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RESEARCH

Parental status influences human-to-pet caregiving behaviors, attachment, and attitudes in a Finnish sample

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Abstract

A growing body of literature suggests people are choosing to forego parenthood, bringing companion animals into the home as a focus for people's attachment and caretaking behavior instead. This emergent "pet parenting" can be defined as the parent-like investment in companion animals and has been linked to countries that are experiencing or have experienced the Second Demographic Transition (SDT) marked by subreplacement fertility, changing marriage norms, increased educational attainment, and a flexible life orientation no longer focused solely on reproduction. In this research, we sought to determine if Finland, a country where the SDT has already been evidenced, is also experiencing an emergence of pet parenting and whether there is a difference between parents', nonparents', and future parents' attachment and caregiving behaviors toward companion animals in the home. A total of 857 participants completed an online survey delivered in Finnish and English which included demographic questions, the Lexington Attachment to Pets Scale (LAPS), and a series of questions designed to probe topics regarding the training of companion animals, generalized caretaking, and the ascription of personhood or autonomy to companion animals under the respondent's care. Future parents reported more agreement across all scales of the LAPS, followed by nonparents than parents. Future parents also reported more frequency of behaviors associated with *Affective Responsiveness*, while nonparents reported more frequency of behaviors associated with *Training and Play* and *General Care*. From our results, we argue that Finland does seem to be experiencing the emergence of pet parenting, likely in response to the SDT, and this is demonstrated by marked differences in attachment and caregiving behaviors directed at companion animals in the home.

Keywords: companion animal, attachment, caretaking, parenting strategies, human-animal bond

Introduction

It has been argued that a growing number of people are choosing to forego parenthood, bringing companion animals into the home as a focus for people's attachment and caretaking behavior instead (Laurent-Simpson, 2017a, 2021; Volsche, 2018, 2019, 2021). This phenomenon, often referred to as "pet parenting," has primarily been studied in colonial, western, English-speaking societies (e.g., USA, Australia, UK) or highly urbanized centers (e.g., India). Yet anecdotal observations on social media, via international media outlets, or with colleagues in other countries (e.g., Brazil and Hungary) suggests pet parenting is much more globally widespread, necessitating research into non-English-speaking cultures.

Pet parenting has been linked to countries that are experiencing or have experienced the second demographic transition (SDT) (Volsche, 2018, 2019, 2021; Laurent-Simpson, 2021; Volsche *et al.*, 2021; Volsche *et al.*, 2022). Marked by subreplacement fertility (below 2.1 children born per woman), changing marriage norms,

and increased educational attainment, one of the most significant outcomes of the SDT is a flexible life orientation (Lesthaeghe, 2014). This flexibility has been connected to the construction of a new norm that runs parallel to parenthood – the choice to remain voluntarily childless ("childfree") (Volsche, 2019). A shift away from intergenerational expectations of parenthood creates a space of choice, in which individuals can focus on personal attainment and preference. For some, this means emphasizing career and intimate relationships over biological reproduction – leaving them with a desire to nurture differently (Volsche, 2018, 2019, 2021).

While the SDT has been critiqued for its reliance on cross-sectional data, lack of cultural sensitivity, and ethnocentric biases (Zaidi and Morgan, 2017), literature exists in contrast to these critiques. In 2018, the GBD 2017 Population and Fertility Collaborators working group (Murray *et al.*, 2018) developed the SocioDemographic Index (SDI) as an attempt to normalize fertility data from different countries to account for migration patterns, mortality rates, and

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other epidemiological factors related to a woman's total fertility rate (the average number of children expected to be born per woman in a population). After reviewing data from 195 countries, their report argued that the SDI can be used as a proxy for women's status in a society by connecting improved access to education, personal choice in family planning, and enhanced healthcare. Using India as a case study, the longitudinal salience of demographic change first documented by Goode (1970) continues to be investigated within the framework of the SDT. Ghosh (2017) found that the SDT is a relevant explanation in Kolkata, despite different explanations for the decline in fertility (socioeconomic constraints on reproduction rather than choice, though the choice is present; Volsche *et al.*, 2021). Likewise, Chadda and Sinha (2013) documented the resulting recession of the joint family system, giving way to a nuclear and extended family system. Though cultural nuance is necessary, this simply highlights the need for studies like the current one which works directly with local institutions and voices.

Valkonen *et al.* (2008) studied the SDT in Finland, finding the expected changes in marriage and cohabitation, as well as economic shifts and education. These changes were the highest in Finland's rapidly growing urban regions. Relatedly, the fertility rate in Finland has been in rapid decline since the mid-1960s, reaching an all-time low of 1.35 births per woman in 2019 (World Bank, n.d.). Interestingly, Tilastokeskus (a government agency in Finland) and Kennelliitto (The Finnish Kennel Union) reported on November 25, 2021, that 2020 was the first year in which the number of puppies born in Finland exceeded the number of babies born in the country (Twitter, n.d.). Given these markers of the SDT, it makes sense to pet parenting in Finland.

Using a convenience sample and an online survey of people living with companion animals in Finland, we asked the question: Do Finnish people parent pets? If so, what are the distinctions between parents and nonparents? We define "parents" as individuals who have biological children or are a primary caregivers for a child in the home (e.g., stepchildren); "future parents" as those who reported intentions or desires of having biological children but are not currently parents; and "nonparents" as those who do not have and do not intend to have children in the future and may even identify as "childfree." We further clarify our terms by defining "pet parent" as one who invests time, money, and emotion into their pets in ways that mirror parental investment in children. To answer our questions, we measured attachment using the Lexington Attachment to Pets Scale (LAPS) (Johnson *et al.*, 1992). We also used the Companion Animal Relationships Scale (CARES, first developed by Volsche *et al.*, 2021) to measure a person's affective responsiveness and caretaking behaviors toward a companion animal in the home. Lastly, we included specific demographic questions to probe the language used in role development between humans and companion animals. If Finland is experiencing the emergence of pet parenting, our hypotheses predict:

- H1: Respondents will report using familial/affiliative terms more frequently than terms of ownership to describe their relationships with companion animals in the home.
- H2: Nonparents will use familial and affiliative terms (e.g., parent, child) more frequently than parents and future parents.
- H3: Nonparents will be more likely to agree with statements on the LAPS than parents and future parents.
- H4: Nonparents will report higher frequencies of the behaviors included in the CARES than parents and future parents.

Methods

PARTICIPANTS

We recruited adults, aged 18 years and older, living in Finland, who live with at least one dog or cat. Recruitment occurred via a convenience sample with emails to Omaeläinklinikka Oy's

client list and social media outlets, as approved by Boise State University's Institutional Review Board (IRB) and documented in the letter of collaboration between Omaeläinklinikka Oy and the principal investigator. The team at Boise State University did not have direct contact with Omaeläinklinikka Oy's clients and only received de-identified data. The clinic intended to include this data as part of their marketing and strategic plan. Upon receiving the email or viewing the social media post, respondents clicked a link which took them to an online survey distributed using the Webropol suite of tools. Respondents consented via this online platform and were presented with the survey upon affirming consent to participate. Respondents also confirmed they lived in Finland when completing the Informed Consent, which was verified against the Omaeläinklinikka Oy client list.

The target sample was 500 valid responses, providing sufficient power to find a medium effect (G*Power suggests a minimum of $n = 294$ for a one-way ANOVA; however, we ultimately used Kruskal-Wallis tests due to the unequal distribution of the sample). Data were collected during the late spring and summer of 2021. The survey was ethically reviewed and approved by the management staff at Omaeläinklinikka and Boise State University's IRB (protocol #041-SB19-272).

MATERIALS AND PROCEDURE

The survey was originally written in English (Volsche, 2021). Upon discussing culturally appropriate variations to the demographic questions, it was manually translated using MS Word to Finnish by JP and back translated in MS Word to English by MM, both of whom are native Finnish speakers. Upon completion of the translation process, SV reviewed the back translation for the accuracy and intent of the survey questions. The goal of the translation process was to ensure congruency and accuracy of meaning between the Finnish version and the English version. Both versions were then made available to respondents. This allowed respondents to select the language within which they were most comfortable answering the questions. Responses completed in Finnish were translated into English before being shared with SV and SS.

Demographic questions included standard information like age group, sex, income, education, and relationship status. Additionally, respondents were asked to identify their relationships with children by choosing "all that apply" from a list of possibilities. Options ranged from "I have biological children living with me" to "I identify as childfree by choice." Other options sought to capture the presence of foster and stepchildren, biological children not living in the home, and care invested in the children of others (e.g., teaching, caring for nieces/nephews). Respondents could also specify future fertility plans by selecting "I want children, but do not have any at this time" and "I do not want children, now or in the future."

We also asked questions pertaining to respondents' relationships with companion animals. This included whether they were raised with dogs or cats in the home, with which species they currently live, where their companion animals sleep, and what type of diet is usually provided. There were also questions regarding the language used when speaking about their companions. For example, the question "When talking to close friends and relatives about your relationship with your pet(s), how do you most frequently refer to yourself?" included options such as "owner," "parent (mom/dad)," "friend," or "caretaker." Alternatively, the question "When talking to close friends and relatives about your relationship with your pet(s), how do you most frequently refer to your pet(s)?" with options such as "animal (dog/cat)," "kids/children/baby," "roommate," and "family member." These same two questions were asked with "close friends and relatives" replaced by the context "coworkers or strangers."

Lexington Attachment to Pets Scale (LAPS). To measure human-to-companion animal attachment behavior, we used the LAPS (Johnson *et al.*, 1992). We chose this attachment instrument as

it has been previously validated for use in other languages (e.g., Spanish – Ramírez *et al.*, 2014; Japanese – Volsche *et al.*, 2022). The LAPS includes a total of 23 items and consists of three primary subscales which reached acceptable and good validity with the Finnish sample: *General Attachment* (11 items; Finnish sample $\alpha = 0.862$), *People Substituting* (7 items; Finnish sample $\alpha = 0.816$), and *Animal Welfare/Rights* (5 items; Finnish sample $\alpha = 0.760$). These items are measured on a 4-point, forced-choice Likert scale ranging from 1 (strongly agree) to 4 (strongly disagree). The *General Attachment* scale includes statements such as “My pet and I have a very close relationship” and “Owning my pet adds to my happiness.” The *People Substituting* scale includes statements such as “quite often I confide in my pet” and “I enjoy showing other people pictures of my pet.” The *Animal Welfare/Rights* scale includes statements such as “I believe that pets should have the same rights and privileges as family members” and “I would do almost anything to take care of my pet.”

Companion Animal Relationship Scale (CARES). Finally, a series of Likert-scale questions probed human caretaking behaviors and affective responsiveness toward companion animals in the home. Statements were measured on a 5-point frequency scale, with 1 = “never” to 5 = “always.” Across multiple samples, these statements load into three factors summarized as CARES (Companion Animal Relationship Scale). The first scale, *Affective Responsiveness* (10 items; Finnish sample $\alpha = 0.829$) includes statements such as “I console my pet when they are upset/nervous/scared,” “I consider my pet’s preferences when interacting with them,” and “I let my pet request play/walks from me.” The second scale, *Training and Play* (7 items; Finnish sample $\alpha = 0.806$) includes statements such as “I take my pet to training classes,” “I take my pet to socialize with others of their species,” and “I play games with my pet.” The third scale, *General Care* (6 items; Finnish sample $\alpha = 0.701$) includes statements regarding care such as “I am the person who feeds my pet” and “I am the person who grooms my pet.” *General Care* also includes three statements that are reverse coded: “Someone else feeds my pet,” “Someone else walks/exercises my pet,” and “Someone else plays with my pet.”

ANALYSIS

Upon completion of data collection, all Finnish responses were translated into English and provided to SV as a Microsoft Excel file. The data was then cleaned and checked for coding errors, and subsequently imported to IBM’s SPSS V29.0. Any responses

in which participants missed or skipped questions were removed ($n = 370$). Descriptive statistics, frequencies, and chi-squared tests were completed on demographic questions, including those related to companion animals currently in the home. Responses to the question regarding relationships with children were coded into one of three categories: “Parents” (those who have biological children or step-/foster children living in the home), “Nonparents” (those who do not have or do not want children), and “Future Parents” (those who reported a desire or intent for children in the future). If a respondent could not be coded into one of these three categories, or if their answers were ambiguous, they were removed from the sample.

We computed Cronbach’s alpha for each scale in the two instruments and used Kruskal-Wallis tests to compare parents, nonparents, and future parents on questions related to attachment and caregiving behaviors, as well as language use and other demographics. A probability of superiority measured effect size since the data were not normally distributed.

Results

DEMOGRAPHICS

A total of 1227 responses were collected. After removing incomplete submissions or skipped questions, a total of 857 participants completed the survey. The overall sample was skewed toward females ($n = 788$, 91.9%), who were married or in a domestic partnership for over 1 year ($n = 575$, 67.1%), and obtained postsecondary education (Undergraduate Degrees, $n = 301$, 35.1%; Graduate Degrees, $n = 169$, 19.7%). There were 438 (51.1%) parents, 229 (26.7) nonparents, and 190 (22.2) future parents. Most of our sample was also reproductively aged (25–35 years, $n = 269$, 31.4%; 36–46 years, $n = 194$, 22.6%). The full sample demographics are presented in Table 1.

A chi-square test found significant differences between parents, nonparents, and future parents in the language used to refer to themselves or their companion animals. Most notably, when speaking with family and friends, parents were significantly more likely to report the use of ownership terms, while nonparents and future parents were more likely to use affiliative words like “parent (mom/dad),” “family member,” and “kids/children” (referring to self: $\chi^2 = 21.438$, $p = 0.018$; referring to companion animal: $\chi^2 = 34.217$, $p = 0.002$). Interestingly, when referring to themselves or their

Table 1. Respondent demographics ($n = 857$).

	<i>n</i> (%)		<i>n</i> (%)
Parental status*:		Sex:	
Parent (have children)	438 (51.1)	Male	66 (7.7)
Nonparent (do not have/want children)	229 (26.7)	Female	788 (91.9)
Future parent (want children, but do not have them currently)	190 (22.2)	Other	3 (0.4)
Age:		Education:	
18–24	43 (5.0)	Elementary or similar	37 (4.3)
25–35	269 (31.4)	High school	125 (14.6)
36–46	194 (22.6)	Vocational degree	207 (24.2)
46–60	296 (34.5)	Undergraduate degree	301 (35.1)
61+	55 (6.4)	Graduate degree	169 (19.7)
		Doctoral degree	18 (2.1)
Relationship status:		Annual income:	
Married/domestic partner \geq 1 yr	694 (67.3)	€ 0–10,000	71 (8.3)
Married/domestic partner $<$ 1 yr	25 (2.4)	€ 10,001–30,000	239 (27.9)
Exclusive relationship \geq 1 yr	58 (5.6)	€ 30,001–50,000	326 (38.0)
Exclusive relationship $<$ 1 yr	22 (2.1)	€ 50,001–70,000	100 (11.7)
Dating, not exclusive	5 (0.5)	€ 70,001–90,000	35 (4.1)
Single and looking	79 (7.7)	€ 90,000+	21 (2.5)
Single, not looking	148 (14.4)	prefer not to disclosure	65 (7.6)

*Parental status was determined by asking a series of questions related to the presence of children in the home; desire and intention to have children in the future; and self-identification as a parent or childfree.

companion animals with coworkers or strangers, future parents were more likely to use these terms (referring to self: $\chi^2 = 20.830$, $p = 0.02$; referring to companion animal: $\chi^2 = 21.438$, $p = 0.018$), though code-switching to terms of ownership rather than affiliation were seen across the sample. Table 2 includes a full list of the responses, separated by parental status.

We performed a chi-square test on the question regarding where companion animals slept, with an interest in whether co-sleeping occurred. We adopted Smith *et al.*'s (2017) definition of co-sleeping as "sharing beds or rooms with animals (p. 257)" and collapsed responses into one of three categories: sleeps in the same bed/room; sleeps in the house but not in the room; and sleeps in a crate or outside. There was a significant difference in the multispecies co-sleeping patterns of parents, nonparents, and future parents ($\chi^2 = 14.454$, $df = 2$, $p = 0.025$), with nonparents more likely to sleep in the same room/bed (73.4%), followed by future parents (66.3%), and parents (59.4%).

LAPS

A Kruskal-Wallis test resulted in statistically significant differences between parents, nonparents, and future parents on all three subscales of the LAPS. In all instances, future parents were more likely than nonparents, followed last by parents, to agree with statements on each subscale (*General Attachment*, $H = 41.808$, $p < 0.001$, $d = 0.442$; *People Substituting*, $H = 65.225$, $p < 0.001$, $d = 0.566$); *Animal Rights/Welfare*, $H = 74.496$, $p < 0.001$, $d = 0.609$). The same was true with the total LAPS scores ($p < 0.001$, $d = 0.594$). The results for the LAPS are summarized in Table 3.

CARES

A Kruskal-Wallis test found statistically significant differences between parents, nonparents, and future parents across all three scales in the CARES (Companion Animal Relationships Scale). In all cases, nonparents reported higher frequencies of the behaviors (and lower frequencies of the reverse-coded items). Future parents reported the highest frequencies of behaviors related to *Affective Responsiveness* ($H = 72.110$, $p < 0.001$, $d = 0.598$) followed closely by nonparents, then parents. Nonparents reported the highest frequencies of behaviors in the *Training and Play* ($H = 7.368$, $p = 0.025$, $d = 0.159$) and *General Care* ($H = 27.713$, $p < 0.001$, $d = 0.352$), followed by future parents and then parents. The results of the CARES are summarized in Table 4.

Discussion

Based on our findings, it appears that Finland is experiencing the emergence of "pet parenting" among companion animal caregivers. Nearly half our sample used familial or affiliative terms (e.g., "Mom/Dad," "kids," "family member") when referring to themselves or their companion animal when speaking with close friends and family. However, there is a statistically significant shift in this language to terms like "pet" and "owner" when speaking with coworkers or strangers. This suggests that the practice of pet parenting is still new and, perhaps, the use of affiliative terms is less appropriate or acceptable in public or professional interactions. Alternatively, it is possible that terms such as "children" or "mom/dad" are reserved for less formal settings, like the exchange of "beloved" or "hubby" for "spouse." Interestingly, though code-switching occurred across the sample, future parents showed the largest shift with a nearly doubling of ownership terms when speaking to coworkers or strangers. This suggests the need to further investigate the importance of language and culture when deciding how to present one's relationships in varied environments.

Nonparents were most likely to report co-sleeping with their companion animals when compared to parents and future parents. Co-sleeping is an adaptive strategy in mammals, including humans, serving to build bonds and protect offspring (Ball, 2009). The presence of co-sleeping among nonparents may be indicative of

the protective and bond-building nature of parental-like investment in companion animals. If so, it makes sense that nonparents were more likely to report this behavior. Herzog (2021) and Pierce (2016) argue that parents are more likely to have companion animals in the home as avenues for children to learn caretaking and responsibility, and this may translate to choices related to co-sleeping. Alternatively, parents may perceive a demarcation between humans and animals in the home as part of the "civilizing" process or to prevent zoonotic disease transmission (Smith *et al.*, 2017, p. 260).

Contrary to our hypothesis, future parents – not nonparents – were most likely to agree with statements on the three LAPS subscales. The higher scores on *General Attachment* and *People Substituting* suggest viewing one's companion animal as an attachment figure in need of affection. Since parents have children, it is logical their focus would be on the needs of their children. It is possible that future parents form deep attachments with their companion animals as "practice" for their future roles as parents (Herzog, 2021). It is more difficult to account for future parents' higher scores on *Animal Rights/Welfare*. A growing literature on welfare in veterinary practices (e.g., Schuurman, 2017), perceptions of animal use and welfare (e.g., Kupsala, 2018), and people's perceptions of animals' mental capacities (e.g., Kupsala *et al.*, 2016), suggests that companion animals are becoming more beloved and their welfare more of a concern in the Finnish culture. The scores on *Animal Rights/Welfare* support this. These concerns may simply be more prevalent among nonparents and future parents because they do not have children whose rights and welfare are the priority. More research is needed to better understand the increasing importance of animal welfare globally, and Finland is clearly no exception.

As expected, nonparents reported the most frequency of behaviors related to *General Care*. As noted above, parents often bring companion animals into the home as avenues for their children to learn responsibility and caregiving skills (Pierce, 2016). Likewise, it makes sense that nonparents have more time for these responsibilities, as do future parents who may be building skills for future childrearing (see Laurent-Simpson, 2017b). Nonparents also reported the most frequent engagement in behaviors related to *Training and Play*. This, too, makes sense as the statements for this subscale also referenced play dates and other forms of socialization that are good for both companion animals and their guardians (see Bekoff, 2018; Volsche *et al.*, 2020).

In contrast to our hypothesis, the highest scores on *Affective Responsiveness* were among future parents, rather than nonparents. At first glance, this is puzzling. However, both future parents and nonparents have significantly higher *Affective Responsiveness* than parents. From this perspective, it is possible that future parents and nonparents spend more time focused on their companion animals, therefore seeing the individuals rather than the species or collective of family. This is supported by interviews with childfree individuals who shared the importance they placed on species-specific care and the agency of their companion animals and go so far as to propose that "pet parent" is simply shorthand for a different, though equally deep bond (see Volsche, 2018, 2019).

Overall, our findings add to the growing literature that argues for the role of the second demographic transition in the emergence of pet parenting across cultures. With its flexible life orientations and focus on higher-order needs, the SDT provides an avenue for choice regarding parenthood. For individuals who choose not to have children or have not yet begun their family, companion animals appear to provide a valuable outlet for the need to nurture. Like many other cultures, Finland appears to be experiencing an emergence of pet parenting, and the attachment and caregiving behaviors we would expect to see humans apply to children are being employed toward companion animals in the home – especially in homes without children.

Table 2. Relationship language used with companion animals (by parental status).

Referencing self when talking to friends and relatives ... ($\chi^2 = 21.438, p = 0.018$)		n (%)			Referencing pets when talking to friends and relatives ... ($\chi^2 = 34.217, p = 0.002$)		n (%)		
	P	NP	FP		P	NP	FP		FP
Owner	186 (42.5)	89 (38.9)	75 (39.5)	Animal (dog/cat)	120 (27.4)	48 (21.0)	53 (28.0)		
Parent (mom/dad)	153 (34.9)	83 (36.2)	85 (44.7)	Pet	49 (11.2)	16 (7.0)	11 (5.8)		
Guardian	12 (2.7)	3 (1.3)	5 (2.6)	Kids/children	22 (5.0)	27 (11.8)	29 (15.3)		
Friend	28 (6.4)	7 (3.1)	6 (3.2)	Girls/boys	54 (12.3)	34 (14.8)	13 (6.9)		
Caretaker	12 (2.7)	6 (2.6)	1 (0.5)	Friend	16 (3.7)	8 (3.5)	8 (4.2)		
Other*	47 (10.7)	41 (17.9)	18 (9.5)	Roommate	1 (0.2)	1 (0.4)	1 (0.5)		
				Family member	104 (23.7)	55 (24.0)	49 (25.9)		
				Other*	72 (16.4)	40 (17.5)	25 (13.2)		

Referencing self when talking to coworkers or strangers ... ($\chi^2 = 20.830, p = 0.02$)		n (%)			Referencing pet when talking to coworkers or strangers ... ($\chi^2 = 21.438, p = 0.018$)		n (%)		
	P	NP	FP		P	NP	FP		FP
Owner	305 (69.6)	147 (64.2)	151 (79.5)	Animal (dog/cat)	213 (48.6)	98 (42.8)	101 (53.2)		
Parent (mom/dad)	65 (14.8)	34 (14.8)	22 (11.6)	Pet	74 (16.9)	42 (18.3)	31 (16.3)		
Guardian	9 (2.1)	8 (3.5)	4 (2.1)	Kids/children	12 (2.7)	12 (5.2)	8 (4.2)		
Friend	21 (4.8)	7 (3.1)	5 (2.6)	Girls/boys	21 (4.8)	17 (7.4)	10 (5.3)		
Caretaker	12 (2.7)	9 (3.9)	1 (0.5)	Friend	19 (4.3)	5 (2.2)	3 (1.6)		
Other*	26 (5.9)	24 (10.5)	7 (3.7)	Roommate	1 (0.2)	1 (0.4)	0 (0.0)		
				Family member	68 (15.5)	36 (15.7)	32 (16.8)		
				Other*	0 (6.8)	18 (7.9)	5 (2.6)		

*Nearly all references to "other" identified using the person's or animal's name, a nickname, or referencing a relationship of servitude toward one's companion animal (e.g., servant, master).

Table 3. Sample descriptive for LAPS by scale.

	Parents		Nonparents		Future parents		H	p	d [†]
	n	Mean rank*	n	Mean rank*	n	Mean rank*			
Scale 1**	438	478.32	229	404.41	190	344.93	41.808	<0.001	0.442
Scale 2**	438	494.86	229	373.40	190	344.19	65.225	<0.001	0.566
Scale 3**	438	499.01	229	369.97	190	338.76	74.496	<0.001	0.609
Total LAPS	438	495.64	229	379.27	190	330.66	71.134	<0.001	0.594

*Lower mean rank signifies more agreement with statements from the scale.

**Scale 1 = *General attachment*; Scale 2 = *People substituting*; Scale 3 = *Animal rights/welfare* (Johnson et al., 1992).

†Cohen's *d* obtained using the calculator developed by Lenhard and Lenhard (2016).

Table 4. Sample descriptive for CARES by scale (by parental status).

	Parents		Nonparents		Future parents		H	p	d [†]
	n	Mean rank*	n	Mean rank*	n	Mean rank*			
Scale 1**	438	359.80	229	486.06	190	519.76	72.110	<0.001	0.598
Scale 2**	438	406.80	229	456.27	190	447.31	7.368	0.025	0.159
Scale 3**	438	396.36	229	501.10	190	417.36	27.713	<0.001	0.352

*Higher mean rank signifies more reported frequency of each statement from the scale.

**Scale 1 = *Affective responsiveness*; Scale 2 = *Training and play*; Scale 3 = *General care*.

†Cohen's *d* obtained using the calculator developed by Lenhard and Lenhard (2016).

Limitations and conclusion

The potential limitations of this study are largely centered around the sample population. Since recruitment took place primarily via an email to Omaeläinclinikka Oy's client list, it may not be generalizable to the entirety of the Finnish population of companion animal guardians. Additionally, the sample was skewed toward females with postsecondary education, who had been married or in a domestic partnership for at least 1 year. However, this is also the population most commonly impacted by major demographic changes like education and improvements in women's status in a society (Murray et al., 2018). Accordingly, this is the first group in any culture where we would expect to see changes in fertility and caregiving patterns. Also because of this unequal distribution of sex in responses, we are unable to test whether sex differences exist in the Finnish responses to our survey. This is an avenue worth further investigation, as Volsche et al. (2022) found distinct differences between men and women in Japan.

Future research needs to continue exploring how the SDT impacts changes in cultural norms, particularly in relation to family and community obligations. Expanding this data beyond individual countries and seeking nationally representative samples is one starting point. Alternatively, more nuanced, ethnographic work examining the lived experiences of nonparents and future parents who apply their parenting skills to companion animals may shed light on the deeper reasons behind this choice. As argued by Laurent-Simpson (2017b, 2021), individuals who begin their families with companion animals may find the competing demands of work, life, and caring for their companions sufficiently challenging to deter them from having children. Assuming Volsche's (2019) argument that foregoing parenthood has become a parallel norm to having children, it is crucial to understand the long-term outcomes of this choice for the individuals and their companion animals.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

ETHICS STATEMENT

All necessary ethical approvals were received before data collection began.

AUTHOR CONTRIBUTIONS

S.V. conceptualized the study; S.V., J.P., and M.M. contributed to methodology; S.V., S.S., and S.A. carried out formal analysis; J.P. and M.M. performed data curation; S.V. contributed to writing – original draft; S.V., S.S., and J.P. contributed to writing – review & edit; S.V. supervised the study.

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This was an unfunded project.

DATA AVAILABILITY

Data is available upon request from the first author.

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