



Osaamista  
ja oivallusta  
tulevaisuuden  
tekemiseen

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# Animal-Assisted Interventions in Early Childhood Education

## Exploring Attitudes of Professionals and Parents

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<p>Viime vuosien kansainvälisiä ja suomalaisia julkaisuja tarkasteltaessa näyttää siltä, että Animal-Assisted Interventions (AAI) herättää kiinnostusta terveydenhuollon ja sosiaalipalvelujen ammattilaisten keskuudessa. Eläimiä koskeva tutkimus varhaiskasvatuksessa on kuitenkin edelleen harvinaista. Tämän opinnäytetyön tavoitteena oli selvittää varhaiskasvatuksen ammattilaisten ja päiväkotilasten huoltajien / vanhempien tietoisuutta ja asenteita AAI:stä päiväkodeissa. Toinen kiinnostuksen kohde oli osallistujien mahdolliset huolenaiheet.</p> <p>Tämän tutkimuksen tiedot kerättiin lähettämällä kaksi erillistä kyselyä kahdelle tutkimusryhmälle: Ryhmä 1 koostui 19 Helsingin yksityisen päivähoidon ammattilaisesta; Ryhmä 2 koostui 40 huoltajasta / lasten vanhemmasta yksityisissä ja kunnallisissa päiväkodeissa Helsingissä. Kaikki koehenkilöt osallistuivat vapaaehtoisesti ja nimettömästi.</p> <p>Tulokset osoittivat, että vaikka puolet ammattilaisista oli kuullut AAI-käsitteestä, vain harvat huoltajista olivat tietoisia siitä. Lähes kaikki osallistujat uskoivat kuitenkin, että eläinkontakti on hyödyllistä lapsille, ja suurin osa pystyi kuvittelemaan eläinten sisältyvän omaan työpaikkaansa tai heidän päivähoitoonsa. Huolet ja heidän asteensa erottuivat: vaikka ammattilaisten keskuudessa suurimpia huolenaiheita olivat allergioiden tai astman kehittyminen, ylimääräinen työmäärä ja eläinten hyvinvointi, huoltajat olivat huolissaan lähinnä eläinten hyvinvoinnista, korkeammista päivähoitomaksuista ja ammattilaisten ylimääräisestä työstä. Huolimatta näistä huolenaiheista useimmat ammattilaisista ja huoltajista pitivät AAI: ta varhaiskasvatuksessa yhä hyvänä ideana.</p> <p>Nämä tulokset voivat johtaa siihen johtopäätökseen, että tarvitaan enemmän tietoisuutta AAI: sta ja sen käytännön vaikutuksista. Lisätutkimukset voisivat selventää, voivatko tietyt suuret tai pienet huolenaiheet perustua väärinkäsityksiin tai tietoisuuden puutteeseen. Vaikka ammattilaisten ja huoltajien suhtautuminen oli myönteistä, näyttää siltä, että toteutus käytännössä, etenkin ajankäytön ja resurssien hallinnan sekä eläinten hyvinvoinnin varmistamisen suhteen, on suuri este. Tämä saattaa viitata siihen, että AAI: n käyttöönoton monimuotoisuutta on tutkittava paremmin ja edistettävä, jotta tuetaan kiinnostuneita ammattilaisia sisällyttämään eläimillä avustetut menetelmät työhönsä, ja siten tarjoamaan AAI: ta suuremmalle osalle kiinnostuneita asiakkaita.</p>	
Avainsanat	varhaiskasvatus, eläimet, AAI, päiväkotit, lapset

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<p>Reviewing international and Finnish publications from recent years, it seems that Animal-assisted Interventions (AAI) are gaining interest among professionals of health care and social services. However, research concerning animals in early childhood education is still rare. The goal of this bachelor's thesis was to investigate the awareness and attitudes of professionals of early childhood education as well as guardians/parents of kindergarten children about AAI in day-care centres. Potential concerns among the participants were another focus of interest.</p> <p>Data for this study was collected by sending two separate surveys to two research subject groups: Group 1 consisted of 19 professionals of private day-care centres in Helsinki; group 2 was composed of 40 guardians/parents of children in private and municipal day-care centres in Helsinki. All subjects participated voluntarily and anonymously.</p> <p>The results showed that while half of the professionals had heard about the concept of AAI, only few of the guardians were aware of it. However, almost all participants believed animal contact to be beneficial for children, and the majority could imagine animals being included in their own workplace or their child's day-care. Concerns and their scores differed: while the main concerns among professionals were the development of allergies or asthma, extra workload, and animal welfare, the guardians worried mainly about animal welfare, higher day-care fees, and extra work for the professionals. Despite those concerns, most professionals and guardians still found AAI in early childhood education a good idea.</p> <p>These results may lead to the conclusion that more awareness of AAI and its practical implications is needed. Further studies may clarify if certain high or low scores of concerns might be based on misconceptions or lack of awareness. Although the overall attitude among professionals and guardians was positive, it seems that the practical implementation, especially concerning time and resource management, and the assurance of the animals' well-being, is a great obstacle. This may indicate that more elucidation and promotion of the variety of AAI implementation is needed in order to support interested professionals to include animal-assisted methods in their work, and therefore provide AAI to a greater number of interested clients.</p>	
Keywords	early childhood education, animals, AAI, day-care, children

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## 1 Introduction

"I am with all creatures in the most beautiful harmony of the soul. We are related, I feel it intimately, and for that reason I love them." (Wilhelm Busch in Göhring and Schneider-Rapp, 2017, p. 21)

Animals have been companions for humans throughout history. Research has been examining the phenomenon of human-animal-interaction, the impact of animal contact on humans, and the reasons behind it. During the last years, the concept of including animals into the work life of professionals of health care, therapy and counselling, social services, and education has gained interest.

This bachelor's thesis engages with the contact and interaction between animals and young children, and specifically with the concept of animal-assisted interventions (AAI) in combination with early childhood education and care (ECEC). A research investigation displayed an apparent lack of Finnish studies on that particular subject. Yet, as multiple bachelor's and master's theses focusing on AAI and children were published during the last few years, the interest among future professionals of health care, social services, and education seems to be increasing.

In contrast to those theses, which mostly investigated the influence of animals within specific schools or projects, or on individual children, the aim of this bachelor's thesis is to explore the attitudes towards AAI in institutions of ECEC on a wider level. The purpose is to understand the level of awareness of AAI and its impact on child development among day-care professionals, and parents and guardians of kindergarten children. Examining the opinions and potential concerns about an implementation of AAI into day-care centres may clarify the current interest among the relevant target groups. Furthermore, a critical analysis of the participants' answers may identify whether there is need of more promotion of the concept, elucidation of misconceptions, or practical support for the implementation of AAI in institutions. Even though this project is a small-scale study with limitations to the number and diversity of participants, time, and place, and consequently generalisations are not possible, the results may give a first impression of the status quo, and potential for further research.

In preparation of the research project, a literature review on relevant international studies provides the theoretical background of AAI and discusses critically the research findings concerning the impact of animal contact on child development, contradicting studies, as

well as the research situation in Finland. In the following, the focus shifts towards AAI in ECEC. The legal regulations concerning animals in educational institutions are described, followed by suggestions on the adaption of AAI into the Finnish core curriculum as a method of education and support. Further considerations concern the suitability of different animal species for young children, potential risks of animal-child-contact and their prevention, as well as the importance of animal welfare.

In conclusion, this project's study results will be discussed in consideration of the reviewed literature.

## 2 Animal-Assisted Intervention and Child Development

The International Association of Human-Animal Interaction Organisations (IAHAIO, 2018) distinguishes between several ways of including animals into client work:

Animal-Assisted Therapy (AAT): Specific goal-oriented therapy sessions conducted by professionals of health care, social services, or education aiming at cognitive, physical, cognitive, or socio-emotional support.

Animal-Assisted Education/Pedagogy (AAE): Settings focused on pedagogical goals directed by professionals with pedagogical background.

Animal Assisted Coaching/Counselling (AAC): Interventions that aim at personal growth, socio-emotional functioning and social skills, as well as group processes, delivered by professional coaches or counsellors.

Animal-Assisted Activities (AAA): Activities for motivational or recreational means supervised by professionals, or volunteers with training.

Animal-Assisted Interventions (AAI): General definition of structured, goal-oriented interventions with the assistance of animals in the areas of health care, education, or social services. It serves as an umbrella term for AAT, AAE, AAC, and AAA.

For reasons of simplicity, the term Animal-Assisted Interventions (AAI) is used in this bachelor's thesis.

## 2.1 Theoretical Background of AAI

There are several attempts to explain the positive effects of animals on human health and well-being. However, at this moment there is not one theory, but different suggestions:

Wilson and Kellert (in Vernooij and Schneider, 2008) introduce the biophilia hypothesis, which suggests that humans developed right from the primeval times a deep and biological founded connection with nature and all creatures. This bond shaped our evolution and still influences our "emotional, cognitive, aesthetic, and even spiritual development" (Vernooij & Schneider 2008, p. 4). However, Joye (2011) assumes that scientific explanations are still too unclear and unspecified to take biophilia as a proven concept behind the therapeutic effects of AAI.

According to Greiffenhagen (in Vernooij and Schneider, 2008), the theory of "You-Evidence" acknowledges the existence of relationships between humans and animals and considers them to be similar to those among humans (or among animals). This means that animals are perceived as companions or friends, and with personal, often anthropomorphized characteristics. (Vernooij and Schneider, 2008)

An alternative theory hypothesises that "joint attention" between humans and animals is possible, even though research did not yet find evidence for the existence of mirror neurons in animals. This would explain the transference of positive effects such as calmness or improvement of mood when being in contact with an animal. (Vernooij and Schneider, 2008)

Based on attachment theory, Julius, Beetz, Kotrschal, Turner and Uvnäs-Moberg (2013) argue that positive attachment can be experienced with animals, especially with dogs, and may be transferred to future human-interaction. This suggests that children with insecure attachment model may have the opportunity to rearrange and change their learnt attachment pattern and relationship expectations (Vernooij and Schneider, 2008).

A currently popular theory is based on the hormone Oxytocin, which is produced in the hypothalamus. This hormone is caused by sensory stimulation, especially in connection with mother-child interaction (e.g. during breast-feeding), but also in trusting relationships. Oxytocin stimulates social interaction, reduces anxiety and aggression, increases calmness and trust, and leads to a better mood. (Julius et al., 2013) Julius et al. (2013) assume that, as deep relationships between humans and animals are possible, oxytocin is released also in these relationships. They referred to a study by Odendaal (2000), who found higher level of oxytocin in people interacting with their own dog than with unfamiliar dogs. Based on this and several other studies with similar findings, the authors argue that oxytocin plays a significant role in human-animal interaction. (Julius et al., 2013)

## 2.2 How Animals Support Child Development

Even though research cannot yet fully explain *why* humans benefit from animal contact, there are multiple studies that prove the positive effects on general health, as well as blood pressure, or endocrine responses (Julius et al., 2013). The presence of the animal stimulates the senses, relaxes sore muscles and prevents further pain, mobilizes body functions and agility, activates deep breathing, and can even regulate the appetite (Otterstedt, 2001).

Focussing on child development, Schade (in Otterstedt and Schade, n.d.) demonstrated how animal-assisted education with farm animals positively affects the children's progress in five developmental areas:

- *Motor skills and body awareness* through physical work on the farm
- *Learning* through observation of the animal's intentions, emotions, and non-verbal expression
- *Perception* through sensory processing and observations
- *Social behaviour skills* through care, respect, and responsibility for the animals, as well as through group tasks with other children



- *Emotional skills* through facing positive or negative emotions with animals, discovering own abilities and strengths, experiencing success, and making relationships with animals. (Otterstedt and Schade, n.d.)

Several studies highlighted particularly the impact of animal presence on attention, and cognitive development and learning: Considering several earlier studies, Melson (n.d.) found that even infants hold longer attention to animals compared with moving toys or even humans. Newer studies by Deloache, Pickard and LoBue (n.d.) with infants as young as 4 to 12 months confirmed longer visual attention as well as higher positive emotional engagement not only to moving animals, but also to pictures of animals compared with inanimate objects. Gee in co-operation with others documented in several studies that preschool children required fewer instructional prompts to perform memory tasks (Gee, Crist and Carr, 2010), and made fewer mistakes on an object categorization task (Gee, Church and Altobelli, 2010; Gee, Gould, Swanson and Wagner, 2012) in the presence of a dog.

Other studies focused on the socio-emotional benefits, finding that animal contact may reduce anxiety and depression (Julius et al., 2013; Otterstedt, 2001), decreases aggressive behaviour (Julius et al., 2013; Beetz, Uvnäs-Moberg, Julius and Kotrschal, 2012), and improves social interaction and empathy (Julius et al., 2013; Otterstedt, 2001). Reviewing the findings of 69 original studies, Beetz et al. (2012) identified the benefits of contact with animals on emotional and social functioning: a positive impact on social attention from others and facilitation of interpersonal interactions, increased trust towards other people, higher empathy, independence and social competence, lower stress level, as well as reduction of anxiety and improvement of calmness.

Otterstedt and Olbrich (2003) discussed the effect of early attachment experiences on emotional intelligence (e.g. expression of own emotions, empathy, self-regulation) and social intelligence (e.g. caring for others, tactfulness) throughout the whole life span. They argue that the ability to build relationships is a basic characteristic of a functioning personality and mental health. (Otterstedt and Olbrich, 2003) Contact with animals may help to keep the balance:

“Where respect for a tree, a plant, an animal is missing, the respect for humans will be lost as well. Respect for life arises in the personal encounter with the living: with nature, with animals, with humans, the You and I. Nature-Pedagogy, animal-assisted education and therapy build on this personal encounter between humans, nature and animals.” (Otterstedt, 2007, pp. 27-28.)

A study by Hawkins, Williams, and the Scottish Society for the Prevention of Cruelty to Animals (2017) examined the connection between attachment to pets, caring and compassionate behaviour, and attitudes towards animals. Results showed a strong connection between caring behaviour and the attachment to the pet, which in turn predicted positive attitudes towards animals. They conclude that encouraging children to participate in pet care may not only bring positive outcome for both the children and the pet but might also support secure attachment in children's human relationships. (Hawkins et al., 2017)

Under consideration of the biophilia theory, Melson (n.d.) investigated the effect of companion animals on three aspects of child development: perceived security, perceptual, cognitive, and language development, as well as emotional intelligence. He reasons that due to historical human-animal co-evolution and dependence concerning safety or danger, the presence of friendly animals still has a reassuring and relaxing effect on children. Moreover, he suggests that children view animals as minded and intentional actors and try to decode their behaviour. Animals always show authentic behaviour and are unable to pretend or deceive, and even though their intentions or reactions might differ from human behaviour, this authenticity may help children to learn to interpret and decode others' actions and non-verbal cues. (Melson, n.d.)

But how can animals support child development in a classroom setting?

Several studies report that animals, especially dogs, lower the threshold for human contact and therefore increase social interaction, as well as improve trust and cooperation (Beetz, 2012). Beetz (2012) transfers those findings to a pedagogical setting and argues that dogs may support the teacher-student relationship, which is one of the most important prerequisites for successful education. Referring to a study by Kotrschal and Ortbauer (in Beetz, 2012), who demonstrated that a teacher perceived more positive attention in the presence of her dog, Beetz proposes that even a student who is close to the dog may be perceived more positively by their class mates. The presence of the school dog therefore improves the atmosphere in class by positively influencing the interactions between teachers and students, as well as among the children. Investigating several studies on the effects of school dogs on pre-schoolers and students in elementary schools, Beetz documented that the presence of the dogs led to increased empathy, improvement of atmosphere in class, reduction of aggressive behaviour, improvement

of attention and positive attitude towards learning and school, and the students' implementation of adaptive strategies for dealing with negative emotions. (Beetz, 2012)

A recent study by Zents, Fisk and Lauback (2017) has confirmed the positive contribution of school dogs to students' psychological well-being and school climate by providing non-judgment, 'unconditional love', and a calming effect. In addition, the school staff reported the dog's significant positive influence on students with selective mutism, autism spectrum disorder, challenges in school attendance, behaviour issues, or with emotional challenges. (Zents et al., 2017)

However, not only dogs are known to have positive effects on school children. A research from 2013 found that interventions with guinea pigs were just as successful. After an 8-week period of AAI, a group of primary school children showed significantly greater improvements in social functioning and a decrease in problematic behaviour than the control group. (O'Haire, McKenzie, McCune and Slaughter, 2013) Though, as the children's behaviour and social skills were evaluated by the parents and teachers, biased expectations might have influenced the results of the study and must therefore be viewed with caution.

### 2.3 Contradicting Research Results concerning AAI Benefits

In contrast to the mentioned studies that promote the benefits of AAI on child development and well-being, few studies could be found that came to different results.

Takács and Szalai (2015) explored the influence of animal contact on the mental hygiene and, in result, on the learning development of kindergarten and primary school children. However, the results were not clear enough to prove the hypothesis of a positive effect of AAI: Even though the animal, a rabbit, seemed to have a positive influence on the atmosphere, and the children's motivation, no difference concerning attention, concentration, task recognition, self-esteem, or group structure could be identified. According to the researchers, one potential reason might have been the division of the participants, which was not based on blind assignment. On the contrary, the effects of the AAI program and the focus of the pilot study might not have correlated. (Takács and Szalai, 2015). This is one good example of the difficulties social researchers often face.

Clearly contradicting results were found in a study by Daly and Morton (2003) investigated the connection between pet ownership and empathy. Students from grade 4 to 8 filled out surveys that were based on the Bryant Index of Empathy, the Pet Preference Inventory, and the Companion Animal Bonding Scale. The results revealed that there was no difference in the level of empathy between pet-owners and non-owners, nor any link between empathy and the level of attachment to pets. (Daly and Morton, 2003)

Serpell, McCuneb, Geeb and Griffin (2017) address more the theoretical and practical challenges within the AAI research procedure: They argue that AAI research lacks specific theories that prove positive outcomes compared to other well-researched interventions, such as psychotherapy. Although several existing theories, such as the theory of attachment theory or the effect of oxytocin (cf. chapter 2.1), try to explain the effects of AAI, the authors consider those explanations as not sufficient enough to support the hypothesis of AAI benefits. Moreover, the authors address practical issues regarding research design and methodology: Summarizing several studies on AAI, they found challenges concerning research questions, lack of standardized measures, small sample sizes, or the inability of using blinded and randomly assigned target groups, among others. Another concern that especially social research faces, is the pressure from the public and mass media for positive results, which can lead to inaccurate or biased reporting of scientific findings. (Serpell et al., 2017)

## 2.4 Research Situation in Finland

In Finland, the situation of animal-assisted interventions seems to be still in the very beginning of development, both concerning theoretical research as well as practical implementation. Although the first article on animal-assisted practice was published in 1987, most publications are from the last 20 years (Hautamäki, Ramadan, Ranta, Haapala and Suomela-Markkanen, 2018).

In 2018 the Finnish Social Insurance Institution Kela published a research review concerning animal-assisted work, which focused on therapy and rehabilitation performed by psychotherapists, speech therapists, physiotherapists, and occupational therapists. One particularly interesting result was that negative experiences with animal-assisted therapy (AAT) was difficult to find. They concluded that this was because AAT was not used if

the client did not want to interact with animals, and therefore their experiences did not appear in studies. (Hautamäki et al., 2018) This may lead to the question how trustworthy research can be if one counterpart of the investigation is missing.

In addition, the research review showed that the benefits of AAT – in contrast to therapy methods without an animal – were very similar to the international results, which were introduced earlier in this chapter: calming effect and stress reduction, increase of motivation, better coping, improved self-esteem and confidence, increasing empathy and social skills, improvement of daily activities and well-being, improvement of cognitive skills (memory, attention, concentration) and motor functions (Hautamäki et al., 2018). Concerning children with disabilities or special needs, an interviewed occupational therapist pointed out that AAT might be especially suitable for children with ADHD, cerebral palsy, neurological developmental disorders, dysphasia or language disorder, as well as children in the autism spectrum (Hautamäki et al., 2018). Based on this statement, it may be suggested that animals can help with challenges in interaction, communication, sociality, and concentration – both in therapy settings, but also in pedagogical setting.

Even though Finnish academic research concerning AAI in non-therapeutic settings is still rare, there are several Bachelor's and Master's Theses of graduates of education, health care, or social services programs that focus on animal-assisted methods in pedagogical or social-pedagogical contexts, e.g. dogs in schools (e.g. Nieminen, 2016), or child protection service (e.g. Korhonen, 2017). Several theses focused also specifically on early childhood education and care (cf. chapter 3). Considering that numerous of those theses are from the last three or four years, it may be concluded that the awareness and interest in animal-assisted work is increasing.

### **3 Animal-Assisted Interventions in Early Childhood Education and Care**

Very few studies could be found that focused on the implementation of AAI in institutions of early childhood education and care (ECEC). Most of them, as the studies by Gee et al. mentioned in chapter 2.2, used young children as their target group, although the emphasis lay on child development rather than the institutional situation.

Only the study by Ferreira et al. (2016) investigated the attitudes of early childhood professionals, parents, and young children towards animal-assisted therapy (AAT) in ECEC. Specific questionnaires to each target group explored the knowledge of AAT in general, and the attitudes towards AAT and its implementation into their day-care centre. The results showed that parents had more previous knowledge of AAT than professionals. However, AAT was generally viewed as positive and beneficial to children, and all interviewed groups would welcome AAT as a model of education in their school. Nevertheless, the authors pressured the need for more research concerning the pedagogical perspective of AAT, as the study identified AAT as still rather unknown to educational professionals. (Ferreira et al., 2016) Moreover, as the outcome of this study also revealed the professionals' and parents' concerns (e.g. financial resources, physical space, and the employment of more interdisciplinary professionals), rising awareness of AAT/AAI and its benefits for young children, may also tackle the explorations of solutions to those practical challenges.

In practice, the implementation of AAI in ECEC institutions has a wide range of appearance. Some kindergartens have animals in their own premises or "next door" (e.g. a nearby farm or zoo) and the children are in daily contact with the animals, like in learning projects and activities, or even in the daily routine of caring and nurturing. Aims are for example the understanding of connections between humans and nature, exploring the animal kingdom, and learning about wildlife conservation. (Children's House e.V., 2015) A different purpose can be the children's possibility for free and independent exploration and problem solving by helping with the daily farm work: feeding the animals, cleaning their stables, harvesting, or using and manufacturing nature products (Muhs and Strunz ed., 2011). Other kindergartens choose to co-operate with AAI professionals or volunteers who visit the kindergarten regularly with their companion animals, such as dogs or small mammals like guinea pigs, or even insects (Claeßens, n.d.).

Possibly the most important duty of the pedagogue or AAI professional is to teach the appropriate handling of the animals to the children. Young children do not have the understanding yet, that the animal's needs and signals may differ from humans' and therefore might frighten or even harm the animal in their best intention (Döring, Bidoli and Jung, n.d.). To ensure the well-being of the animal, Döring et al. (n.d.) stress the importance of professionally controlled interaction, the "principle of voluntariness", which means that the animal must always have the possibility to retreat from the contact and must never be disturbed when sleeping or eating. The animal's small signals of stress or

fear must be recognized and lead to immediate intervention by the professional. (Döring et al., n.d.)

Strunz (n.d. (a)) introduces a didactic model for the pedagogical work with animals, which is based on 5 principles:

- Professionally guided interaction with animals
- Supporting reflection by seizing children’s comments during or after intervention
- Experiencing the animal as a “partner” through attachment, empathy, respect
- Experiencing the animal as a “facilitator” for growth and development
- Experiencing the animal as a “companion” for a sustainable lifestyle (Strunz, n.d. (a))

In order to ensure a beneficial outcome of the intervention for both the children and the animal, the professional must be aware of both the children’s potential deficits (physical, cognitive, or emotional) and the animal’s abilities (e.g. what tasks or situations does the dog need to be trained for?).

In Finland, animal-assisted methods have been implicated since the beginning of the 2000s mainly with animal-assisted volunteering in hospitals and institutions and more concretely by professionals starting from 2008 (Hautamäki et al., 2018). Yet, even though the establishment of animal-assisted methods in therapy and rehabilitation, as well as in special education (e.g. as classroom dog or reading dog) or well-being (e.g. volunteering visiting service in institutions) is documented (Hautamäki et al., 2018), concrete facts on the situations regarding ECEC could not be found.

However, in recent years AAI in ECEC institutions has been subject of small-scale investigations in numerous bachelor’s theses. While some studied the effect of animal-assisted activities on young children and found positive outcomes regarding the children’s social and emotional skills (e.g. Könönen, 2016) or children’s behaviour and integration (e.g. Pöllänen and Sedergren, 2010), others developed practical ways of implementation that may fit into the ECEC routine (e.g. Linna and Reunanen, 2016).

### 3.1 Regulations and Legislation Concerning Animals in Schools

In some countries (e.g. Austria, or several federal states of Germany), there are official regulations or guidelines concerning the presence of animals (especially dogs) in schools, for example the requirement of the professional's and animal's training, regulations concerning animal husbandry in schools, physical space, hygiene, or risk prevention (Bundesministerium für Bildung und Frauen (Austria), n.d.; Ministerium für Schule und Weiterbildung des Landes Nordrhein-Westfalen (Germany), 2015).

In Finland there is no common legislation that regulates animals in schools or institutions of early childhood education and care. However, research by the Finnish Social Insurance Institution Kela reported that many professionals, who use animal-assisted methods in their work, invest into further AAI-training e.g. from the Summer Universities of Tampere and Hämeenlinna (in cooperation with a private company), or Jyväskylä University of Applied Sciences, which has a dog-assisted work program for health and social care professionals and educators and cooperates with Koirat kasvatus- ja kuntoutustyössä ry. Other training programs (e.g. Solution Focused Animal Assisted Therapy, or Sosped Koira training) provide training for professionals and volunteers who want to work with a therapeutic approach, or in a pedagogical setting, such as kindergartens or schools. (Hautamäki et al., 2018)

In addition to the professional's training, many professionals also stress the importance of the animal's suitability and training. Not every animal may be suitable for AAI due to their species related characteristics or individual personality traits, and some training is needed to ensure the client's safety, and the animal's well-being. When working with a dog, aptitude and screening tests are conducted by associations and other actors. Therapy dogs must pass a veterinarian examination and will then wear a recognizable scarf or harness when being "at work". (Hautamäki et al., 2018)

When considering to keep animals permanently on school premises, it is important to apply the Government Decree on dogs, cats and other small companion and recreational animals 674/2010, which was composed by the Ministry of Agriculture and Forestry under adjustment of the Animal Welfare Act 247/1996 (cf. chapter 3.5). This decree regulates for example requirements concerning the animal's enclosure, care and well-being, and species-related requirements of dogs, cats, small mammals (e.g. rodents, rabbits,



ferrets), birds, reptiles, amphibians, fishes, and invertebrates (Valtioneuvoston asetusköirien, kissojen ja muiden pienikokoisten seura- ja harrastuseläinten suojelusta 674/2010).

### 3.2 AAI within the Finnish Curriculum for Early Childhood Education and Care

Based on the Finnish Act on Early Childhood Education and Care, the National Core Curriculum for Early Childhood Education and Care regulates the obligations of early childhood institutions, and the implementation of high-quality pedagogy and equal and holistic practices (Finnish National Agency for Education (FNAE), 2017). This chapter explores how AAI could find its place within the curriculum.

Finnish early childhood education and care (ECEC) promotes the child's holistic growth, health, and well-being, which includes, among others, the prerequisites for life-long learning, physical activities, teamwork, and interaction skills – supporting participation, and a responsible and sustainable lifestyle (FNAE, 2017). Comparing these aims with the benefits of animal contact that were discussed in chapter 2, it becomes clear that both do correspond.

Focussing on the area of learning, the curriculum states:

Learning is holistic and occurs everywhere. It combines knowledge, skills, actions, emotions, sensory perceptions, bodily experiences and thinking. (...) Children learn best when they are feeling well and secure. Positive emotional experiences and interactive relationships promote learning. (FNAE, 2017, p. 23)

Remembering Beetz's studies on school dogs (cf. chapter 2.2), as well as the earlier mentioned studies on the emotional and psychological benefits of animal contact, it may be safe to suggest that animals do have a beneficial effect on children's learning within the understanding of Finnish early childhood education. However, suggesting AAI as a beneficial activity that has its rightful place within the curriculum, we must be more concrete and have a look at the framework for pedagogical activities:

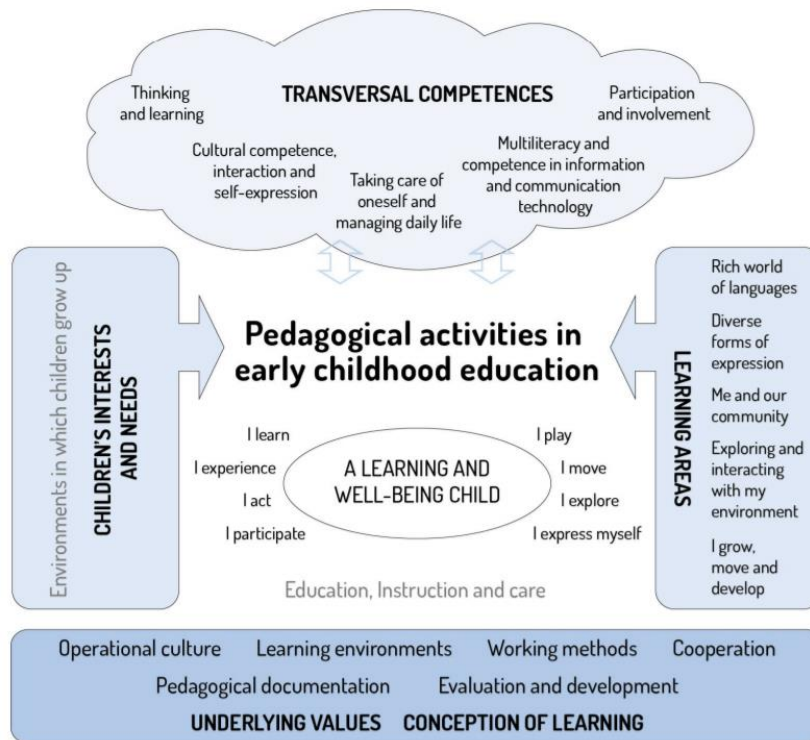


Figure 1. Framework for pedagogical activity in ECEC (FNAE, 2017, p. 40)

Aiming at the transversal competences (in the top cloud of figure 1), holistic pedagogical activities support a child's learning and well-being while being based on the underlying values of ECEC and using working methods and learning environments as a foundation for education and care.

So how could AAI fit into this framework?

In chapter 4.3 the curriculum states that "working methods [must be] functional and promote the creativity and participation of children [providing] natural ways of learning (...) Children must have an opportunity to explore the world with all of their senses and their entire bodies" (FNAE, 2017, p. 42). Clearly, AAI covers all these requirements: animal contact stimulates the child's senses, supports physical activities, and implements learning experiences through direct or indirect participation and creativity (e.g. planning activities or making toys for the animal). The same requirements apply to the learning environments: Healthy and safe environments must promote growth and development in all learning areas, provide active as well as relaxing settings, support interaction and opportunities for participation, and take children's ideas, needs, and skills into consideration (FNAE, 2017, p. 34). AAI can serve as a learning environment in various and diverse

ways, e.g. by visiting farms, inviting AAI volunteers and their pets to the day-care, or fostering own pets at the day-care premises. In all cases, the animal contact provides an enormous variety of learning experiences in physical, cognitive, social, and emotional dimensions. Animal contact can be active and stimulating or passive and relaxing. Children may be included under consideration of their interest, abilities, and needs, and the animal's authentic behaviour gives direct feedback to the child's actions, reactions, and interaction skills (cf. chapter 2.2).

Animal-assisted activities may cover all five learning areas – rich world of languages; diverse forms of expression; me and our community; exploring and interacting with my environment; I grow, move and develop – (FNAE, 2017): Animal contact may invite the child to talk with or about the animal, or learn new words and expressions. The experiences of being with the animal can be expressed and processed through drawings or even by singing songs about animals. Discussing the animal's needs may stimulate the child's ethical thinking and perspectives. Learning about, from, and for the animal may increase the child's scientific and environmental learning, e.g. biology, species-appropriate living conditions, or measuring and building animal housing. And finally, animal contact may bring rich opportunities for learning about safety, hygiene, health, and well-being.

These considerations suggest that AAI can be seen as a holistic approach that has its rightful place within the ECEC framework and promotes the children's transversal competences.

### 3.3 Animal Species and Their Suitability for Small Children

Although dogs and horses are the more common animals in animal-assisted settings, almost all animals can serve as a medium. Nevertheless, actively included animals, especially dogs, must fulfil some requirements, such as the ability for attention and concentration, reliability to show similar behaviour in similar situations, predictable behaviour in new or sudden situations, physical and character eligibility (e.g. size, appearance, temperament suitable to the client's needs), and a friendly, not anxious character. Still, the most important requirement is the strong and healthy attachment to the owner/pro-

professional, who is always in charge of ensuring clarity, safety, and well-being to the animal. Only if the animal has assurance to trust him/her even in stressful situations and receive calmness and orientation from him/her, this bond can positively influence the setting. (Vernooij and Schneider, 2008; Otterstedt, 2007)

Yet, the choice of a specific animal also depends on the setting of the intervention, e.g. the animal's role, the context of the human-animal contact, or the client's goals (Hart, n.d.). Animals with a similar character and tempo as the client may facilitate calmness, relaxation, and openness for dialogue, while contrary personality traits or behaviour may give new impulses and encourage for different behaviour reactions. A lively animal may motivate and increase quality of life, while an even-balanced, sensitive character might respond to a client's emotional needs. (Otterstedt, 2001) Professionals should be aware, that their own preference of an animal species is not necessarily the same as the client's. Clients' background experiences and feelings regarding specific species, as well as their religious or cultural beliefs must be identified and considered in order to provide a positive experience for both the client and the animal. (Hart, n.d.; IAHAIO, 2014)

The choice of the animal species for an institution of early childhood education and care should not be taken lightly. Circumstances and context of the planned interventions play a key role: What is the children's situation, earlier experiences, and their needs? Is the aim to motivate the children for physical activity, or to provide a feeling of safety and security? (Hart, n.d.)

On the contrary, considerations should not only touch what the animal brings to the children, but moreover the species-related needs: Do the school premises provide space for species-appropriate housing including opportunity to retreat? What are the cost factors concerning the animal's facility and equipment, food, and veterinarian costs? Does the species live in groups (e.g. guinea pigs, rabbits, farm animals) or on their own (e.g. hamsters)? Humans or other species can never serve as a replacement for companions from the same species! (Godau ed., 2011; Döring et al., n.d.)

#### Advantages and challenges of different species

Dogs are generally interactive and social but need a lot of attention (Hart, n.d.). They need an owner and cannot stay alone in the school's premises overnight. The costs

concerning food and veterinarian costs are rather high. (Godau ed., 2011) Potential risks are allergies and dog-bites (cf. chapter 3.4).

Cats can be entertaining; though their interaction is low-level and calm (Hart, n.d.). They are easy to keep and bring the “cuddle factor” and emotional attachment. Potential risks: allergies, scratches, and bites. (Godau ed., 2011)

Small mammals are generally easy to keep, but they are social animals and need to live in groups (except for hamsters) (Godau ed., 2011). Rabbits may become attached but are generally easily scared (Godau ed., 2011), while guinea pigs are more relaxed, but do not enjoy being groomed (Döring et al., n.d.). Hamsters have extremely high level of stress when being touched (Godau ed., 2011). Rats are very social and interactive but may have a strong smell and a short span of life (Godau ed., 2011).

Birds can be entertaining, and some species are interactive and social, but they may also be noisy and messy (Hart, n.d.).

Fish need relatively little space and are easy to keep; they are relaxing and suitable for children with allergies (Godau ed., 2011).

Horses may need professional facilities and expert supervision, especially if used for therapy (Hart, n.d.).

Farm animals generally have huge space requirements and cause high costs. They are social animals and need to live in groups. On the other hand, the advantages are their very active and diverse characteristics and behaviours. (Godau ed., 2011)

Reptiles need little time and effort but require expert knowledge. They cannot be cuddled and are fed with living animals. (Godau ed., 2011) According to IAHAIO (2014), reptiles, same as wild animals, should not be included in AAI but only be observed in their natural habitats or wildlife sanctuaries that meet animal welfare standards.

### 3.4 Potential Risks and Their Prevention

The unpredictability of animal behaviour may raise concerns about the potential risks of the contact between animals and small children, such as allergies, zoonoses, and animal bites. Taking these concerns seriously, several studies have focused on these subjects.

#### Allergies

Research has come to contradicting results regarding allergies and animal contact. While studies by Takkouche, Gonzáles-Barcala, Etminan and FitzGerald (2008), and McConnell et al. (2006) found that exposure to dogs slightly increases the risk of asthma, and dog ownership may worsen asthmatic symptoms, Bufford et al. (2008) revealed that early dog contact in infancy may lead to reductions in wheezing and atopy. In contrast to those older studies, a new Swedish study has documented a reduced risk of asthma in preschool and school children older than 3 years old when being exposed to dogs or farm animals during their first year of life (Fall, Lundholm, Örtqvist, Fall, Fang and Hedhammar, 2016).

In addition to the risk of allergies towards the animal itself, the professional should also be aware of potential allergies towards utensils or animal food, e.g. peanuts, wheat (Dogwood Therapy Services Inc., 2008-2019).

#### Zoonoses

Diseases that are transmitted from animals to humans can be caused by viruses, bacteria, parasites, or fungi. Haverkos, Hurley, McCune and McCardle (n.d.) provide a list of diseases, as well as their symptoms, sources of infection and precautions. Even though several animal-related infections exist, most of them are rare and seldom transferred by pets, but rather through contaminated food or water (e.g. bird flu, swine flu, salmonella), wild animals (rabies), or insects (Lyme disease). Nevertheless, precautions, which are linked to hygiene and the animal's health condition, should be taken seriously. Pets and animals that are in contact with humans need regular health check-ups and handling ill animals should be avoided. Human-animal contact must always be supervised, especially with young children, as they are at a higher risk for infections due to their sensory way of exploring. Education on appropriate interaction with animals (e.g. no kissing) and

mandatory hygiene (e.g. washing hands after interaction) is highly important. (Haverkos et al., n.d.)

### Animal bites

Animal bites are a genuine problem, with the majority (85-90%) concerning dogs. Dog bites may lead to infections of the wound, hospitalizations and surgeries, or even post-traumatic stress disorder. Due to their small size and behaviour, children are at increased risk for being bitten. (Haverkos et al., n.d.)

Investigating the reasons for animal bites, researchers and practitioners agree that the biggest issue lays in the lack of knowledge regarding animal behaviour and communication systems, and the misinterpretation of the dog's early signs of discomfort (Haverkos et al., n.d.; McConnell, n.d.). Demirbas et al. (2016) reported that over 65% of adults, who were asked to interpret a dog's behaviour and body language during interaction with a child, mistook a fearful, anxious dog as being relaxed and confident. Significantly, dog owners performed even more poorly than non-owners. A similar study by Lakestani, Donaldson and Waran (2014) demonstrated that young children age 4 and 6 were unable to identify fearful behaviour in dogs, due to the lack of knowledge that besides the facial expression also tail and general posture must be observed when reading a dog's emotional condition.

In conclusion, preventative measures in AAI settings must include the education of clients (in ECEC: the children) on the differences between the human and animal communication systems. Additionally, the owner or AAI professional must be trained to understand their animal's stress answer, to identify the animal's early signs of discomfort, and to intervene as early as possible.

### 3.5 Animal Welfare

In Finland, the Animal Welfare Act 247/1996 regulates the well-being and treatment of all animals, e.g. the prevention from distress through excessive exertion, rough handling or training, the provision of appropriate premises, and care (Animal Welfare Act 247/1996. S. 3-6). In addition, the Government Decree on Dogs, Cats and Other Small

Companion and Recreational Animals 674/2010 defines more specific requirements concerning premises, care, and well-being of different pet species (cf. chapter 3.1). Yet, neither the Animal Welfare Act nor the Government Decree include any section concerning therapy animals.

Serpell, Coppinger and Fine (n.d.) point out various sources of potential welfare issues specifically concerning animals in AAI. Among them are for example issues regarding the provision for the animal's social and behavioural needs, cruel training methods, and inappropriate environments or conditions. Strunz (n.d. (b)) criticizes the attitudes and expectations towards AAI animals or misjudgements and lack of knowledge concerning their needs that she was confronted with in the daily routine of different AAI settings. Animals were not kept in species-appropriate housing, were expected to bear clients' rough handling, or were simply killed when veterinarian costs increased or when the animal's behaviour was judged as problematic. A high stress level of the animal was recognized, but not prevented or anticipated. (Strunz, n.d. (b))

On the contrary, some studies found positive results. To investigate the well-being of therapy dogs, several studies examined their stress level during an AAI intervention either by means of salivary cortisol response (Glenk, Kothgassner, Stetina and Palme, 2013) or by measuring the heart-rate and comparing it with video-taped behaviour (Palestrini et al., 2017). The results showed no indicator of stress. The absence of stress during the intervention is of course only one factor for the animal's well-being. Nutrition, breaks between intervention sessions, ensuring a safe environment, as well as intervention-free days are just as important (Winkle and Canfield, 2008).

Although most research is directed at dogs, a study by Gut, Crump, Zinsstag, Hattendorf and Hediger (2018) focussing on AAI with guinea pigs confirmed that retreat possibilities during the AAI session is mandatory for the well-being of the animals.

The Farm Animal Welfare Council (2012) emphasizes the 5 freedoms that define "an animal's welfare, whether on farm, in transit, at market or at a place of slaughter" (FAWC, 2012), that may surely apply to pets, companion animals, and therapy animals likewise:

1. "Freedom from Hunger and Thirst
2. Freedom from Discomfort



3. Freedom from Pain, Injury or Disease
4. Freedom to Express Normal Behaviour
5. Freedom from Fear and Distress” (FAWC, 2012)

To ensure the wellbeing of AAI animals, the IAHAIO (2014) demands that all professionals working with animals should be trained in animal-behaviour and gain knowledge of animals’ needs. Animals must be treated with respect and should never be forced to perform inappropriate or stressful tasks. Clients of AAI must be supervised to ensure appropriate handling of the animal. (IAHAIO, 2014)

According to Kela’s research, Finnish AAI professionals pay thorough attention to animal welfare. In most cases animals do not work more than twice a week or a few hours a time and are always carefully monitored, taking into consideration how active or passive an animal is during a session. Ensuring the possibility to retreat and balancing work and rest is likewise important. (Hautamäki et al., 2018)

Regarding AAI in ECEC, there is one indicator though, that must raise precaution and extra supervision during the intervention: Research revealed that children with a history of experienced domestic violence have a higher risk to show cruel behaviour towards animals (Currie, 2005). AAI professionals must be aware of this correlation in order to ensure an interaction that is safe and beneficial for both the child and the animal.

#### **4 Research Project**

As mentioned earlier, there is still little research that focuses specifically on human-animal interaction in institutions of early childhood education and care. In chapter 2.3 some challenges of current AAI studies were revealed. The Brazilian study by Ferreira et al. (2016) – which analysed the opinions of kindergarten managers, teachers, parents, and children on the implementation of animal-assisted methods as an educational model – showed that AAI is still rather unknown among pedagogical professionals. However, international research documented that animal-contact is beneficial for the development

of children and can be supportive in pedagogical settings (cf. chapter 2.2). Several practical examples also show that AAI is possible in early childhood settings, even though the planning requires multiple considerations (cf. chapter 3).

Chapter 3.2 discussed the possibilities to include AAI in early childhood education along and within the Finnish national core curriculum for early childhood education and care. Finnish early childhood education and care (ECEC) is based on values that promote children's rights, health and well-being, and holistic learning, including a "healthy and sustainable way of living" (FNAE 2016, p. 23). The latter embraces the ecological dimension of life and understanding of ecological sustainability, which serves as the basis for "ecosocial knowledge and ability" and promotion of social sustainability and human rights" (FNAE 2016, p. 23).

Several alternative day-care concepts, such as forest kindergartens, Waldorf/Steiner, or Montessori day-care centres, provide regular and intensive nature experiences, e.g. through school gardens or play with natural materials, and foster ecological values and understanding through seasonal and cosmic activities (Schaffert, 2004; Vereinigung der Waldorfkinderergärten, n.d.; Blattwerk Naturpädagogik Berlin, n.d.). Also, many Finnish day-care centres include forest visits on a regular basis.

Including animals in the daily day-care routine or offering animal contact on a regular basis might be a concept that has strong similarities to nature education. In fact, it even takes a step further by encouraging and teaching the thoughtful and appropriate interaction and care for living beings. Accordingly, AAI may serve as a bridge between the ecological and the social dimension of learning and help children to grow into responsible and sustainable members of society.

#### 4.1 Purpose and setting

The numerous bachelor's theses of graduates of Finnish universities of applied sciences (cf. chapters 2.4 and 3) propose that interest in AAI among professionals has been increasing throughout the last years, also within the field of ECEC.

Yet, most of these theses are case studies that analyse the benefits of an animal-assisted project on young children or the attitudes of professionals in specific schools and day-care centres after a trial of animal-assisted activity. No Finnish research could be found that explored the attitudes towards AAI in ECEC in a broader perspective just as the Brazilian study by Ferreira et al. (2016) did.

Thus, the purpose of this study was to investigate the general awareness and attitudes towards AAI in ECEC, both from the professionals' (as the ECEC provider) point of view, as well as from the parents' or guardians' (as the client) perspective. Questions that formed the research process and choice of method and setting were e.g. "Are people aware of the AAI concept?" or "Is there any interest or need for the implementation of AAI in institutions of ECEC?".

While other studies focused on the impact of AAI on young children, this research project started from a different point: Instead of investigating what numerous scientific studies already confirmed, this project took the assumption that AAI does have a positive impact on child development as the starting point for the next step. Like the Brazilian study, the aim was to analyse the general awareness of AAI among relevant people in the field of ECEC in Finland, and to investigate their opinions on the implementation of AAI in ECEC institutions. Moreover, this study intended to analyse the participants' concerns about an implementation of AAI in day-care centres. The purpose for this second research question was to understand the reasons for participants' positive or negative attitude, and to learn where might be need for clarification or elucidation (e.g. in case of misconceptions), or the potential for further research.

Another difference to earlier Finnish studies was the dimension of this project. Instead of concentrating on one or two specific institutions, this research project was created in a way that allowed the examination in a wider societal sense. Nevertheless, limitations concerning time and resources (cf. following chapters) made it necessary to confine the setting of the research: In contrast to the Brazilian study, which proceeded with four target groups (day-care managers, day-care staff, parents, and children), this project was modified to two target groups: Professionals working in ECEC institutions in the first group, and guardians (including parents and legal guardians) of children in kindergarten age (0-7) in the second group. As for reasons of limited time, the decision was set to focus on the city of Helsinki. Complex requirements concerning research in municipal institutions led to the first target group's focus on private day-care centres in Helsinki.

The institutions' contact details were extracted from the webpage of Helsinki city, and were contacted via email. Unfortunately, some day-care centres did not have functioning webpages and email addresses could not be found and therefore were excluded. In the second group, both guardians from municipal day-care centres and private day-care centres participated. The survey was promoted through social media groups, which were considered to consist of relevant people, e.g. parent groups, or groups of residential areas in Helsinki.

#### 4.2 Methods and Procedure

Two adapted surveys were prepared for the two target groups: Group 1 investigated the attitudes of professionals working in ECEC institutions (Appendix 1), while group 2 focused on guardians of kindergarten children (Appendix 2). To ensure anonymity and convenience, the surveys were prepared with the free online survey software "Survey-Monkey" and could be accessed by the participants via link. Both online surveys were open for 14 days. In the beginning of the survey, the participants were informed about the purpose of the research, the participation in the study, and confidentiality. They were then asked to give their informed consent of the participation. The used languages were English and Finnish.

The reasons for using a fixed design for the project were its structured and objective characteristics. Additionally, through quantitative research it was possible to contact a larger number of participants, and the prospect of a greater feedback rate was higher. This was important in order to get a broader view on representative samples of the relevant target groups.

The advantages of an online survey as the research method were e.g. the low costs and relatively fast and time-efficient implementation compared to face-to-face interviews or paper questionnaires. Another huge advantage was the anonymity of the participants that ensured a more objective picture of the investigated opinions. In contrast, as disadvantages it should be mentioned that misunderstandings cannot be eliminated. Consequently, it was crucial to phrase the questions as unbiased, simple, and short as possible.

Even though this research project was designed for a greater number of participants than a case study or face-to-face interviews, it must be clear that it is still a small-scale study. Time and resource limitations did not allow a research project that could gather enough information to present a sample of the target groups that allows a generalized conclusion on the subject. Nevertheless, the results may give an idea of the state of affairs and may point out the need for further investigation.

When developing the questions for the surveys, the Brazilian study served as a model. However, only one question (“Have you ever heard about AAT”) was adopted – by changing AAT to the more general term AAI – and two more questions (“Do you believe in potential benefits for children by employing AAT?” and “Do you think child-animal interaction is beneficent?”) were modified into “Do you believe that children benefit from regular contact with animals?” (Ferreira et al., 2016). All other questions in this project were newly developed. The difficulty was to create questions that explored a variety of opinions around the subject, but to limit the number of questions to avoid participants getting bored and dropping out.

To start the surveys smoothly, the first three questions aimed at general information (in group 1: the professional’s degree, further training, and the workplace’s educational concept; in group 2: the guardian’s child’s age, municipal or private institution, and the day-care centre’s educational concept). The reason for those question was on one hand to help the participant to engage slowly with the survey, and on the other hand to investigate potential similarities or differences that might occur and might play an interesting role in the analysis.

Both surveys then asked if the participant had heard of AAI before and whether they believed in benefits of regular animal-contact. Following these first inquiries on awareness and opinion, a short paragraph of information, emphasized by scientific sources, informed the participants then about the concept of AAI and gave examples how AAI may improve children’s growth and development. The participants had to tag that they had read the information before continuing with the next question.

The reason for including theory before further investigation of the participants’ opinions was to ensure that the participant understood the subject (the scientific statement that AAI is beneficial for children) and could then form their own opinion on the more specific questions on the implementation of animal contact in ECEC institutions. The motive for

this decision was the assumption that uninformed people may not be able to form clear opinions on a subject they have never heard about. One could argue that including theory in the middle of the survey may have influenced the participants' opinions and led to less objective and reliable results. It is true that the results might have been different if the participants had not received the theoretical input. On the contrary, one could question the reliability of a research that investigates opinions of people who might not have ever heard about the investigated topic, as their answers might not represent their true views on the subject. The belief that some knowledge is necessary in order to form one's own opinions, was the reason for the decision to include this paragraph in between the survey questions. However, in retrospect, the content of the theoretical intercourse could have been more neutral by also including contradicting research (cf. chapter 2.3), though this would have increased the amount and complexity of the information and might have led to participants dropping out of the survey.

The questions following the paragraph of information then explored the participants opinion on concrete topics concerning animals in day-care centres, e.g. preferred animal species, or concerns about the implementation of AAI in ECEC. In order to avoid leading questions, the answer options were randomized sorted, so that they appeared in arbitrary order for each participant.

## 4.3 Results

### 4.3.1 Target Group 1: Professionals of ECEC

In the first group, 19 professionals of early childhood education participated: 5 Bachelors/Master of Social Services, 5 Kindergarten Teachers, 3 Practical Nurses, and 2 Childminders; 4 participants chose "Other" as their occupational background. In this group, 11 professionals had some kind of further training. All participants were employed in private day-care centres in Helsinki, with most of the work places focussing on "foreign languages" (52,63%) or "other" pedagogical concepts (31,58%), while one was specialized in Aesthetics and two did not have any specific focus.

Almost half of the professionals had heard about the concept of AAI before (47,37%), and the vast majority, including the ones who had not heard about AAI before, believed

that children benefit from regular contact with animals, only one participant tagged “I don't know”.

After a brief introduction about AAI and its benefits for children, the participants were asked whether they could imagine including animals in their current workplace. The majority answered with yes, with the same amount (36,84%) to either on a permanent basis in the day-care's own premises or as a visiting program, while 26,32% could not imagine including animals in their workplace.

The next question explored the preferred animal species in a potential AAI program. Several answers were allowed. The most popular animals were small mammals, such as rabbits or guinea pigs (68,75%), dogs (56,25%), and fish (50,00%), followed by farm animals (31,25%), and cats and birds (each 25,00%). Horses or ponies were the least chosen animals with only 18,75%.

Several answers were also allowed for the question regarding the professionals' concerns about AAI in day-care centres. Most professionals stated that they were concerned about the children developing allergies or asthma through the regular animal contact (73,68%). The cause of extra work (63,16%) and concerns about animal welfare (57,89%) were also chosen by many professionals. Almost half of the professionals (42,11%) were worried about the children's safety, 36,84% had concerns regarding hygiene, and once again 36,84% about raising finances when implementing AAI in the day-care. 26,32% were concerned that parents might choose a different day-care centre. Two professionals (10,53%) had no concerns at all. However, in the final question, the majority of all professionals still considered AAI in day-care centres as a good idea (84,21%), while only one professional did not find it realistic or good. The remaining 10,53% were not interested in the subject.

#### 4.3.2 Target Group 2: Guardians of Kindergarten Children

Altogether 40 parents or guardians with children in day-care centres in Helsinki participated in the survey of group 2. Half of them (52,50%) had children under 3 years old, 37,50% children of age 4 or 5, and 10,00% in pre-school age (6 or 7 years old). The majority (85,00%) were in municipal day-care centres in Helsinki, while the remaining

were to equal parts in private day-care centres or “other” institutions of ECEC. Most of the day-care centres were not specialized in any pedagogical concept (65,00%), while 15,00% focused on foreign languages, 7,50% on Aesthetics, 5,00% on Freinet pedagogy, and equally 2,50% on either Nature pedagogy, sports pedagogy, or “other” concepts.

Most participants in this group had not heard about AAI before (87,50% in contrast to 7,50% who had heard about AAI, and 5,00% who were not sure). However, 92,50% believed that regular animal contact is beneficial for children, while 7,50% tagged “I don’t know”.

After reading the information about AAI and its benefits for children, 65,00% could imagine AAI being included in their child’s day-care centre as a visiting program and 17,50% in a permanent basis in the day-care premises. Only 5,00% could not imagine animals being included in the child’s day-care, while 12,50% were not sure.

In group 2, dogs (86,11%) and small mammals (77,78%) were clearly the most popular animal species, followed by farm animals (66,67%), cats (61,11%), fish (58,33%) and horses or ponies (52,78%). Birds were the least popular animals with 36,11%.

The most frequently chosen concern of parents and guardians was animal welfare with 67,50%. Concerns about finances, and extra responsibilities and work were equally chosen by 45,00% of participants. 40,00% of the participants were worried about their child developing allergies or asthma, and 30,00% had concerns about safety. Only 17,50% were concerned about hygiene. Two participants (5,00%) did not have any concerns at all.

In the final question, 75,00% considered AAI in day-care centres a good idea, while 17,50% found it not realistic or good, and 7,50% were not interested in the subject.

#### 4.4 Data Analysis and Discussion

Several challenges appeared before and during the research process. The biggest challenge was the limited time resource. This affected for example the decision to focus



solely on private day-care centres in target group 1, as the research procedure for municipality day-care centres would have gone beyond the scope.

Being aware of skipping a huge part of potential representatives, the interpretation of the results consequently must be done with care: Professionals in private day-care centres may (or may not) have different experiences and opinions than their colleagues in city day-care centres. One reason for a difference between private and municipal workplaces could be for example, that private institutions are focused on specific pedagogical approaches (such as foreign languages, sports, or alternative concepts (Montessori, Steiner, ...) more often than municipality day-care centres. This might affect the interest in or knowledge of other specific methods, such as AAI, in contrast to institutions who work by traditional Finnish pedagogy.

Regarding the target group 2 of guardians, it must be clear that only one specific part of parental society was reached: those who use social media. Promoting the survey through other channels (e.g. by contacting the parents directly through their day-care centres) might have had another impact on the results. Moreover, in contrast to group 1 whose participants were solely from private day-care backgrounds, most of the parents and guardians of group 2 had their child in municipal day-care centres. This, as well as the different number of participants in each group ( $N_1 = 19$  participants,  $N_2 = 40$  participants), makes comparisons of both groups more difficult.

Constructing the surveys in both English and Finnish language, increased the diversity of the target groups. Except, Swedish and Sami speaking professionals and guardians were not directly acknowledged, which should be considered as another limitation concerning the representativeness of the results.

Besides these limitations, another restraint is the number of participants. Being aware that both groups are relatively small, generalizations are not possible, and the discussion of the results must be executed with care.

Yet, being aware of those limitations, this chapter will discuss the results under consideration of the research questions: the awareness of the concept of AAI and the attitudes towards AAI in ECEC institutions, as well as the analysis of the participants' concerns and what they might show.

Comparing the answers of both target groups, it appears that some structures of replies were similar, while others quite different:

While almost half of professionals had heard of AAI before, most guardians had not.



Figure 2. Awareness of AAI concept among kindergarten professionals and guardians

It may be concluded that the awareness concerning the concept of AAI may differ immensely between different societal groups. Interestingly though, these results are in contradiction to the findings of Ferreira et al (2016), which reported that 45% of parents had heard about the concept, but only 30% of kindergarten managers, and 5% of kindergarten teachers.

However, both groups strongly agreed that animal contact is beneficial for children, regardless of their knowledge of the AAI concept.

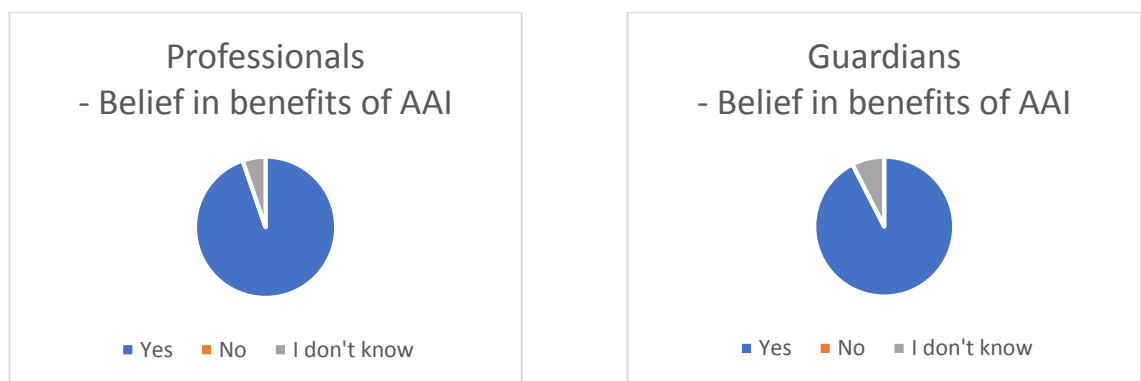


Figure 3. Comparison of professionals and guardians concerning their belief in the benefits of animal contact for children

It seems that whether people are aware of scientific findings, the majority has positive opinions about animal contact. Reasons for this opinion can be numerous, but considering that many people have pets at home, practical and personal experiences may have played a role when answering this question.

Different opinions between professionals and guardians can be seen when comparing whether the participants could imagine animals being included in their own workplace respectively the child's day-care centre. While professionals chose AAI visits and animals living permanently on day-care premises to equal amounts, guardians clearly preferred AAI visits.

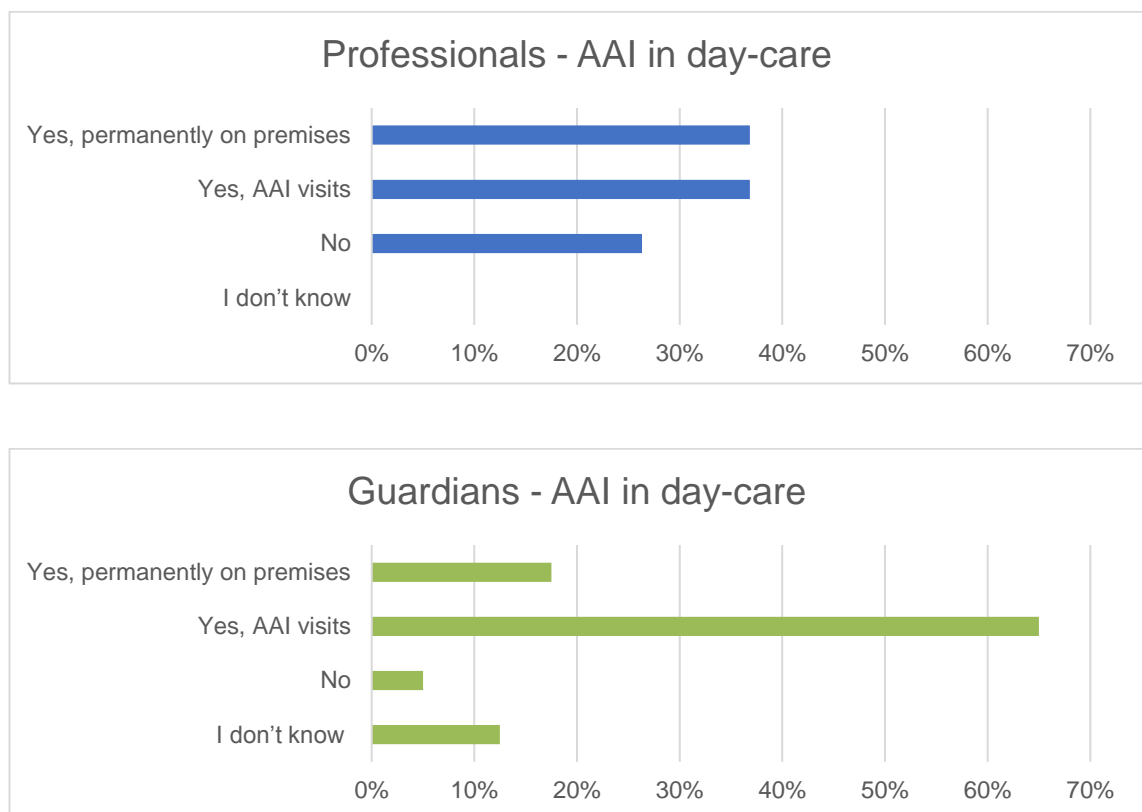


Figure 4. Attitudes of professionals and guardians towards AAI in day-care

Looking more closely into the individual answers, it appears that of those professionals who were familiar with AAI, all of them could imagine AAI being included in their workplace (5 of them as AAI visits, and 4 of them on a permanent basis in their premises). In contrast among the professionals who had never heard about AAI, only half could imagine AAI being included in their workplace (2 as visits, 3 permanently), while the other half disagreed.

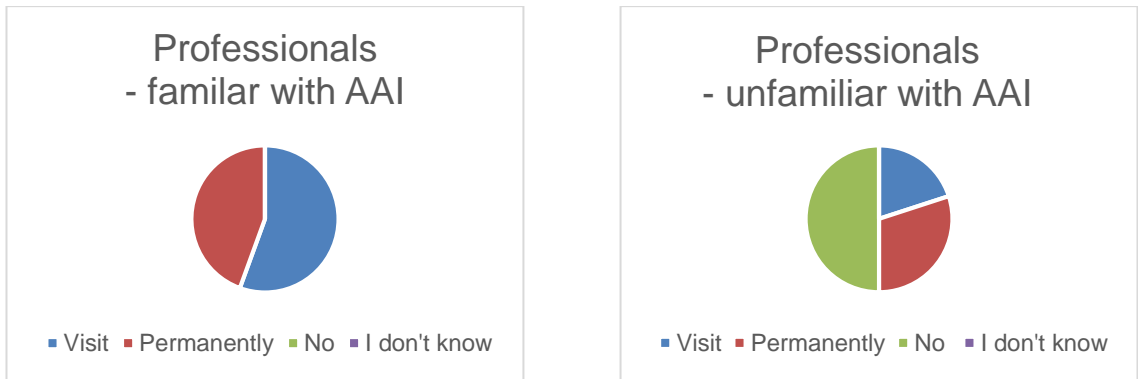


Figure 5. Difference between professionals being familiar or unfamiliar with AAI concerning AAI being included in workplace

These results may lead to the assumption that more knowledge and understanding of AAI and its benefits could help professionals to consider the possibilities of the concept and maybe even to see ways for implementation.

Within group 2, only three guardians had previously heard about AAI and all three could imagine AAI being included as AAI visits in their child’s day-care. Among the ones who were unfamiliar with the concept, the majority still chose AAI visits as their preference, while only two could not imagine an implementation of AAI.

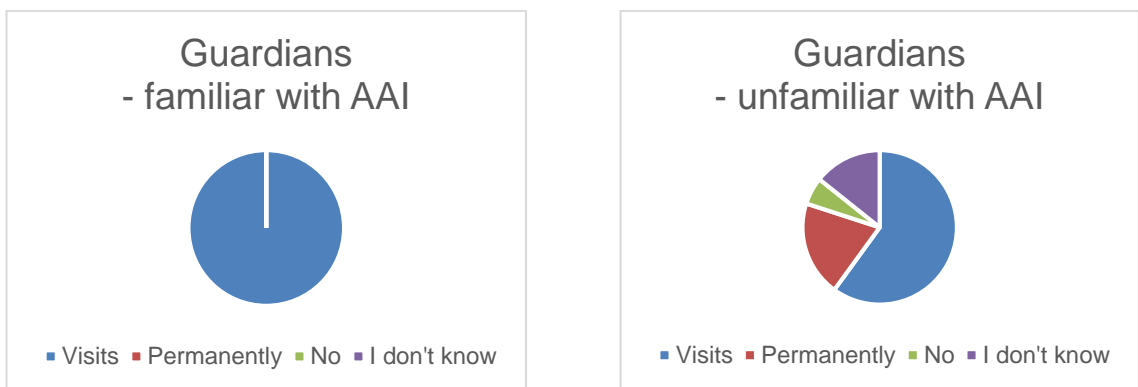


Figure 6. Difference between guardians being familiar or unfamiliar with AAI concerning AAI being included in their child’s day-care

The different results between professionals and guardians who were unfamiliar with the concept of AAI may be that the professionals might have had a more practical view and were directly concerned of how animals could affect their work routine in a negative way. As in contrast guardians might have thought of the positive effects of animals on their children.

Some differences appeared also in the question concerning animal species. While dogs, small mammals, and fish scored highly in both groups, differences could be seen regarding cats, and horses and ponies: Both species got higher results (over 50%) among guardians, and rather low scores among professionals (around 20%).

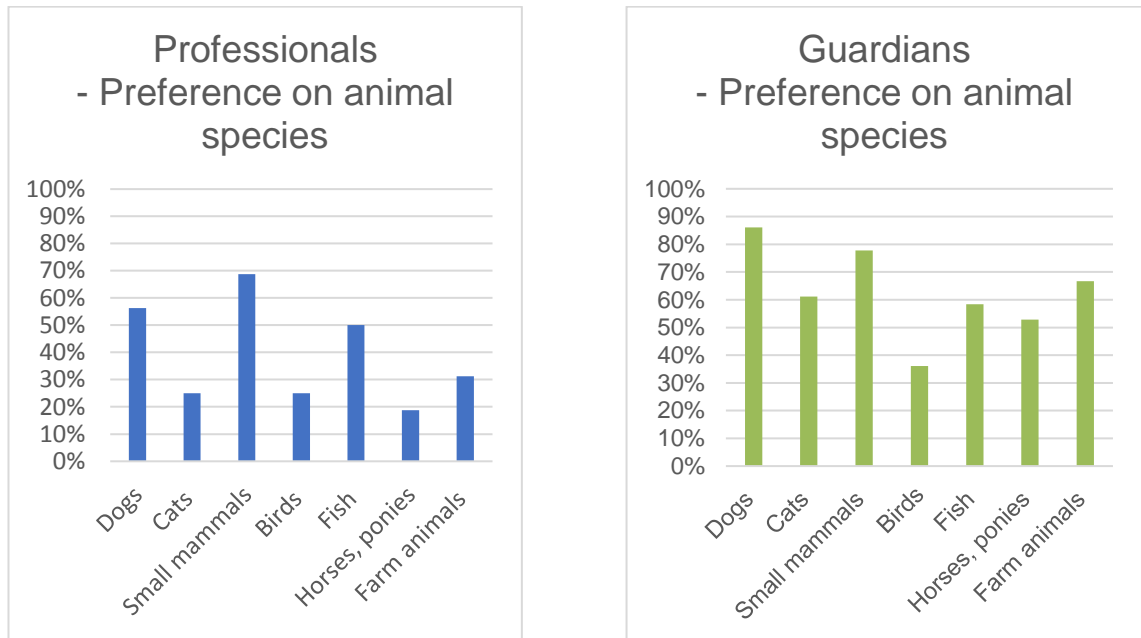


Figure 7. Differences in preference on animal species among professionals and guardians

One reason for the low popularity of horses and ponies in the professionals' group might be that the mounts are considered to require a greater amount of extra work, specific skills and training, and equipment. It could be that professionals, in contrast to guardians, were more aware of the practicalities when answering the question rather than the personal preference on an animal species. This would also explain why cats scored quite low (despite that they are popular as pets and companion animals), as professionals might be concerned of day-care life not being suitable for the sensitive species.

Another interesting difference can be seen in the comparison of the target groups' concerns: Although the numbers of concerns were similar in both groups, the areas of concerns differed.

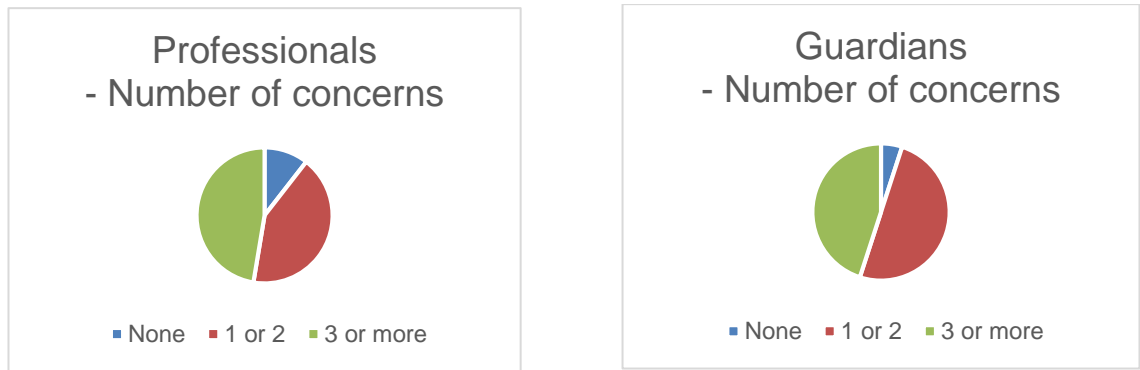


Figure 8. Number of concerns among professionals and guardians

While the top concern of professionals was the children developing allergies or asthma (closely followed by time and responsibilities, and animal welfare), the guardians’ main concern was animal welfare – with a lead of almost 20% towards concerns regarding finances, time and responsibilities, and allergies.

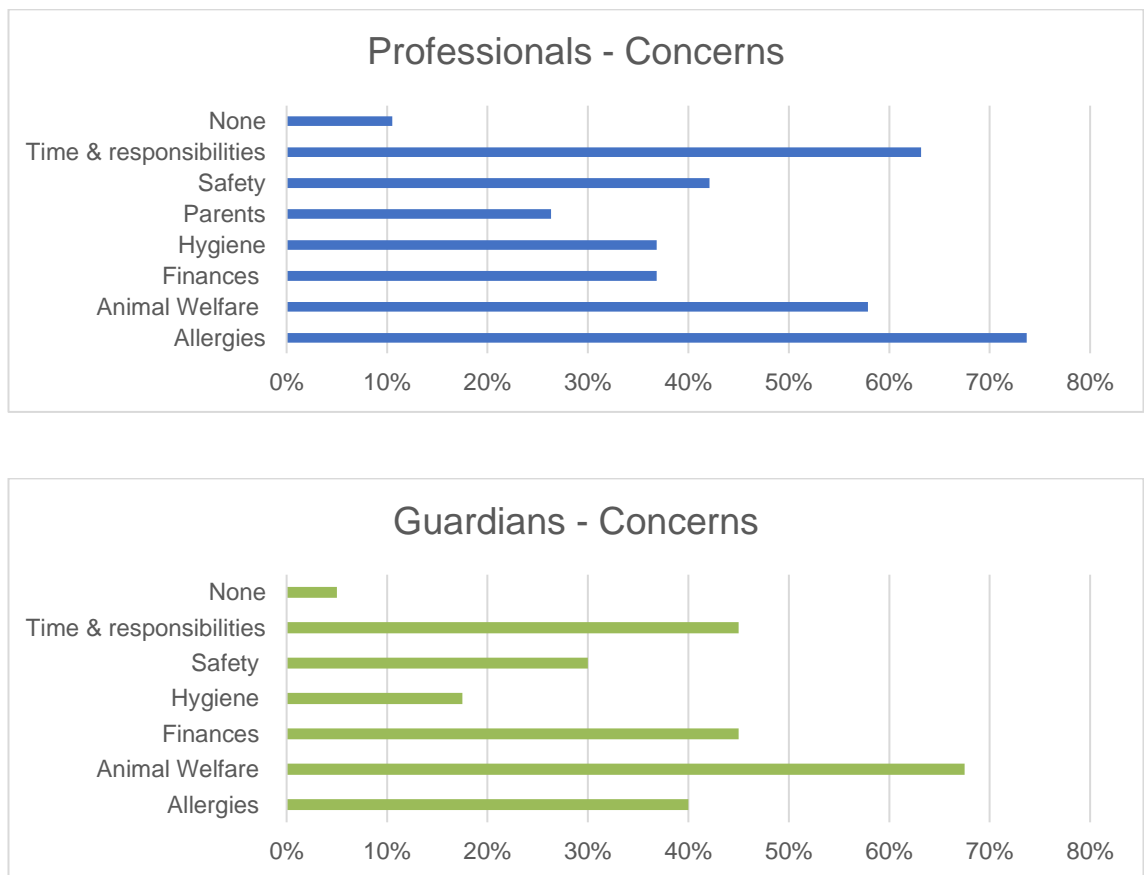


Figure 9. Differences of concerns among professionals and guardians

It was interesting to see that those areas that would affect the children directly (safety, hygiene, allergies) were not the ones that guardians were mostly concerned about and were chosen by less than 40% the participants. In contrast, they chose areas that concerned the animals (animal welfare), the day-care staff (time & responsibilities), and their own family situation (finances).

Keeping those results in mind, it was also interesting to see that the professionals' final attitude regarding AAI in day-care centres were slightly more positive (84,21% professionals, 75,00% of guardians), while a higher number of guardians (17,50%) found AAI in day-care as not realistic or good compared to only 5,26% of professionals.

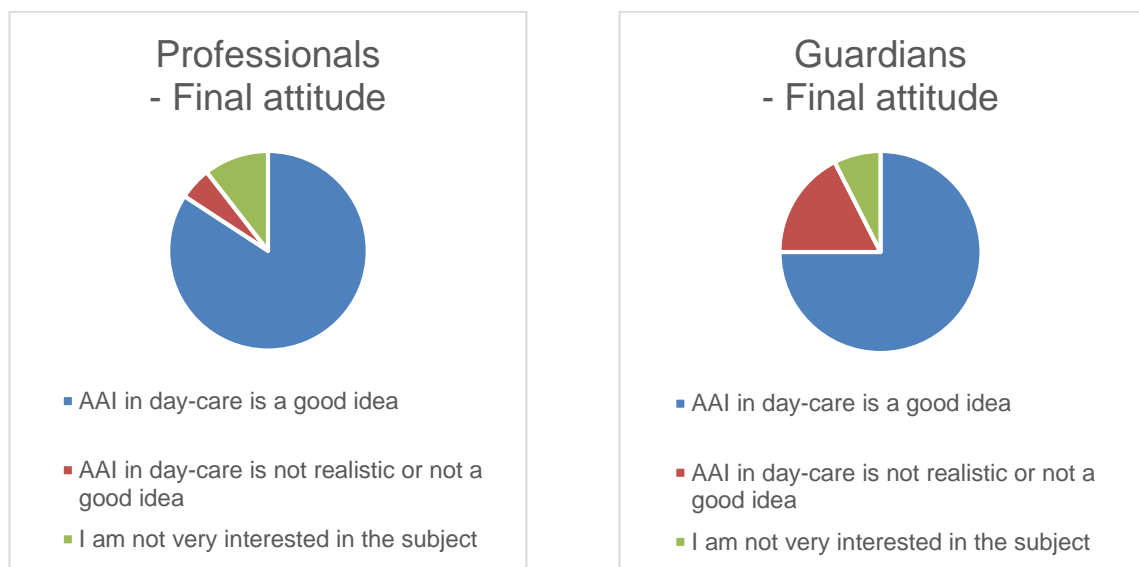


Figure 10. Comparison of final attitude towards AAI in day-care among professionals and guardians

Comparing the amount of concerns with the final attitudes of participants, no significant connection could be found. The only professional with a negative attitude towards AAI in day-care centres tagged 3 concerns – so that it cannot be concluded that a high number of concerns led to a negative attitude towards the implementation of AAI in ECEC. A similar picture appeared in group 2: Of the 6 guardians with negative attitude towards AAI in day-care centres, only half tagged 3 or more concerns, while two tagged two concerns, and one even had no concern at all.

#### 4.5 Interpretation and Conclusions

In chapters 4.3 and 4.4 the research results were presented and compared in diverse ways. But what can be learnt from those results?

As mentioned earlier, due to the limitations of this study (number of participants, no randomized participant groups, different group sizes), comparisons between the target groups must be understood as a cautious impression rather than a fact or affirmation. Moreover, no generalization towards guardians of kindergarten children, or professionals of early childhood education on a societal level can be drawn. Serpell et al. (2017) addressed challenges of social research, and particularly of studies on AAI (cf. chapter 2.3), and certainly, the research project of this bachelor's thesis cannot completely suspend potential restrictions, either. Nevertheless, this small-scale investigation does show the attitudes and opinion of a small sample of these societal groups, and therefore may give a first impression.

What is clear, is the all-over positive attitude towards animals and animal contact among these small samples. The majority in both target groups pictured animals as a source of positive impact on children's lives, and many were open and willing to include animals also in ECEC settings. Yet, obvious is also the lack of awareness concerning AAI, especially among guardians. This may lead to the conclusion that animal-assisted methods need more promotion in order to serve a greater number of people who could benefit from interventions. As shown in Figure 5, the theoretical knowledge of the concept and the scientific explanation of its benefits led to a greater number of positive answers among professionals concerning the implementation of AAI in day-care centres. This means, that in order to apply animal-assisted methods in more institutions, more awareness among society is needed.

Furthermore, this small-scale study may give an insight in potential misconceptions concerning animal contact and suggest, where elucidation may be needed. One potential misconception according to this investigation may be for example the connection between animal contact and the development of allergies and asthma, which was the main concern among professionals. As described in chapter 3.4, research does not definitely prove a connection between animal contact and the development of allergies and asthma, as some studies documented a positive impact of regular animal contact on wheezing, or asthma (Bufford et al., 2008; Fall et al., 2016).



Low scores of concerns about safety and hygiene may either exist due to high alertness on how to reduce potential risks, or in contrast due to lack of knowledge. Further investigation may clarify whether professionals are aware of the risks of zoonoses and injuries, such as animal bites, and their prevention when supervising small children and animals, in order to implement AAI in a way that protects both the children and the animals. Remembering the studies by Demirbas et al. (2016) and Lakestani et al. (2014) that documented the inability of many adults and children to correctly identify and understand dog behaviour, future research might investigate the awareness of AAI-interested kindergarten professionals and their willingness for further training in animal behaviour (cf. chapter 3.4).

Other concerns were related to raising day-care fees (to cover expenses and training), and the cause of extra work for the professionals. These were similar to the results of the study by Ferreira et al. (2016). Definitely, the provision of financial resources and the organisation of the professionals' workload are matters that need to be resolved before an animal-assisted project can be started in an institution. Seeking practical examples or contacting experienced institutions, may be a good start for a day-care centre, which considers the implementation of AAI. Chapter 3 introduced some examples that show the variety of practical implementation. Institutions should be aware that there are diverse ways of including animals into the practical work with children. Regulations concerning animals in institutions, such as the Animal Welfare Act or the Government Decree on dogs, cats and other small companion and recreational animals 674/2010 must be familiar, just as the recommendations and possibilities for AAI-training (cf. chapter 3.1). On the contrary, there might also be cases, when AAI is not suitable at all for an institution or its clientele (e.g. too little space, no financial or time resources, children with conditions that don't allow animal-contact, no compliance among staff members).

In order to create meaningful encounters between children and animals, ECEC professionals should also understand how AAI fits into the Finnish core curriculum. Certainly, positive situations of animal contact will enrich the children's day. Yet, using AAI as a structured and goal-oriented method of early childhood education and care, may have an even greater and more diverse impact on child development, as the professional can construct the animal contact in a way that supports a specific developmental area, such as language development, or environmental learning (cf. chapter 3.2).

As the goal of AAI is to provide positive experiences for both the human and the animal, the planning should be carried out thoroughly and carefully. Animal welfare plays a significant role and should not be taken lightly. Not only does this include the common understanding of careful and gentle handling, but also specific knowledge on animal species and their needs regarding appropriate housing and food, species-related behaviour, and prevention of stress and discomfort (cf. chapter 3.5). Taking animal welfare seriously may also mean to be honest enough to understand when AAI is not suitable for one's own institutions – despite the enthusiasm of the children, parents, staff or management, and the knowledge of the beneficial outcome for the clientele. Seeing that 57% of the professionals and 67% of the guardians in this study were concerned about animal welfare shows that the many may be aware of potential difficulties regarding animals in ECEC institutions (e.g. noise, stress, rough handling). On the contrary, it also suggests that 43% of professionals and 33% of guardians may not have considered the animals' perspective thoroughly enough. Considering the criticism of Serpell et al. (n.d.) and Strunz (n.d. (b)) that was mentioned in chapter 3.5, it may be hypothesised that professionals often pay more attention to the implementation and outcome for the human, rather than to the animal's. Future research might investigate how carefully, and systematically AAI-interested institutions plan the practical implementation in advance. As VanFleet (2014) in her article on humane treatment of AAI-animals affirms that although most AAI-practitioners are enthusiastic about their work and certainly do not intent to bring harm on their animal (in that article mostly dogs), they do need to “ensure that [the dogs] truly enjoy being involved as much as their human partners do” (VanFleet 2014, p. 20).

In accordance with those considerations on animal welfare, further investigations might also clarify whether professionals (and guardians) are aware of the suitability of different species for young children and understand their species-related needs (cf. chapter 3.3). The high score of small mammals among both target groups might implicate that participants consider their practicability and cuteness, but might not recognize their disadvantages, e.g. sensitivity to noise or stress, or fragility and dislike of being lifted or cuddled. In contrast, other species that received lower scores, such as birds, horses and ponies, and farm animals may have benefits that might be more suitable for some institutions than expected. In addition, as Hart (n.d.) pointed out, professionals should also understand and respect the personal, cultural, or religious background of the children and their preference or rejection of specific animal species (cf. chapter 3.3). Consequently, more education in this area might be needed before deciding whether and which species to be suitable for an institution.

#### 4.6 Considerations on Improvement

In conclusion, this small-scale study gave some interesting impressions that may pioneer deeper and more precise investigations in the future. Looking back to the starting point of this project and the development throughout the process, there are certainly decisions that worked well, as well as choices that may have limited or confined the results. One difficulty was undoubtedly the development of the surveys. Due to high engagement and curiosity on the subject, the original version of the surveys was much more detailed, both in questions and options for reply. Included were for example questions that explored the participants' preferences concerning the nature of AAI activities (e.g. stroking, feeding, caring, theoretical or practical learning, or cleaning of animal premises) or the amount of time that should be reserved for AAI activities (from animal care as the main focus to monthly AAI visits). Regarding the participants' concerns, a second question was to discover their level of optimism towards realistic solutions for those challenges. Concluding questions were to ascertain the participants' opinion on the need or interest in ECEC institutions offering AAI, and whether they would share the subject with their workplace manager or children's day-care manager.

Besides the amount and nature of the questions, another difference between the original and the final version was the design. While the original version consisted of a variety of question and reply types (open, closed, scales from 1-10), the final version used only closed question with mostly one answer option (several options were limited to the questions on preferred animal species, and concerns).

The reason for those adjustments and simplifications, was mainly the limitations to resources considering the study's planning, preparation, execution, and analysis. Additionally, advantages of both survey versions had to be traded off against disadvantages. Certainly, a more detailed survey would have provided more exhaustive results, that might have given a clearer picture of the participants' attitudes and opinions. On the contrary, the length and depth might have discouraged some participants and have led to aborted participation. Overall, it felt more convenient, as well as more reasonable to use the shorter, and less detailed, but more precise version.

In retrospect, one subject that would have been interesting to include in the professionals' survey though, is the Finnish core curriculum of ECEC. Exploring the professionals' opinions or ideas on how to include AAI as a supportive method in accordance with the

key concepts, values, purpose, and framework for pedagogical activity, could have enriched the study's results and their discussion and conclusion.

Finally, the initial questions on the professionals' degree and further training, the kindergarten children's age, as well as the day-care concepts were included in the best intention. The purpose was to investigate potential relations between the participants' background and their answers regarding AAI. However, in hindsight the data appeared too small and unclear to draw any reasonable conclusions. Solely because no significant connection could be found does not justify the assumptions that there are no connections. However, this might be an interesting subject for future research, as learning whether certain professionals are more familiar with or more interested in AAI, or whether guardians with 2-year-old children have different opinions than those with pre-schoolers may help institutions to decide whether to implement the concept or not.

## 5 Conclusion

As the review of recent research and theses of graduates of education, health care, and social services proposes, animal-assisted methods are popular among (future) professionals. Multiple international studies document the positive impact of animal contact on human health and well-being, as well as on child development.

In spite of the interest in adapting animal-assisted interventions into early childhood education and care (ECEC), the reviewed Finnish small-scale studies mostly covered case studies in specific day-care centres or on individual or small groups of children. No Finnish study could be found that investigated the attitudes towards AAI in ECEC within society or measures the interest of professionals or parents in institutions providing regular animal contact to children.

On the contrary, some pedagogical concepts of ECEC, such as forest kindergartens, Waldorf/Steiner, or Montessori, do include practical experiences of nature and ecological values into their daily routines. In conclusion, it may be suggested that as the interest in nature pedagogy exists, AAI could grow into a similar alternative by providing meaningful

pedagogical and goal-oriented activities that not only facilitate an ecological and sustainable life-style, but also support children's physical, cognitive, and psychosocial development.

Following these considerations, the purpose of this bachelor's thesis' research project was to explore the awareness of AAI and attitude towards AAI in ECEC among professionals of ECEC, as well as parents and guardians of kindergarten children. Additionally, the aim was to discover potential concerns about the implementation of AAI in day-care centres in order to understand the reasons for participants' positive or negative attitude, and to learn where might be the need for clarification or elucidation of misconceptions, or the potential for further research.

The study was conducted by a specific online survey for each target group (group 1: professionals, group 2: guardians); the participation was voluntary and anonymously. The results showed that while half of the professionals had heard about AAI before, most guardians were unfamiliar with the concept. The majority of both groups believed that animal contact supports children's development and viewed AAI in early childhood education positively. The concerns' score varied slightly between both target groups. Allergies, a higher workload for professionals, raising day-care fees, and animal welfare were the most frequently tagged concerns.

Based on these results, it can be suggested that although the attitude towards AAI is generally positive, the concept lacks awareness, especially among non-professionals. Promoting animal-assisted methods and its impact on general health and well-being, as well as on child development may help to serve a greater number of people who could benefit from interventions.

Concerns about the implementation of AAI in ECEC may be decreased through the awareness of scientific findings (e.g. regarding animal contact and the development of asthma and allergies), and the promotion of practical examples of already existing adaptations in diverse projects.

Future research may clarify the professionals' awareness concerning risks and prevention when supervising children-animal contact, as well as their knowledge on animal species and their suitability for young children to ensure animal welfare on an elevated level.

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## Survey for Target Group 1: Professionals of ECEC

### **ANIMAL-ASSISTED INTERVENTIONS IN KINDERGARTENS**

#### **Eläinavusteiset interventiot päiväkodeissa**

Survey for kindergarten professionals or managers

*Kysely päiväkotien ammattilaisille tai johtajille*

This survey is part of the Bachelor Thesis by Sarah Meurer.

The questions investigate the knowledge and attitude of day-care professionals or managers towards animal-assisted interventions in institutions of early childhood education.

To fill out this questionnaire you do not need any specific knowledge on the subject. However, it is important that you answer the questions in the given order.

*Tämä kysely on osa Sarah Meurerin opinnäytetyötä.*

*Kysymysten avulla selvitetään päiväkotien päiväkotien työntekijöiden ja johtajien tietämystä ja suhtautumista eläinavusteisiin interventioihin päiväkodeissa.*

*Sinun ei tarvitse olla aiheen asiantuntija vastataksesi kysymyksiin. Kysymyksiin on tärkeää vastata esitetyssä järjestyksessä.*

## INFORMED CONSENT

*(suomenkielinen versio on englanninkielisen tekstin alla)*

**Participation:** Your participation in this survey is voluntary. You may refuse to take part in the research or exit the survey at any time without penalty. You are free to decline to answer any particular question you do not wish to answer for any reason.

**Benefits:** You will receive no direct benefits from participating in this research study. However, your responses may help us learn more about the interest in, knowledge about, and need for animal-assisted work in institutions of early childhood education.

**Risks:** There are no foreseeable risks involved in participating in this study other than those encountered in day-to-day life.

**Confidentiality:** The participation in this survey is anonymous. Neither identifying information (name, email address) nor personal information such as gender, sex, origin, race, etc. are part of this study. If you have questions concerning the privacy policy of this webpage, please follow this link:

[https://www.surveymonkey.com/mp/legal/privacy-policy/?ut\\_source=footer](https://www.surveymonkey.com/mp/legal/privacy-policy/?ut_source=footer)

**Electronic consent:** Clicking on the “Ok” button indicates that

- You have read the above information
- You voluntarily agree to participate
- You are 18 years of age or older

## TIETOINEN SUOSTUMUS

*Osallistuminen: Osallistuminen tutkimukseen on vapaaehtoista. Voit kieltäytyä osallistumasta tutkimukseen tai poistua tutkimuksesta milloin tahansa ilman rangaistusta. Voit kieltäytyä vastaamasta mihinkään tiettyyn kysymykseen, johon et halua vastata mistään syystä.*

*Edut: Et saa välittömiä etuja osallistumisesta tähän tutkimukseen. Vastauksesi voivat kuitenkin auttaa meitä oppimaan lisää mielenkiinnosta eläinten avustetun työn kiinnostavuuteen, tuntemiseen ja tarpeeseen varhaiskasvatuslaitoksissa.*

*Riskit: Tutkimukseen osallistumiseen ei liity muita ennakoitavissa olevia riskejä kuin päivittäisessä elämässä kohdatut.*

*Luottamuksellisuus: Osallistuminen tutkimukseen on nimettömää. Tunnistamattomat tiedot (nimi, sähköpostiosoite) tai henkilökohtaiset tiedot, kuten sukupuoli, sukupuoli, alkuperä, rotu jne. Eivät ole osa tätä tutkimusta. Jos sinulla on kysyttävää tämän verkkosivun tietosuojakäytännöstä, seuraa tätä linkkiä:*

*<https://fi.surveymonkey.com/mp/legal/privacy-policy/>*

*Sähköinen luonnos: Napsauttamalla "Ok" -painiketta, se tarkoittaa*

- Olet lukenut yllä olevat tiedot*
- Suostut vapaaehtoisesti osallistumaan*
- Olet vähintään 18-vuotias*

**1. What is your professional degree?**

***Mikä on koulutustasosi?***

- Bachelor / Master of Social Services

*Sosionomi*

- Kindergarten Teacher

*Lastentarhanopettaja*

- Childminder

*Lastenhoitaja*

- Practical Nurse

*Lähihoitaja*

- Special needs teacher

*Erytisopettaja*

- Other

*Muu*

**2. Do you have any further professional training?**

***Onko sinulla muuta koulutusta?***

- No

*Ei ole.*



- Yes

*Kyllä*

- 3. Does your current workplace focus on one of the following educational concepts? (only one answer possible)**

***Painotetaanko nykyisessä työpaikassasi jotakin seuraavista? (vain yksi vastaus)***

- Aesthetics (Art, Drama, Music, Dance)

*Estetiikka (taide, teatteri, musiikki, tanssi)*

- Foreign languages

*Vieraat kielet*

- Freinet pedagogy

*Freinet -pedagogiikka*

- Nature pedagogy

*Luonnonpedagogiikka*

- Reggio Emilia

*Reggio Emilia*

- Rudolf Steiner's "Waldorf"-pedagogy

*Steiner -pedagogiikka*

- Sports pedagogy

*Liikunta*

- Other

*Muu*

- None

*Ei mikään*

**4. Have you ever heard about Animal-Assisted Intervention?**

***Oletko kuullut eläinavusteisesta interventtiosta?***

no / *En ole*

yes / *Olen*

I don't know / *En tiedä*

**5. Do you believe that children benefit from regular contact with animals?**

***Uskotko, että on lapsille hyödyllistä olla säännöllisesti tekemisissä eläinten kanssa?***

no / *Ei*

yes / *kyllä*

I don't know / *En tiedä*

**6. Read the following Information about Animal-Assisted Intervention. Only then continue with the next question.**

***Lue seuraava teksti eläinavusteisesta interventiosta. Sitten jatka seuraavaan kysymykseen. (suomenkielinen versio on englanninkielisen tekstin alla)***

Animal-assisted interventions are structured and goal-oriented activities with the assistance of animals in the areas of health, education, or social services.

Multiple studies confirm the positive effect of animal contact on general health and well-being.

Concerning children's growth and development, research shows the beneficial impact of animal presence on learning and cognitive development, social skills, and emotional well-being:

- The soothing presence of an animal reduces stress and anxiety and decreases aggressive behaviour.
- Understanding the behaviour of an animal and adapting to it increases the children's empathy and interaction skills.
- Caring for animals increases compassionate and gentle behavior.
- Learning from, about and with them supports children's cognitive and language development.
- The presence of a school dog improves the class' atmosphere and interaction between and among teachers and students.

*Terveyspalveluissa, kasvatusalalla ja sosiaalipalveluissa käytetään suunnitelmallisia ja tavoitesuuntautuneita eläinavusteisia interventioita.*

*Useat tutkimukset ovat osoittaneet, että eläinkontakteilla on positiivinen vaikutus henkilön yleiseen terveyteen ja hyvinvointiin.*

*Lasten kasvun ja kehityksen suhteen tutkimukset ovat osoittaneet, että eläinten kanssa toimimisella on suotuisia vaikutuksia oppimiseen ja lasten kognitiiviseen kehittymiseen:*

- *Eläimen rauhoittava läsnäolo vähentää stressiä, levottomuutta ja aggressiivista käytöstä.*
- *Eläimen käyttäytymisen ymmärtäminen ja siihen sopeutuminen lisää lapsen empatiakykyä ja parantaa vuorovaikutustaitoja.*
- *Eläimistä huolehtiminen lisää myötätuntoista ja lempeää käytöstä.*
- *Eläimistä oppiminen, eläimeltä oppiminen ja eläinten kanssa oppiminen tukevat lapsen kognitiivista kehitystä ja kielellistä kehittymistä.*
- *Luokkakoiran läsnäolo parantaa luokan ilmapiiriä ja vuorovaikutusta niin oppilaiden kesken kuin myös oppilaiden ja opettajien välillä.*

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## **7. Could you imagine animals being included in your current workplace?**

***Voisitko kuvitella, että nykyisessä työpaikassasi voitaisi ottaa eläimiä mukaan?***

- Yes, the animal(s) should live permanently in the kindergarten premises

(continue with question 8)

*Kyllä, eläin / eläimiä pitäisi olla päiväkodissa pysyvästi.*

*(jatka kysymykseen 8)*

- Yes, an AAI professional or AAI volunteer should visit the kindergarten regularly with their pet(s)

*(continue with question 8)*

*Kyllä, AAI -ammattilaisen tai AAI -vapaaehtoisen pitäisi tulla päiväkotiin säännöllisesti eläimen / eläinten kanssa*

*(jatka kysymykseen 8)*

- No (continue with question 9)

*En voi kuvitella (Jatka kysymykseen 9)*

- I don't know (continue with question 9)

*En tiedä (Jatka kysymykseen 9)*

**8. Which animals would you like to be included? (several answers allowed)**

***Mitä eläimiä haluaisit ottaa mukaan toimintaan? (Voit valita useita vaihtoehtoja)***

- Dogs

*Koiria*

- Cats

*Kissoja*

- Small mammals, such as rabbits tai guinea pigs

*Pieniä nisäkkäitä kuten kaniineja tai marsuja*

- Birds

*Lintuja*

- Fish

*Kaloja*

- Horses, ponies

*Hevosia, poneja*

- Farm animals, such as sheep, goats, cows, chickens

*Maatilan eläimiä kuten lampaista, vuohia, lehmiä, kanoja*

**9. When thinking about animals in kindergarten, are you concerned regarding the following areas:**

***Kun ajattelet päiväkotiin tulevia eläimiä, oletko huolissasi seuraavista aiheista:***

- Hygiene – The children might catch a disease from the animal /

*Hygienia – Lapset saattavat saada eläimeltä jonkin taudin*

- Allergies – The children might develop asthma or allergies because of the animal

*Allergia – Lapsille voi kehittyä astma tai allergioita eläimen vuoksi*

- Safety – The children might get injured (being bitten or scratched by animal)

*Turvallisuus – Lapset voivat loukkaantua (eläin voi purra tai raapaista)*

- Animal Welfare – AAI in kindergarten will be too stressful for the animal or the animal might get hurt by the kids

*Eläinten hyvinvointi – AAI Päiväkoti on eläimelle liian stressaava ympäristö tai lapset voivat satuttaa eläintä*

- Finances – The kindergarten fee will increase in order to cover for the animals' needs (e.g. equipment and food, veterinarian costs) and/or the teachers' extra training (or employment of an extra professional of AAI)

*Rahoitus – Päivähoitomaksu nousee, koska eläimen tarpeet on otettava huomioon (kalusto, ruoka, eläinlääkärin maksut) ja/tai opettajat on koulutettava (tai palkattava AAI-ammattilainen)*

- Time & responsibilities – The animals will cause extra work / extra training for the staff (evenings, during weekends and holidays)

*Aika & vastuu – Eläimet aiheuttavat lisätyötä / on annettava lisäkoulutusta henkilökunnalle (illalla, viikonloppuisin, lomien aikana)*

- The Parents – They will send their children to other institutions because they do not like the concept

*Vanhemmat voivat valita toisen päiväkodin, koska eivät pidä AAI -toimintaa sopivana lapselle*

**10. After this survey, which statement describes your opinion about AAI in kindergartens best? (Only one answer)**

***Täytettyäsi tämän kyselytutkimuksen, mikä alla olevista vastauksista on lähimpänä mielipidettäsi koskien AAI -toimintaa päiväkodissa? (Vain yksi vastaus)***

- AAI in kindergartens is a good idea

*AAI päiväkodissa on hyvä idea*

- AAI in kindergartens is not realistic or not a good idea

*AAI:n käyttö päiväkodeissa on epärealistista tai ei ole hyvä idea*

- I am not very interested in the subject

*En ole kovin kiinnostunut aiheesta*



## Survey for Target Group 2: Parents and Guardians of Kindergarten Children

### **ANIMAL-ASSISTED INTERVENTIONS IN KINDERGARTENS**

#### **Eläinavusteiset interventiot päiväkodeissa**

Survey for parents and guardians of kindergarten children

*Kysely päiväkotien vanhemmille ja huoltajille*

This survey is part of the Bachelor Thesis by Sarah Meurer.

The questions investigate the knowledge and attitude of parents and guardians towards animal-assisted interventions in institutions of early childhood education.

To fill out this questionnaire you do not need any specific knowledge on the subject. However, it is important that you answer the questions in the given order.

*Tämä kysely on osa Sarah Meurerin opinnäytetyötä.*

*Kysymysten avulla selvitetään päiväkotien vanhempien ja huoltajien tietämystä ja suhtautumista eläinavusteisiin interventioihin päiväkodeissa.*

*Sinun ei tarvitse olla aiheen asiantuntija vastataksesi kysymyksiin. Kysymyksiin on tärkeää vastata esitetystä järjestyksessä.*

## INFORMED CONSENT

(suomenkielinen versio on englanninkielisen tekstin alla)

**Participation:** Your participation in this survey is voluntary. You may refuse to take part in the research or exit the survey at any time without penalty. You are free to decline to answer any particular question you do not wish to answer for any reason.

**Benefits:** You will receive no direct benefits from participating in this research study. However, your responses may help us learn more about the interest in, knowledge about, and need for animal-assisted work in institutions of early childhood education.

**Risks:** There are no foreseeable risks involved in participating in this study other than those encountered in day-to-day life.

**Confidentiality:** The participation in this survey is anonymous. Neither identifying information (name, email address) nor personal information such as gender, sex, origin, race, etc. are part of this study. If you have questions concerning the privacy policy of this webpage, please follow this link:

[https://www.surveymonkey.com/mp/legal/privacy-policy/?ut\\_source=footer](https://www.surveymonkey.com/mp/legal/privacy-policy/?ut_source=footer)

**Electronic consent:** Clicking on the “Done” button indicates that

- You have read the above information
- You voluntarily agree to participate
- You are 18 years of age or older

## TIETOINEN SUOSTUMUS

*Osallistuminen: Osallistuminen tutkimukseen on vapaaehtoista. Voit kieltäytyä osallistumasta tutkimukseen tai poistua tutkimuksesta milloin tahansa ilman rangaistusta. Voit kieltäytyä vastaamasta mihinkään tiettyyn kysymykseen, johon et halua vastata mistään syystä.*

*Edut: Et saa välittömiä etuja osallistumisesta tähän tutkimukseen. Vastauksesi voivat kuitenkin auttaa meitä oppimaan lisää mielenkiinnosta eläinten avustetun työn kiinnostavuuteen, tuntemiseen ja tarpeeseen varhaiskasvatuslaitoksissa.*

*Riskit: Tutkimukseen osallistumiseen ei liity muita ennakoitavissa olevia riskejä kuin päivittäisessä elämässä kohdatut.*

*Luottamuksellisuus: Osallistuminen tutkimukseen on nimettömää. Tunnistamattomat tiedot (nimi, sähköpostiosoite) tai henkilökohtaiset tiedot, kuten sukupuoli, sukupuoli, alkuperä, rotu jne. Eivät ole osa tätä tutkimusta. Jos sinulla on kysyttävää tämän verkkosivun tietosuojakäytännöstä, seuraa tätä linkkiä:*

*<https://fi.surveymonkey.com/mp/legal/privacy-policy/>*

*Sähköinen luonnos: Napsauttamalla "Ok" -painiketta, se tarkoittaa*

- Olet lukenut yllä olevat tiedot*
- Suostut vapaaehtoisesti osallistumaan*
- Olet vähintään 18-vuotias*

**1. How old is your child? (years)**

*Kuinka vanha on lapsesi? (vuotta)*

- 0-3
- 3-5
- 6-7

**2. Your child's kindergarten is**

*Lapsesi päiväkoti on*

- Municipal day-care

*Helsingin kaupungin päiväkoti*

- Private day-care

*Yksityinen päiväkoti*

**3. Does your child's kindergarten focus on one of the following educational concepts? (only one answer possible)**

*Painotetaanko nykyisessä lapsesi päiväkoti jotakin seuraavista? (vain yksi vastaus)*

- Aesthetics (Art, Drama, Music, Dance)

*Estetiikka (taide, teatteri, musiikki, tanssi)*

- Foreign languages

*Vieraat kielet*

- Freinet pedagogy

*Freinet -pedagogiikka*

- Nature pedagogy

*Luonnonpedagogiikka*

- Reggio Emilia

*Reggio Emilia*

- Rudolf Steiner's "Waldorf"-pedagogy

*Steiner -pedagogiikka*

- Sports pedagogy

*Liikunta*

- Other

*Muu*

- None

*Ei mikään*

**4. Have you ever heard about Animal-Assisted Intervention?**

***Oletko kuullut eläinavusteisesta interventtiosta?***

O no / En ole

yes / *Olen*

I don't know / *En tiedä*

**5. Do you believe that children benefit from regular contact with animals?**

***Uskotko, että on lapsille hyödyllistä olla säännöllisesti tekemisissä eläinten kanssa?***

no / *Ei*

yes / *kyllä*

I don't know / *En tiedä*

**6. Read the following Information about Animal-Assisted Intervention. Only then continue with the next question.**

***Lue seuraava teksti eläinavusteisesta interventiosta. Sitten jatka seuraavaan kysymykseen. (suomenkielinen versio on englanninkielisen tekstin alla)***

Animal-assisted interventions are structured and goal-oriented activities with the assistance of animals in the areas of health, education, or social services.

Multiple studies confirm the positive effect of animal contact on general health and well-being.

Concerning children's growth and development, research shows the beneficial impact of animal presence on learning and cognitive development, social skills, and emotional well-being:

- The soothing presence of an animal reduces stress and anxiety and decreases aggressive behaviour.

- Understanding the behaviour of an animal and adapting to it increases the children's empathy and interaction skills.
- Caring for animals increases compassionate and gentle behavior.
- Learning from, about and with them supports children's cognitive and language development.
- The presence of a school dog improves the class' atmosphere and interaction between and among teachers and students.

*Terveyspalveluissa, kasvatusalalla ja sosiaalipalveluissa käytetään suunnitelmallisia ja tavoitesuuntautuneita eläinavusteisia interventioita.*

*Useat tutkimukset ovat osoittaneet, että eläinkontakteilla on positiivinen vaikutus henkilön yleiseen terveyteen ja hyvinvointiin.*

*Lasten kasvun ja kehityksen suhteen tutkimukset ovat osoittaneet, että eläinten kanssa toimimisella on suotuisia vaikutuksia oppimiseen ja lasten kognitiiviseen kehittymiseen:*

- *Eläimen rauhoittava läsnäolo vähentää stressiä, levottomuutta ja aggressiivista käytöstä.*
- *Eläimen käyttäytymisen ymmärtäminen ja siihen sopeutuminen lisää lapsen empatiakykyä ja parantaa vuorovaikutustaitoja.*
- *Eläimistä huolehtiminen lisää myötätuntoista ja lempeää käytöstä.*
- *Eläimistä oppiminen, eläimeltä oppiminen ja eläinten kanssa oppiminen tukevat lapsen kognitiivista kehitystä ja kielellistä kehittymistä.*
- *Luokkakoiran läsnäolo parantaa luokan ilmapiiriä ja vuorovaikutusta niin oppilaiden kesken kuin myös oppilaiden ja opettajien välillä.*

## References / Lähde:

Beetz, A., Uvnäs-Moberg, K., Julius, H. & Kotrschal, K., 2012. *Psychosocial and psychophysiological effects of human-animal interactions: the possible role of oxytocin*. *Frontiers in Psychology*, 2012:3, article 234. doi: 10.3389/fpsyg.2012.00234.

Fine, A. (ed.), 2000. *Handbook on Animal-Assisted Therapy – Theoretical Foundations and Guidelines for Practice*. California: Academic Press.

## 7. Could you imagine animals being included in your current workplace?

***Voisitko kuvitella, että nykyisessä työpaikassasi voitaisi ottaa eläimiä mukaan?***

- Yes, the animal(s) should live permanently in the kindergarten premises (continue with question 8)

*Kyllä, eläin / eläimiä pitäisi olla päiväkodissa pysyvästi (jatka kysymykseen 8)*

- Yes, an AAI professional or AAI volunteer should visit the kindergarten regularly with their pet(s) (continue with question 8)

*Kyllä, AAI -ammattilaisen tai AAI -vapaaehtoisen pitäisi tulla päiväkotiin säännöllisesti eläimen / eläinten kanssa (jatka kysymykseen 7)*

- No (continue with question 9)

*En voi kuvitella (Jatka kysymykseen 9)*

- I don't know (continue with question 9)

*En tiedä (Jatka kysymykseen 9)*



**8. Which animals would you like to be included? (several answers allowed)**

*Mitä eläimiä haluaisit ottaa mukaan toimintaan? (Voit valita useita vaihtoehtoja)*

- Dogs

*Koiria*

- Cats

*Kissoja*

- Small mammals, such as rabbits tai guinea pigs

*Pieniä nisäkkäitä kuten kaniineja tai marsuja*

- Birds

*Lintuja*

- Fish

*Kaloja*

- Horses, ponies

*Hevosia, poneja*

- Farm animals, such as sheep, goats, cows, chickens

*Maatilan eläimiä kuten lampaista, vuohia, lehmiä, kanoja*

**9. When thinking about animals in kindergarten, are you concerned regarding the following areas:**

***Kun ajattelet päiväkotiin tulevia eläimiä, oletko huolissasi seuraavista aiheista:***

- Hygiene – The children might catch a disease from the animal /

*Hygienia – Lapset saattavat saada eläimeltä jonkin taudin*

- Allergies – The children might develop asthma or allergies because of the animal

*Allergia – Lapsille voi kehittyä astma tai allergioita eläimen vuoksi*

- Safety – The children might get injured (being bitten or scratched by animal)

*Turvallisuus – Lapset voivat loukkaantua (eläin voi purra tai raapaista)*

- Animal Welfare – AAI in kindergarten will be too stressful for the animal or the animal might get hurt by the kids

*Eläinten hyvinvointi – AAI Päiväkoti on eläimelle liian stressaava ympäristö tai lapset voivat satuttaa eläintä*

- Finances – The kindergarten fee will increase in order to cover for the animals' needs (e.g. equipment and food, veterinarian costs) and/or the teachers' extra training (or employment of an extra professional of AAI)

*Rahoitus – Päivähoitomaksu nousee, koska eläimen tarpeet on otettava huomioon (kalusto, ruoka, eläinlääkärin maksut) ja/tai opettajat on koulutettava (tai palkattava AAI-ammattilainen)*

- Time & responsibilities – The animals will cause extra work / extra training for the staff (evenings, during weekends and holidays)

*Aika & vastuu – Eläimet aiheuttavat lisätyötä / on annettava lisäkoulutusta henkilökunnalle (illalla, viikonloppuisin, lomien aikana)*

**10. After this survey, which statement describes your opinion about AAI in kindergartens best? (Only one answer)**

***Täytettyäsi tämän kyselytutkimuksen, mikä alla olevista vastauksista on lähimpänä mielipidettäsi koskien AAI -toimintaa päiväkodissa? (Vain yksi vastaus)***

- AAI in kindergartens is a good idea

*AAI päiväkodissa on hyvä idea*

- AAI in kindergartens is not realistic or not a good idea

*AAI:n käyttö päiväkodeissa on epärealistista tai ei ole hyvä idea*

- I am not very interested in the subject

*En ole kovin kiinnostunut aiheesta*