal distribution and provide more accurate results that are not skewed as well as supplying the questionnaires to several clinics and forums online, perhaps even providing an incentive for online questionnaires to be filled.

6. CONCLUSION

As highly respected as the age-old profession of veterinary is, it also was very accurately pointed out as a market-driven business by Bergenstrahle and Nielsen (2015) as pet owners expectations and requests have in general been the encouraging factor for the changes that have occurred in the veterinary world.

For the veterinary career to carry on progressing in all areas and to fulfil the oath of enhancing this profession by providing a high level of care and educating in the best possible way, it is necessary to think outside the box and to understand the reasons influencing an owner's requests.

In Hungary alone, there was a 30-50% growth in recent years of the use of complementary and alternative therapies, which highlights the need for veterinarians to undergo training or have a coordination with a CAM practitioner so they may complement their general practice and provide an exceptional standard of care for the animal and the owner (Marziani, 2018). Complementary medicine implies the idea of conservative medicine and CAM working alongside to take into consideration an owners requests by supplying a well-tolerated and cost effective treatment options (Shmalberg & Memon, 2015).

In conclusion, to acknowledge the factors and to understand the manner of how they affect an owner's perspective on CAM therapies is the first step to uncover the potential of a communicative veterinarian-client relationship. However, it is abundantly clear that controlled studies of higher design quality must be performed as only insufficient data happens to be present to support multiple therapies. With increased measures to control and provide, will result in improved confidence levels among veterinarians and enhanced treatment outcomes (Budgin & Flaherty, 2013).

7. ABSTRACT

The use of complementary and alternative medicine (CAM) has been increasing in popularity over several years in both the general population and for their pets. However, the reason for why pet owners are becoming more inquisitive and seeking out such therapies have not been fully determined. A questionnaire-based study analysed 257 owners over the course of 1-year concerning their use and requirement of CAM, including their demographic situation and whether this affected their perspective on such treatments. The results showed a significant correlation between the variables of age, gender, country of residence, living area and number of years of owning a pet with the personal use and pricing of CAM therapies. Furthermore, pet owners indicated a need for veterinary clinics to supply the option of integrative medicine, CAM alongside conventional medicine. It is suggested that culture, socioeconomic and gender concepts play a role in influencing an owner's perspective of complementary and alternative medicine, which may give an insight to the treating veterinarian on how to advise and guide the owner concerning their demands to have their pet undergo CAM therapy.

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A komplementer és alternatív gyógyászat egyre nagyobb népszerűségre tett szert az elmúlt években mind az emberek, mind állataik kezelésével kapcsolatban. Arról azonban kevés az információ, hogy milyen tényezők befolyásolják a tulajdonosok ilyen típusú terápiák iránti igényét. Tanulmányunkban demográfiai szempontok tükrében vizsgáltuk a tulajdonosok komplementer és alternatív gyógyászathoz való viszonyulását. A statisztikai feldolgozáshoz több, mint egy éven keresztül gyűjtöttük az adatokat kérdőíves formában összesen 257 tulajdonostól. Az eredmények szignifikáns korrelációt mutattak a kor, nem, ország, lakóhely, állattartás hossza években, saját részre történő komplementer és alternatív terápiák alkalmazása és a kezelések számukra megfelelőnek tartott ára között. Eredményeink szerint a tulajdonosok nagy része igényli, hogy az állatorvosi rendelő az integratív terápia lehetőségét is fel tudja kínálni a konvencionális orvoslás mellett. Vizsgálatunkban azt találtuk, hogy a tulajdonosok kultúrális, társadalmi-gazdasági helyzete és neme egyaránt befolyásolja ezen terápiákhoz való viszonyulásukat. Eredményeink segíthetik a gyakorló állatorvost a komplementer és alternatív terápiák pozícionálásában mind a saját munkájukban való szerepét, mind a tulajdonosok részére való ajánlását illetően.

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10. APPENDICES

Appendix 1. Questionnaire in English.

QUESTIONNAIRE – THESIS INQUIRY FORM (CLAUDIA STRASSBURG, 5th YEAR STUDENT)

1. **Do you personally use any alternative therapies?**
   ☐ Yes ☐ No
2. **If "Yes", which type of therapies do you use? (You can choose more than one answer)**
   ☐ Acupuncture (special thin needles are inserted into the body)
   ☐ Aromatherapy (uses natural plant extracts to promote health & well-being)
   ☐ Bio-resonance (gentle, non-invasive, vibrational therapy)
   ☐ Chiropractic (performing adjustments to the spine or other parts of the body)
   ☐ Elastic kinesiology tape (aids a wide variety of musculoskeletal injuries & inflammations)
   ☐ Electroacupuncture (small electric current is passed through acupuncture needles)
   ☐ Ethnomedicine (bioactive compounds in plants & animals)
   ☐ Homeopathy (diluted amounts of natural substances are used to treat various ailments)
   ☐ Magnetic therapy (uses static magnets to alleviate pain & other health concerns)
   ☐ Massage therapy (manipulation of soft tissues in the body)
   ☐ Nutraceuticals (fortified food supplements assisting in treating or preventing disease)
   ☐ Physiotherapy (treating injury or disease with exercise, massage or heat treatment)
   ☐ Phytotherapy (study of botany and use of plants intended for medicinal purposes)
   ☐ None
   ☐ Other:
3. **Do you think there is a requirement for veterinary practices to use alternative therapies?**
   ☐ Yes ☐ No ☐ Maybe
4. **Do you think that there is a need for ONLY alternative veterinary practices?**
   ☐ Yes, because they can be specialised.
   ☐ No, I can only imagine this service as a complement to a conventional medicine clinic.
   ☐ They should not use alternative treatments.
5. **Do you use any alternative therapies on your animals without veterinary supervision?**
   ☐ Yes ☐ No
6. **If "Yes", which type of therapy have you used on them? (You can choose more than one answer.)**
   ☐ Acupuncture ☐ Aromatherapy ☐ Bio-Resonance ☐ Chiropractic
   ☐ Kinesiology tape ☐ Ethnomedicine ☐ Homeopathy ☐ Massage
   ☐ Electropuncture ☐ Magnetic therapy ☐ Phytotherapy ☐ Physiotherapy
   ☐ Other:
7. **If "No", would you use any alternative therapies for your pet if you had the ability to do so?**
   ☐ Yes ☐ No ☐ Maybe
8. **Which therapies would you personally prefer to use? (You can choose more than one.)**
   ☐ Acupuncture ☐ Aromatherapy ☐ Bio-Resonance ☐ Chiropractic
   ☐ Kinesiology tape ☐ Ethnomedicine ☐ Homeopathy ☐ Massage
   ☐ Electropuncture ☐ Magnetic therapy ☐ Phytotherapy ☐ Physiotherapy
   ☐ Other:
9. **In which situations would you use them for your animal companion? (more than one answer possible)**
   ☐ Acute cases (e.g. cold, injuries, diarrhoea)
   ☐ Chronic cases (e.g. allergy, autoimmune diseases, serious organ dysfunction)
   ☐ Behaviour problems
   ☐ As an extra treatment beside the conventional therapies (e.g. after surgery)
   ☐ Other:
10. **Which treatments would you like a Veterinary clinic to offer? (You can choose more than one answer)**
    ☐ Acupuncture ☐ Aromatherapy ☐ Bio-Resonance ☐ Chiropractic
    ☐ Kinesiology tape ☐ Ethnomedicine ☐ Homeopathy ☐ Massage
    ☐ Electropuncture ☐ Magnetic therapy ☐ Phytotherapy ☐ Physiotherapy
    ☐ Other:

11. Which prices would you accept for such treatments?

☐ 1000-3000 ft/occasion ☐ 4000 – 6000 ft/occasion ☐ 7000 – 10000 ft/occasion
☐ 10000 – 15000 ft/occasion ☐ The price is of no importance.
☐ Other:

12. Where did you acquire your knowledge on alternative therapies?

☐ Books ☐ Internet ☐ Internet forums ☐ Social media
☐ Friends/family ☐ Animal owners ☐ Articles ☐ Veterinarians
☐ Other

13. To which gender identity do you most identify?

☐ Female ☐ Male

14. Do you live in Hungary?

☐ Yes ☐ No

15. Where do you reside?

☐ Capital city ☐ Town ☐ Village ☐ Countryside

16. Your age group?

☐ < 20yrs ☐ 21-30yrs ☐ 31-40yrs ☐ 41-50yrs ☐ 51-60yrs ☐ > 60yrs

17. What is your highest level of education?

☐ High School ☐ Undergraduate ☐ BSc ☐ MSc

18. Which animals do you have? (You can choose more than one answer.)

☐ Dog ☐ Cat ☐ Rodent (mouse, rat, hamster, guinea pig, chinchilla, etc)
☐ Rabbit ☐ Bird ☐ Horse ☐ Reptile ☐ Fish
☐ Other:

19. Where do you keep your animals? (You can choose more than one answer.)

☐ Indoors ☐ Indoors-Outdoors ☐ Outdoors ☐ Stables
☐ Other:

20. Which nutritional diet applies to your animal?

☐ Special brands (eg. Royal Canin, St Hippolyt, Purina, Hill's, Orijen, etc)
☐ Supermarket brands (eg. Whiskas, Felix) ☐ Only home prepared diet
☐ Home prepared diet ☐ Raw diet (BARF - bones and raw food)
☐ Prescribed diet by veterinarian ☐ Cereal mix
☐ Other:

21. How long have you had a pet/pets?

☐ Less than 1 year ☐ 1-5 years ☐ 6-15 years ☐ More than 15 years

22. If you chose an alternative therapy, what would be your reasoning?

☐ I believe they are better than classical treatments
☐ I do not want to use poisonous chemicals to treat my animal
☐ I am inclined to use natural treatments
☐ The alternative methods have no side effects or minimal risk of side effects
☐ The have worked before when classical treatment has not
☐ I do not believe in pharmaceutical companies
☐ The classical treatment is only a business and does not serve the animal's well being
☐ I use them on myself
☐ I am curious about alternative treatments
☐ Other:

23. If you do not intend to use any alternative therapies on your pets, why not?

☐ Not science based ☐ They are a scam
☐ Their effectiveness has not been proven ☐ They are simply the latest trend
☐ They are not better than conservative treatments ☐ They have side effects
☐ No basic structure and accuracy like conservative medical treatments
☐ Too new to the market to be confident of their effectiveness
☐ Classical treatments are safer ☐ Never had success
☐ Other:

Appendix 2. Questionnaire in Hungarian.

KÉRDŐÍV – SZAKDOLGOZATHOZ (Claudia Strassburg V. évf. Hallgató)

1. **Igénybe vesz Ön saját részre alternatív terápiát?**
   ☐ Igen ☐ Nem
2. **Milyen kiegészítő -alternatív kezeléseket vesz igénybe vagy ismer? (Többet is megjelölhet.)**
   ☐ Akupunktúra (speciális tűket megfelelő pontokba szúrva kezelnek)
   ☐ Elektroakupunktúra (fenti tűket gyenge árammal ingerlik)
   ☐ Aromaterápia (növényi kivonatok alkalmazása gyógyítás és közérzet javítása céljából)
   ☐ Bio-rezonancia (a szervezet elektromos, elektromágneses rezgésein alapuló terápia)
   ☐ Kiropraktika, manuálterápia (kézzel végzett manipuláció a vázrendszeren)
   ☐ Kineziotape (elasztikus tapaszt ragasztanak tartósan a bőrre pl. szalagok fölé, azok kímélése céljából)
   ☐ Homeopátia (erősen higított természetes anyagok használata betegségek kezelésére)
   ☐ Etnomedicina (növényi, állati eredetű anyagok használata hagyományos népi receptek alapján)
   ☐ Mágnesterápia (statikus, vagy dinamikus mágneses mező használata pl. fájdalomcsillapítás céljából)
   ☐ Masszázs (izmok kezelése különféle masszázstechnikákkal)
   ☐ Táplálékkiegészítők (nem receptköteles táplálék kiegészítők alkalmazása)
   ☐ Fizioterápia (sérülések, ortopédiai betegségek kezelése masszázzsal, gyakorlatokkal, berendezésekkel)
   ☐ Gyógynövények (gyógynövények, kivonatok alkalmazása)
   ☐ Egyéb:
3. **Ön szerint van igény az állatgyógyászatban alternatív terápiák alkalmazására?**
   ☐ Igen ☐ Nem ☐ Talán
4. **Ön szrint van igény az állatgyógyászatban KIZÁRÓLAG alternatív terápiát alkalmazó rendelőkre?**
   ☐ Igen, lehet egy rendelő kifejezetten alternatív gyógymódokra specializált
   ☐ Nem, csak kiegészítésként alkalmazzanak ilyen kezeléseket
   ☐ Egyáltalán ne alkalmazzanak kiegészítő kezelést
5. **Alkalmaz Ön bármilyen kiegészítő kezelést önállóan (állatorvosi felügyelet nélkül) saját kisállatán?**
   ☐ Igen ☐ Nem
6. **Ha igennel válaszolt az előző kérdésre, milyen terápiákat alkalmazott már? (Többet is megjelölhet.)**
   ☐ Akupunktúra ☐ Elektroakupunktúra ☐ Aromaterápia ☐ Bio-rezonancia
   ☐ Kiropraktika ☐ Kineziotape ☐ Homeopátia ☐ Etnomedicina
   ☐ Mágnesterápia ☐ Masszázs ☐ Táplálékkiegészítők ☐ Fizioterápia
   ☐ Gyógynövények ☐ Egyéb:
7. **Ha nemmel válaszolt az 5. kérdésre (nem alkalmaz kiegészítő kezelést saját állatán önállóan), igénybe venne alternatív – kiegészítő kezelést, ha volna rá lehetősége?**
   ☐ Igen ☐ Nem ☐ Talán
8. **Mely terápiákat alkalmazná? (Többet is megjelölhet.)**
   ☐ Akupunktúra ☐ Elektroakupunktúra ☐ Aromaterápia ☐ Bio-rezonancia
   ☐ Kiropraktika ☐ Kineziotape ☐ Homeopátia ☐ Etnomedicina
   ☐ Mágnesterápia ☐ masszázs ☐ Táplálékkiegészítők ☐ Fizioterápia
   ☐ Gyógynövények ☐ Egyéb:
9. **Mely esetekben használna, vagy használt már ilyen kezelést saját állatán? (Többet is megjelölhet.)**
   ☐ Akut esetben (pl. sérülés, hasmenés stb.)
   ☐ Krónikus esetben (pl. allergia, autoimmun betegség, orthopédiai, belgyógyászati problémák, stb)
   ☐ Viselkedészavarok
   ☐ Konvencionális orvosi terápia kiegészítéseként (pl. műtét után)
   ☐ Egyéb:
10. **Milyen kezelést venne igénybe az állatorvosi rendelőben? (Többet is megjelölhet.)**
    ☐ Akupunktúra ☐ Elektroakupunktúra ☐ Aromaterápia ☐ Bio-rezonancia
    ☐ Kiropraktika ☐ Kineziotape ☐ Homeopátia ☐ Etnomedicina
    ☐ Mágnesterápia ☐ masszázs ☐ Táplálékkiegészítők ☐ Fizioterápia
    ☐ Gyógynövények ☐ Egyéb

11. Milyen árat tartana elfogadhatónak hasonló kezelésért?

☐ 1000-3000 ft/alkalom ☐ 4000-6000 ft/alkalom ☐ 7000-10000 ft/alkalom
☐ 10000-15000 ft/alkalom ☐ Az ár nem számít ☐ Más:

12. Milyen forrásból tájékozódik az alternatív terápiákkal kapcsolatban?

☐ Könyvek ☐ Internet ☐ Internetes fórumok ☐ Szociális média (Facebook, stb)
☐ Család, barátok ☐ Többi állattartó ☐ Újságok ☐ Állatorvos
☐ Egyéb:

13. Ön:

☐ Férfi ☐ Nő

14. Magyarországon él?

☐ Igen ☐ Nem itt élek, vagy máshová tartozónak érzem magam.

15. Milyen méretű településen él?

☐ Főváros ☐ Nagy város ☐ Kisebb város ☐ Falu ☐ Tanya

16. Milyen korosztályba tartozik?

☐ 20 év alatt ☐ 21-30 év ☐ 31-40 év ☐ 41-50 év ☐ 51-60 év ☐ 60 év fölött

17. Legmagasabb iskolai végzettsége:

☐ Általános iskola ☐ Egyetemi hallgató ☐ Egyetem – Bsc ☐ Egyetem – Msc

18. Milyen állatot tart? (Többet is megjelölhet.)

☐ Kutya ☐ Macska ☐ Rágcsáló (egér, patkány, hörcsög, tengerimalac, csincsilla, stb)
☐ Madár ☐ Ló ☐ Hüllyő ☐ Hal
☐ Egyéb:

19. Hol tart állatot? (Többet is megjelölhet.)

☐ Fedett ☐ Beltéri-szabadban ☐ Szabadban ☐ Istálló ☐ Egyéb:

20. Milyen eleséget ad állatának?

☐ Felsőbb kategóriájú táp (pl. Royal canine, Purina, Hill's, Orijen, Farmina, stb)
☐ Szupermarket táp (Whiskas, Felix, Friskies stb)
☐ Csak házikoszt
☐ Házikoszt és táp
☐ Nyers, vagy BARF etetés
☐ Állatorvosi gyógytáp (pl. vesediéta, cukorbeteg, májbeteg, allergiás stb. állatoknak való eleség)
☐ Egyéb:

21. Mióta tart állatot?

☐ Kevesebb, mint 1 éve ☐ 1-5 éve ☐ 6-15 éve ☐ Több mint 15 éve ☐ Mindig volt állatunk otthon

22. Mi az oka, ha kiegészítő, vagy alternatív terápiát választ? (Többet is megjelölhet.)

☐ Jobbnak tartom a nyugati orvoslásnál ☐ Nem hiszek a gyógyszer előállítóknak
☐ Nem szeretném kémiai vegyületekkel mérgezni az állatomat ☐ Én is használom magamon
☐ Szeretek természetes kezeléseket alkalmazni ☐ Érdekelnek az alternatív kezelések
☐ Az alternatív kezeléseknek nincs, vagy minimális a mellékhatása
☐ Sokkal régebb óta alkalmazza sikerrel ezeket az emberiség, mint a modern eljárásokat
☐ A nyugati orvoslás üzlet és nem az állat érdekét szolgálja
☐ Egyéb:

23. Semmilyen alternatív kezelést nem szeretnék alkalmazni az állatomon, mert: (többet is megjelölhet)

☐ Nincsen tudományos alapjuk ☐ Az egész csak csalás
☐ Mellékhatásaik lehetnek ☐ Kipróbáltam, de nem volt hatékony
☐ Hatékonyságuk nem bizonyított ☐ Nem jobbak a konzervatív (nyugati) kezelésnél
☐ Klasszikus (nyugati) kezelések biztosabbak ☐ Használatuk csupán aktuális divat
☐ Nem követik a nyugati orvoslás alapvető felépítését, nem annyira pontosak a kezelések
☐ Kevés a tapasztalat, túl újak ahhoz, hogy biztosak lehessünk a hatékonyságukban
☐ Egyéb:

Appendix 3. SPSS Frequency distribution showing number of answers & mode for the following questions (columns), including Kurtosis & Skewness.

		Gender	Educ.	Country	Age	Area
N of answers	Valid	247	255	252	249	252
	Missing	10	2	5	8	5
Mode		1.00	2.00	1.00	2.00	1.00
Skewness		.967	-.171	.511	.546	1.000
Std. Error of Skewness		.155	.153	.153	.154	.153
Kurtosis		-1.073	-1.090	-1.453	-.625	-.041
Std. Error of Kurtosis		.309	.304	.306	.307	.306

		Personal Use	Required	No supervision use	Price / occasion	Years with pets
N of answers	Valid	257	257	257	249	255
	Missing	0	0	0	8	2
Mode		1	1.00	2.00	2.00	5.00
Skewness		.650	.751	-.921	.452	-.542
Std. Error of Skewness		.152	.152	.152	.154	.153
Kurtosis		-1.490	-1.376	-1.160	-1.150	-.677
Std. Error of Kurtosis		.303	.303	.303	.307	.304

		Ability to use
N of answers	Valid	179
	Missing	78
Mode		1.00[a]
Skewness		.000
Std. Error of Skewness		.182
Kurtosis		-1.471
Std. Error of Kurtosis		.361

Appendix 4. SPSS Pearson's Chi-squared test of independence & Kruskal-Wallis test; Correlation between Gender & Personal Use.

	Valid		Cases Missing		Total	
	N	Percent	N	Percent	N	Percent
Gender * Personal use	247	96.1%	10	3.9%	257	100.0%

		Personal Use					
		Yes		No		Total	
		N	%	N	%	N	%
Gender	Female	122	75.8	55	64.0	177	71.7
	Male	39	24.2	31	36.0	70	28.3
Total		161	100.0	86	100.0	247	100.0

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	3.858[a]	1	.049
Likelihood Ratio	3.784	1	.052
Kruskal-Wallis H	3.843	1	.050
N of Valid Cases	247		

Appendix 5. SPSS Pearson's Chi-squared test of independence & Kruskal-Wallis test; Correlation between Gender & Requirement.

	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Gender * Requirement	247	96.1%	10	3.9%	257	100.0%

		Requirement							
		Yes		No		Maybe		Total	
		N	%	N	%	N	%	N	%
Gender	Female	120	75.0	7	58.3	50	66.7	177	71.7
	Male	40	25.0	5	41.7	25	33.3	70	28.3
Total		160	100.0	12	100.0	75	100.0	247	100.0

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	2.849[a]	2	.241
Likelihood Ratio	2.766	2	.251
Kruskal-Wallis H	2.162	1	.141
N of Valid Cases	247		

Appendix 6. SPSS Pearson's Chi-squared test of independence & Kruskal-Wallis test; Correlation between Gender & Price per occasion.

	Valid		Cases Missing		Total	
	N	Percent	N	Percent	N	Percent
Gender * Price per occasion	242	94.2%	15	5.8%	257	100.0%

		Price (HUF/occasion)											
		1-3k		4-6k		7-10k		10-15k		Flexible		Total	
		N	%	N	N	%	N	N	%	N	%	N	%
Gender	Female	41	73.2	61	70.1	18	69.2	30	78.9	24	68.6	174	71.9
	Male	15	26.8	26	29.9	8	30.8	8	21.1	11	31.4	68	28.1
Total		56	100.0	87	100.0	26	100.0	38	100.0	35	100.0	242	100.0

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	1.403[a]	4	.844
Likelihood Ratio	1.452	4	.835
Kruskal-Wallis H	.000	1	.999
N of Valid Cases	242		

Appendix 7. SPSS Pearson's Chi-squared test of independence & Kruskal-Wallis test; Correlation between Gender & No supervision use.

	Valid		Cases Missing		Total	
	N	Percent	N	Percent	N	Percent
Gender * No supervision use	247	96.1%	10	3.9%	257	100.0%

		No supervision use					
		Yes		No		Total	
		N	%	N	%	N	%
Gender	Female	54	77.1	123	69.5	177	71.7
	Male	16	22.9	54	30.5	70	28.3
Total		70	100.0	177	100.0	247	100.0

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	1.446[a]	1	.229
Likelihood Ratio	1.486	1	.223
Kruskal-Wallis H	1.440	1	.230
N of Valid Cases	247		

Appendix 8. SPSS Pearson's Chi-squared test of independence & Kruskal-Wallis test; Correlation between Gender & Ability to use.

	Valid		Cases Missing		Total	
	N	Percent	N	Percent	N	Percent
Gender* Ability to use	173	67.3%	84	32.7%	257	100.0%

		Ability to use							
		Yes		No		Maybe		Total	
		N	%	N	%	N	%	N	%
Gender	Female	57	75.0	11	50.0	53	70.7	121	69.9
	Male	19	25.0	11	50.0	22	29.3	52	30.1
Total		76	100.0%	22	100.0	75	100.0	173	100.0

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	5.105[a]	2	.078
Likelihood Ratio	4.788	2	.091
Kruskal-Wallis H	.346	1	.556
N of Valid Cases	173		

Appendix 9. SPSS Pearson's Chi-squared test of independence & Kruskal-Wallis test; Correlation between Age & Personal Use.

	Valid		Cases Missing		Total	
	N	Percent	N	Percent	N	Percent
Age * Personal Use	249	96.9%	8	3.1%	257	100.0%

		Personal Use					
		Yes		No		Total	
		N	%	N	%	N	%
Age (years)	< 20	5	3.0	5	6.0	10	4.0
	21-30	61	37.0	18	21.4	79	31.7
	31-40	30	18.2	32	38.1	62	24.9
	41-50	39	23.6	11	13.1	50	20.1
	51-60	13	7.9	9	10.7	22	8.8
	> 60	17	10.3	9	10.7	26	10.4
Total		165	100.0	84	100.0	249	100.0

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	17.881[a]	5	.003
Likelihood Ratio	17.811	5	.003
Kruskal-Wallis H	17.809	1	.003
N of Valid Cases	249		

Appendix 10. SPSS Pearson's Chi-squared test of independence & Kruskal-Wallis test; Correlation between Age & Requirement.

	Valid		Cases Missing		Total	
	N	Percent	N	Percent	N	Percent
Age * Requirement	249	96.9%	8	3.1%	257	100.0%

		Requirement							
		Yes		No		Maybe		Total	
		N	%	N	%	N	%	N	%
Age	< 20	7	4.3	0	0.0	3	4.0	10	4.0
	21-30	50	30.9	4	33.3	25	33.3	79	31.7
	31-40	38	23.5	2	16.7	22	29.3	62	24.9
	41-50	35	21.6	3	25.0	12	16.0	50	20.1
	51-60	18	11.1	1	8.3	3	4.0	22	8.8
	> 60	14	8.6	2	16.7	10	13.3	26	10.4
Total		162	100.0	12	100.0	75	100.0	249	100.0

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	7.123[a]	10	.714
Likelihood Ratio	8.004	10	.628
Kruskal-Wallis H	17.809	5	.354
N of Valid Cases	249		

Appendix 11. SPSS Pearson's Chi-squared test of independence & Kruskal-Wallis test; Correlation between Age & Price per occasion.

	Valid		Cases Missing		Total	
	N	Percent	N	Percent	N	Percent
Age * Price per occasion	245	95.3%	12	4.7%	257	100.0%

		Price (HUF/ occasion)											
		1-3k		4-6k		6-10k		10-15k		Flexible		Total	
		N	%	N	%	N	%	N	%	N	%	N	%
Age	< 20	2	3.7	2	2.3	0	0.0	4	10.3	1	2.6	9	3.7
	21-30	9	16.7	19	21.8	14	53.8	23	59.0	14	35.9	79	32.2
	31-40	14	25.9	23	26.4	6	23.1	8	20.5	10	25.6	61	24.9
	41-50	12	22.2	24	27.6	4	15.4	2	5.1	6	15.4	48	19.6
	51-60	10	18.5	6	6.9	0	0.0	0	0.0	6	15.4	22	9.0
	> 60	7	13.0	13	14.9	2	7.7	2	5.1	2	5.1	26	10.6
Total		54	100.0	87	100.0	26	100.0	39	100.0	39	100.0	245	100.0

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	51.664[a]	20	.000
Likelihood Ratio	56.186	20	.000
Kruskal-Wallis H	20.041	5	.001
N of Valid Cases	245		

Appendix 13. SPSS Pearson's Chi-squared test of independence & Kruskal-Wallis test; Correlation between Age & No supervision use.

	Valid		Cases Missing		Total	
	N	Percent	N	Percent	N	Percent
Age * No supervision use	249	96.9%	8	3.1%	257	100.0%

		No supervision use					
		Yes		No		Total	
		N	%	N	%	N	%
Age	< 20	3	4.2	7	4.0	10	4.0
	21-30	22	30.6	57	32.2	79	31.7
	31-40	19	26.4	43	24.3	62	24.9
	41-50	15	20.8	35	19.8	50	20.1
	51-60	4	5.6	18	10.2	22	8.8
	> 60	9	12.5	17	9.6	26	10.4
Total		72	100.0	177	100.0	249	100.0

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	1.812[a]	5	.874
Likelihood Ratio	1.915	5	.861
Kruskal-Wallis H	1.805	5	.875
N of Valid Cases	249		

Appendix 14. SPSS Pearson's Chi-squared test of independence & Kruskal-Wallis test; Correlation between Age & Ability to use.

	Valid		Cases Missing		Total	
	N	Percent	N	Percent	N	Percent
Age* Ability to use	173	67.3%	84	32.7%	257	100.0%

		Ability to use							
		Yes		No		Maybe		Total	
		N	%	N	%	N	%	N	%
Age	< 20	3	3.9	1	4.8	1	1.3	5	2.9
	21-30	22	28.6	6	28.6	27	36.0	55	31.8
	31-40	19	24.7	4	19.0	19	25.3	42	24.3
	41-50	17	22.1	7	33.3	12	16.0	36	20.8
	51-60	13	16.9	0	0.0	5	6.7	18	10.4
	> 60	3	3.9	3	14.3	11	14.7	17	9.8
Total		77	100.0	21	100.0	75	100.0	173	100.0

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	15.910[a]	10	.102
Likelihood Ratio	18.210	10	.052
Kruskal-Wallis H	10.483	5	.063
N of Valid Cases	173		

Appendix 15. SPSS Pearson's Chi-squared test of independence & Kruskal-Wallis test; Correlation between Country & Personal use.

	Valid		Cases Missing		Total	
	N	Percent	N	Percent	N	Percent
Country * Personal use	252	98.1%	5	1.9%	257	100.0%

		Personal Use					
		Yes		No		Total	
		N	%	N	%	N	%
Country	Hungary	90	53.9	67	78.8	157	62.3
	Other	77	46.1	18	21.2	95	37.7
Total		167	100.0	85	100.0	252	100.0

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	14.907[a]	1	.000
Likelihood Ratio	15.668	1	.000
Kruskal-Wallis H	14.848	1	.000
N of Valid Cases	252		

Appendix 16. SPSS Pearson's Chi-squared test of independence & Kruskal-Wallis test; Correlation between Country & Requirement.

	Valid		Cases Missing		Total	
	N	Percent	N	Percent	N	Percent
Country * Requirement	252	98.1%	5	1.9%	257	100.0%

		Requirement							
		Yes		No		Maybe		Total	
		N	%	N	%	N	%	N	%
Country	Hungary	108	65.9	6	50.0	43	56.6	157	62.3
	Other	56	34.1	6	50.0	33	43.4	95	37.7
Total		164	100.0	12	100.0	76	100.0	252	100.0

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	2.714[a]	2	.257
Likelihood Ratio	2.684	2	.261
Kruskal-Wallis H	2.262	1	.133
N of Valid Cases	252		

Appendix 17. SPSS Pearson's Chi-squared test of independence & Kruskal-Wallis test; Correlation between Country & Price per occasion.

	Valid		Cases Missing		Total	
	N	Percent	N	Percent	N	Percent
Country * Price per occasion	246	95.7%	11	4.3%	257	100.0%

		Price (HUF/ occasion)											
		1-3k		4-6k		6-10k		10-15k		Flexible		Total	
		N	%	N	%	N	%	N	%	N	%	N	%
Country	Hungary	51	92.7	68	78.2	12	46.2	3	7.7	18	46.2	152	61.8
	Other	4	7.3	19	21.8	14	53.8	36	92.3	21	53.8	94	38.2
Total		55	100.0	87	100.0	26	100.0	39	100.0	39	100.0	246	100.0

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	87.244[a]	4	.000
Likelihood Ratio	96.351	4	.000
Kruskal-Wallis H	60.983	1	.000
N of Valid Cases	246		

Appendix 18. SPSS Pearson's Chi-squared test of independence & Kruskal-Wallis test; Correlation between Country & No supervision use.

	Valid		Cases Missing		Total	
	N	Percent	N	Percent	N	Percent
Country * No supervision use	252	98.1%	5	1.9%	257	100.0%

		No supervision use					
		Yes		No		Total	
		N	%	N	%	N	%
Country	Hungary	45	60.8	112	62.9	157	62.3
	Other	29	39.2	66	37.1	95	37.7
Total		74	100.0	178	100.0	252	100.0

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	.099[a]	1	.753
Likelihood Ratio	.099	1	.753
Kruskal-Wallis H	.099	1	.753
N of Valid Cases	252		

Appendix 19. SPSS Pearson's Chi-squared test of independence & Kruskal-Wallis test; Correlation between Country & Ability to use.

	Valid		Cases Missing		Total	
	N	Percent	N	Percent	N	Percent
Country* Ability to use	175	68.1%	82	31.9%	257	100.0%

		Ability to use							
		Yes		No		Maybe		Total	
		N	%	N	%	N	%	N	%
Country	Hungary	47	61.0	15	68.2	47	61.8	109	62.3
	Other	30	39.0	7	31.8	29	38.2	66	37.7
Total		77	100.0	22	100.0	76	100.0	175	100.0

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	.383[a]	2	.826
Likelihood Ratio	.390	2	.823
Kruskal-Wallis H	.011	1	.917
N of Valid Cases	175		

Appendix 20. SPSS Pearson's Chi-squared test of independence & Kruskal-Wallis test; Correlation between Education & Personal use.

	Valid		Cases Missing		Total	
	N	Percent	N	Percent	N	Percent
Education * Personal use	255	99.2%	2	0.8%	257	100.0%

		Personal use					
		Yes		No		Total	
		N	%	N	%	N	%
Education	High School	14	8.4	6	6.8	20	7.8
	Undergraduate	50	29.9	34	38.6	84	32.9
	BSc	50	29.9	23	26.1	73	28.6
	MSc	53	31.7	25	28.4	78	30.6
Total		167	100.0	88	100.0	255	100.0

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	2.003[a]	3	.572
Likelihood Ratio	1.982	3	.576
Kruskal-Wallis H	1.995	3	.573
N of Valid Cases	255		

Appendix 21. SPSS Pearson's Chi-squared test of independence & Kruskal-Wallis test; Correlation between Education & Requirement.

	Valid		Cases Missing		Total	
	N	Percent	N	Percent	N	Percent
Education * Requirement	255	99.2%	2	0.8%	257	100.0%

		Requirement							
		Yes		No		Maybe		Total	
		N	%	N	%	N	%	N	%
Education	High School	10	6.0	3	23.1	7	9.2	20	7.8
	Undergraduate	54	32.5	2	15.4	28	36.8	84	32.9
	BSc	53	31.9	2	15.4	18	23.7	73	28.6
	MSc	49	29.5	6	46.2	23	30.3	78	30.6
Total		166	100.0%	13	100.0	76	100.0	255	100.0

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	9.475[a]	6	.149
Likelihood Ratio	8.526	6	.202
Kruskal-Wallis H	3.071	3	.381
N of Valid Cases	255		

Appendix 22. SPSS Pearson's Chi-squared test of independence & Kruskal-Wallis test; Correlation between Education & Price per occasion.

	Valid		Cases Missing		Total	
	N	Percent	N	Percent	N	Percent
Education * Price per occasion	249	96.9%	8	3.1%	257	100.0%

		Price (HUF/ occasion)											
		1-3k		4-6k		6-10k		10-15k		Flexible		Total	
		N	%	N	%	N	%	N	%	N	%	N	%
Education	High School	3	5.3	5	5.7	1	3.8	8	20.5	3	7.5	20	8.0
	Undergraduate	24	42.1	28	32.2	10	38.5	10	25.6	9	22.5	81	32.5
	BSc	15	26.3	27	31.0	10	38.5	7	17.9	13	32.5	72	28.9
	MSc	15	26.3	27	31.0	5	19.2	14	35.9	15	37.5	76	30.5
Total		57	100.0	87	100.0	26	100.0	39	100.0	40	100.0	249	100.0

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	18.270[a]	12	.108
Likelihood Ratio	16.583	12	.166
Kruskal-Wallis H	5.851	3	.119
N of Valid Cases	249		

Appendix 23. SPSS Pearson's Chi-squared test of independence & Kruskal-Wallis test; Correlation between Education & No supervision use.

	Valid		Cases Missing		Total	
	N	Percent	N	Percent	N	Percent
Education * No supervision use	255	99.2%	2	0.8%	257	100.0%

		No supervision use					
		Yes		No		Total	
		N	%	N	%	N	%
Education	High School	6	8.1	14	7.7	20	7.8
	Undergraduate	27	36.5	57	31.5	84	32.9
	BSc	22	29.7	51	28.2	73	28.6
	MSc	19	25.7	59	32.6	78	30.6
Total		74	100.0%	181	100.0	255	100.0

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	1.274[a]	3	.735
Likelihood Ratio	1.295	3	.730
Kruskal-Wallis H	1.269	3	.737
N of Valid Cases	255		

Appendix 24. SPSS Pearson's Chi-squared test of independence & Kruskal-Wallis test; Correlation between Education & Ability to use.

	Valid		Cases Missing		Total	
	N	Percent	N	Percent	N	Percent
Education* Ability to use	177	68.9%	80	31.1%	257	100.0%

		Ability to use							
		Yes		No		Maybe		Total	
		N	%	N	%	N	%	N	%
Education	High School	6	7.7	2	8.7	5	6.6	13	7.3
	Undergraduate	24	30.8	3	13.0	26	34.2	53	29.9
	BSc	23	29.5	6	26.1	22	28.9	51	28.8
	MSc	25	32.1	12	52.2	23	30.3	60	33.9
Total		78	100.0	23	100.0	76	100.0	177	100.0

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	5.517[a]	6	.479
Likelihood Ratio	5.780	6	.448
Kruskal-Wallis H	.240	3	.971
N of Valid Cases	177		

Appendix 25. SPSS Pearson's Chi-squared test of independence & Kruskal-Wallis test; Correlation between Residence area & Personal use.

	Valid		Cases Missing		Total	
	N	Percent	N	Percent	N	Percent
Residence Area * Personal use	252	98.1%	5	1.9%	257	100.0%

		Personal use					
		Yes		No		Total	
		N	%	N	%	N	%
Residence Area	Capital	75	45.2	47	54.7	122	48.4
	City	33	19.9	11	12.8	44	17.5
	Town	36	21.7	19	22.1	55	21.8
	Village	3	1.8	5	5.8	8	3.2
	Countryside	19	11.4	4	4.7	23	9.1
Total		166	100.0	86	100.0	252	100.0

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	8.415[a]	4	.078
Likelihood Ratio	8.632	4	.071
Kruskal-Wallis H	8.381	4	.079
N of Valid Cases	252		

Appendix 26. SPSS Pearson's Chi-squared test of independence & Kruskal-Wallis test; Correlation between Residence area & Requirement.

	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Residence area* Requirement	252	98.1%	5	1.9%	257	100.0%

		Requirement							
		Yes		No		Maybe		Total	
		N	%	N	%	N	%	N	%
Residence Area	Capital	85	51.8	7	58.3	30	39.5	122	48.4
	City	30	18.3	3	25.0	11	14.5	44	17.5
	Town	32	19.5	1	8.3	22	28.9	55	21.8
	Village	4	2.4	0	0.0	4	5.3	8	3.2
	Countryside	13	7.9	1	8.3	9	11.8	23	9.1
Total		164	100.0	12	100.0	76	100.0	252	100.0

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	8.493[a]	8	.387
Likelihood Ratio	8.881	8	.352
Kruskal-Wallis H	5.157	4	.272
N of Valid Cases	252		

Appendix 27. SPSS Pearson's Chi-squared test of independence & Kruskal-Wallis test; Correlation between Residence area & Price per occasion.

	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Residence area* Price per occasion	247	96.1%	10	3.9%	257	100.0%

		Price (HUF/ occasion)											
		1-3k		4-6k		6-10k		10-15k		Flexible		Total	
		N	%	N	%	N	%	N	%	N	%	N	%
Residence Area	Capital	36	64.3	52	59.8	9	34.6	6	15.4	15	38.5	118	47.8
	City	7	12.5	13	14.9	5	19.2	12	30.8	7	17.9	44	17.8
	Town	11	19.6	19	21.8	6	23.1	10	25.6	8	20.5	54	21.9
	Village	2	3.6	1	1.1	2	7.7	1	2.6	2	5.1	8	3.2
	Countryside	0	0.0	2	2.3	4	15.4	10	25.6	7	17.9	23	9.3
Total		56	100.0	87	100.0	26	100.0	39	100.0	39	100	247	100.0

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	49.857[a]	16	.000
Likelihood Ratio	54.673	16	.000
Kruskal-Wallis H	32.773	4	.000
N of Valid Cases	247		

Appendix 28. SPSS Pearson's Chi-squared test of independence & Kruskal-Wallis test; Correlation between Residence area & No supervision use.

	Valid		Cases Missing		Total	
	N	Percent	N	Percent	N	Percent
Residence area* No supervision use	252	98.1%	5	1.9%	257	100.0%

		No supervision use					
		Yes		No		Total	
		N	%	N	%	N	%
Residence Area	Capital	37	50.7	85	47.5	122	48.4
	City	10	13.7	34	19.0	44	17.5
	Town	16	21.9	39	21.8	55	21.8
	Village	2	2.7	6	3.4	8	3.2
	Countryside	8	11.0	15	8.4	23	9.1
Total		73	100.0	179	100.0	252	100.0

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	1.382[a]	4	.847
Likelihood Ratio	1.411	4	.842
Kruskal-Wallis H	1.377	4	.848
N of Valid Cases	252		

Appendix 29. SPSS Pearson's Chi-squared test of independence & Kruskal-Wallis test; Correlation between Residence area & Ability to use.

	Valid		Cases Missing		Total	
	N	Percent	N	Percent	N	Percent
Residence area* Ability to use	175	68.1%	82	31.9%	257	100.0%

		Ability to use							
		Yes		No		Maybe		Total	
		N	%	N	%	N	%	N	%
Residence Area	Capital	40	51.9	12	54.5	32	42.1	84	48.0
	City	18	23.4	5	22.7	10	13.2	33	18.9
	Town	11	14.3	4	18.2	23	30.3	38	21.7
	Village	3	3.9	0	0.0	3	3.9	6	3.4
	Countryside	5	6.5	1	4.5	8	10.5	14	8.0
Total		77	100.0	22	100.0	76	100.0	175	100.0

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	9.972[a]	8	.267
Likelihood Ratio	10.834	8	.211
Kruskal-Wallis H	8.098	4	.088
N of Valid Cases	175		

Appendix 30. SPSS Pearson's Chi-squared test of independence & Kruskal-Wallis test; Correlation between Number of years with pets & Personal use.

	Valid		Cases Missing		Total	
	N	Percent	N	Percent	N	Percent
Years with pets* Personal use	255	99.2%	2	0.8%	257	100.0%

		Personal use					
		Yes		No		Total	
		N	%	N	%	N	%
Years with pets	<1	10	6.0	6	6.8	16	6.3
	1-5	18	10.8	9	10.2	27	10.6
	6-15	40	24.0	28	31.8	68	26.7
	>15	40	24.0	16	18.2	56	22.0
	Always	59	35.3	29	33.0	88	34.5
Total		167	100.0	88	100.0	255	100.0

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	2.385[a]	4	.665
Likelihood Ratio	2.377	4	.667
Kruskal-Wallis H	2.376	4	.667
N of Valid Cases	255		

Appendix 31. SPSS Pearson's Chi-squared test of independence & Kruskal-Wallis test; Correlation between Number of years with pets & Requirement.

	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Years with pets* Requirement	255	99.2%	2	0.8%	257	100.0%

		Requirement							
		Yes		No		Maybe		Total	
		N	%	N	%	N	%	N	%
Years with pets	<1	9	5.4	1	7.7	6	7.9	16	6.3
	1-5	17	10.2	1	7.7	9	11.8	27	10.6
	6-15	48	28.9	1	7.7	19	25.0	68	26.7
	>15	42	25.3	1	7.7	13	17.1	56	22.0
	Always	50	30.1	9	69.2	29	38.2	88	34.5
Total		166	100.0	13	100.0	76	100.0	255	100.0

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	11.562[a]	8	.172
Likelihood Ratio	11.665	8	.167
Kruskal-Wallis H	5.074	4	2.80
N of Valid Cases	255		

Appendix 32. SPSS Pearson's Chi-squared test of independence & Kruskal-Wallis test; Correlation between Number of years with pets & Price per occasion.

	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Years with pets* Price per occasion	249	96.9%	8	3.1%	257	100.0%

		Price (HUF/ occasion)											
		1-3k		4-6k		7-10k		10-15k		Flexible		Total	
		N	%	N	%	N	%	N	%	N	%	N	%
Years with pets	<1	6	10.5	3	3.4	0	0.0	5	12.8	2	5.0	16	6.4%
	1-5	4	7.0	9	10.3	4	15.4	3	7.7	4	10.0	24	9.6%
	6-15	18	31.6	20	23.0	11	42.3	9	23.1	9	22.5	67	26.9%
	>15	13	22.8	29	33.3	1	3.8	3	7.7	10	25.0	56	22.5%
	Always	16	28.1	26	29.9	10	38.5	19	48.7	15	37.5	86	34.5%
Total		57	100.0%	87	100.0	26	100.0	39	100.0	40	100.0	249	100.0

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	28.426[a]	16	.028
Likelihood Ratio	31.811	16	.011
Kruskal-Wallis H	9.524	4	.049
N of Valid Cases	249		

Appendix 33. SPSS Pearson's Chi-squared test of independence & Kruskal-Wallis test; Correlation between Number of years with pets & No supervision use

	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Years with pets* No supervision use	255	99.2%	2	0.8%	257	100.0%

		No supervision use					
		Yes		No		Total	
		N	%	N	%	N	%
Years with pets	<1	2	2.7	14	7.7	16	6.3
	1-5	3	4.1	24	13.3	27	10.6
	6-15	19	25.7	49	27.1	68	26.7
	>15	22	29.7	34	18.8	56	22.0
	Always	28	37.8	60	33.1	88	34.5
Total		74	100.0	181	100.0	255	100.0

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	9.562[a]	4	.048
Likelihood Ratio	10.600	4	.031
Kruskal-Wallis H	9.524	4	.049
N of Valid Cases	255		

Appendix 34. SPSS Pearson's Chi-squared test of independence & Kruskal-Wallis test; Correlation between Number of years with pets & Ability to use.

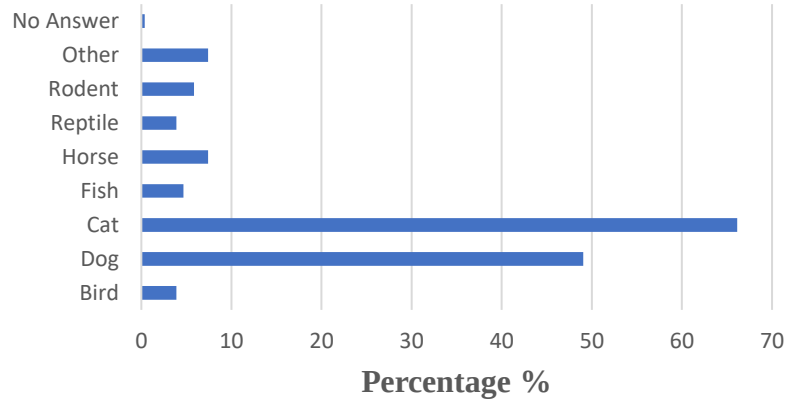
	Valid		Cases Missing		Total	
	N	Percent	N	Percent	N	Percent
Years with pets* Ability to use	177	68.9%	80	31.1%	257	100.0%

		Ability to use							
		Yes		No		Maybe		Total	
		N	%	N	%	N	%	N	%
Years with pets	<1	5	6.4	2	8.7	6	7.9	13	7.3
	1-5	11	14.1	1	4.3	11	14.5	23	13.0
	6-15	27	34.6	5	21.7	16	21.1	48	27.1
	>15	14	17.9	5	21.7	15	19.7	34	19.2
	Always	21	26.9	10	43.5	28	36.8	59	33.3
Total		78	100.0%	23	100.0	76	100.0	177	100.0

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	6.704[a]	8	.569
Likelihood Ratio	7.130	8	.523
Kruskal-Wallis H	3.940	4	.414
N of Valid Cases	177		

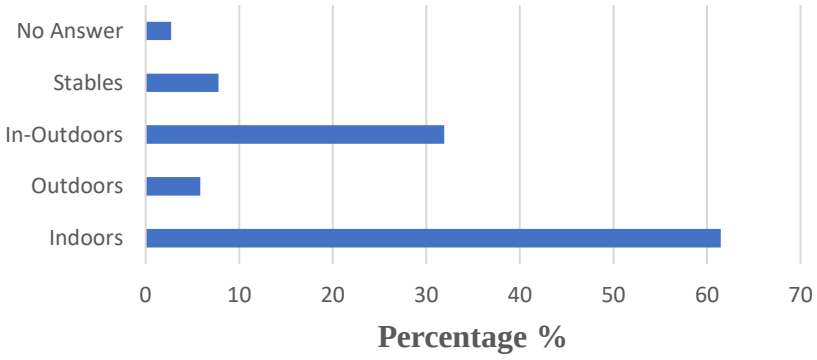
Appendix 35. Frequency distribution for type of pets owned by owners.

	HU	INT	Total	Percent %
Bird	4	6	10	4
Dog	68	58	126	49
Cat	129	41	170	66
Fish	7	5	12	5
Horse	4	15	19	7
Reptile	5	5	10	4
Rodent	10	5	15	6
Other	14	5	19	7
No Answer	0	1	1	0



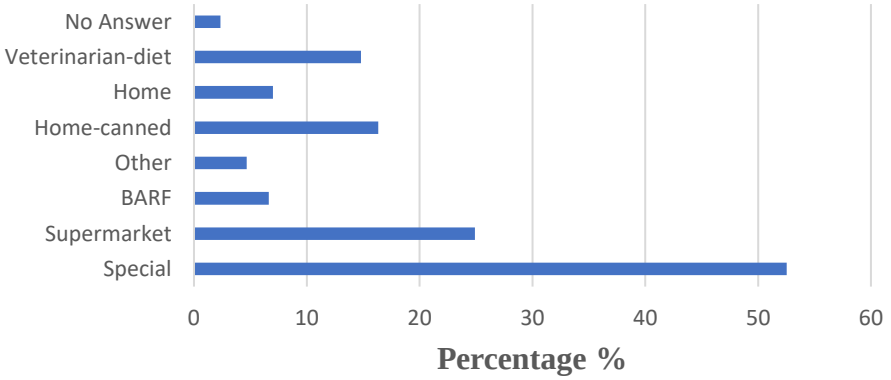
Appendix 36. Frequency distribution for living arrangements of pets.

	HU	INT	Total	Percent %
Indoors	93	65	158	61
Outdoors	11	4	15	6
In-Outdoors	65	17	82	32
Stables	5	15	20	8
No Answer	5	2	7	3



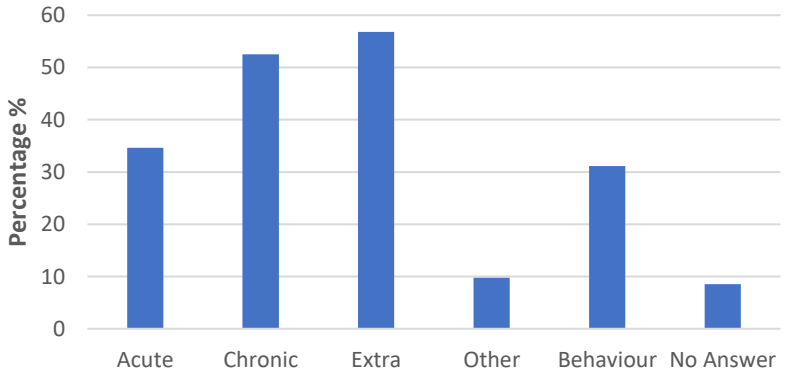
Appendix 37. Frequency distribution for diet given to pets by owners.

	HU	INT	Total	Percent %
Special	101	34	135	53
Supermarket	29	35	64	25
BARF	10	7	17	7
Other	9	3	12	5
Home & canned	22	20	42	16
Home	14	4	18	7
Veterinarian diet	27	11	38	15
No Answer	5	1	6	2



Appendix 38. Frequency distribution for which situations should alternative treatments be given.

	HU	INT	Total	Percent %
Acute	58	31	89	35
Chronic	81	54	135	53
Extra	78	68	146	57
Other	23	2	25	10
Behaviour	40	40	80	31
No Answer	22	0	22	9



Appendix 39. Frequency distribution of owner's method of seeking knowledge of CAM therapy.

	HU	INT	Total	Percent %
Articles	19	17	36	14
Books	42	42	84	33
Internet	102	57	159	62
Forums	39	12	51	20
Friends-Family	30	46	76	30
Social media	27	16	43	17
Veterinarians	77	41	118	46
Other	47	4	51	20
Owners	3	27	30	12
No answer	8	2	10	4

Appendix 39. Frequency distribution of owner's reasons for choosing a CAM therapy.

	HU	INT	Total	Percent %
Anti-conservative	8	3	11	4
Anti-Pharma companies	8	7	15	6
Drugs are poison	47	11	58	23
Better than conservative	10	10	20	8
Curiosity	55	37	92	36
Inclined to use	41	20	61	24
Minimal side effects	52	37	89	35
Use	77	32	109	42
Worked	21	31	52	20
Other	16	11	27	11

Appendix 40. Frequency distribution of owner's reasons for **not** choosing a CAM therapy.

	HU	INT	Total	Percent %
Pro-Conservative	2	8	10	4
Too New	9	5	14	5
Not better	5	9	14	5
Not scientific	7	17	24	9
Safer	0	1	1	0
Scam	1	15	16	6
Side-effects	4	3	7	3
Trend	11	12	23	9
Unproven	2	19	21	8
Unstructured	10	1	11	4
Ineffective	2	0	2	1
Other	2	3	5	2

Appendix 41. Supervisor-counter signature form.

I hereby confirm that I am familiar with the content of the thesis entitled "Veterinary Alternative Therapies, an Owner's Perspective"

written by Claudia Strassburg Frewin (student name)

which I deem suitable for submission and defence.

Date: Budapest, 16 day 11 month 2020 year

Dr. Balogh Éva dr Bagh Éva

Supervisor name and signature

Internal Medicine

Department

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HuVetA

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