

Investigation of the Effect of Keeping Pets at Home and Playing Musical Instruments on the Empathetic Tendencies of Children

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ABSTRACT

The present study was carried out to investigate the empathetic tendencies of children with regard to keeping a pet at home and playing a musical instrument. The study was carried out with a total of 139 children, 72 girls and 67 boys, attending the third-fourth and fifth grades of a foundation primary school located in the city center of Denizli in Turkey. In the study, a Personal Information Form as developed by the researchers was used with an aim to obtain information about the child and family, and the "KA-Sİ Empathetic Tendency Scale for Children and Adolescents - Children's Form" was used in order to determine the empathetic tendency of children. Parametric (t-Test, One-Way Variance Analysis (ANOVA) and non-parametric (Mann-Whitney, Kuruskal Wallis) tests were applied based on whether the data demonstrated a normal distribution or not, in order to determine if the empathetic tendencies of children differ by the variables of keeping a pet and playing a musical instrument at home. As a result of the research; it was found that the variables of keeping a pet at home and playing a musical instrument were associated with a significant difference in the mean scores of children's empathetic tendency ($p < 0.05$). Children can be given responsibilities about keeping pets, which makes important contribution to empathetic skill; children can be oriented to musical activities in line with their interests, and studies can be conducted with an aim to raise awareness of parents and the close environment.

KEYWORDS

Empathetic tendency; children; keeping a pet at home, playing a musical instrument, primary school.

INTRODUCTION

Living creatures need to communicate in order to survive. The place of communication in human life is completely different. People have the chance to identify with each other's role and empathize with each other. Having an empathetic understanding, communicating without conflict, and maintaining it requires considerable effort. Empathetic communication is the best way of conflict-free communication. In human relationships, empathy is an important feature that determines the quality of relationships. In the most general sense, empathy is expressed as putting oneself in the place of the other person, being able to look at events from his/her eyes and reflecting these feelings to him/her (Derman et al., 2020; Ersoy & Köşger, 2016; Huseynova, 2018; Saleme et. al., 2020; Stern et al., 2015).

The child's ability to view events from someone else's point of view; based on the understanding of another person's attitudes and feelings, allows them to organize their own behavior and adapt to their environment. The more skilled an individual is in understanding the feelings of other people, the more one can support the people, who need help, by sensing their feelings and needs in advance (Cengizhan, 2015; Hüseynova, 2018; Taner-Derman, 2013; Yavuzer, 2004). Therefore, in order to support the positive development of children's empathic tendencies, it is very important to identify their empathic tendencies and to reveal factors that may affect their empathic tendencies. A review of the factors that may affect the empathic tendency provides that there are some findings with regard to the fact that some of the factors that positively support the empathetic tendencies of the children are found in keeping a pet at home and playing a musical instrument (Atılğan & Ördekçi, 2014; Dökmen, 2004; Güven, 2017; Özen et.al., 2022; Simonic, 2015; Türkmen, 2010; Williams et al., 2010).

Pet love has huge and constructive effects on children. Children can share their joy and sadness with pets. They connect to pets that give them unconditional love and try to understand them; they become one with them and learn love (Arıkan et al., 2019). Especially when the quality of the relationship of children with their pets is considered a common variable, it is observed that attitudes towards animals spread towards empathy for people. Therefore, it is thought that empathetic skills of people in perceiving the needs of animals create a transfer effect on empathic skills and tendency established with humans (Endenburg & Van Lith, 2011; Longobardi & Badenes- Ribera, 2019; Renck- Jalongo, 2018; Sobko et al., 2018).

Studies conducted on the relevant subject suggest the fact that the children in the houses, where pets such as cats and dogs are kept have higher empathetic skills, and especially the cognitive and emotional role skills, compared to the empathetic skills of children in houses, where pets are not fed; that the empathetic tendency increases with establishing close ties with pets, and that children, who keep pets at home, are more empathetic than children, who do not (Akdemir & Gölge, 2020; Arıkan et al., 2019; Endenburg & Van Lith 2011; Hachey & Butler, 2012; Hawkins & Williams, 2017; Longobardi & Badenes-Libara, 2019; Renck-Jalongo, 2018;

Rothgerber & Mican, 2014; Sobko et al., 2018; Thompson & Gullone, 2008; Tu, 2006; Uttley, 2013).

It is emphasized that dealing with music also had positive impacts on empathic tendencies of children necessary for healthy communication along with keeping a pet at home (Cho, 2021; Laird, 2015; Rabinowitch et al., 2013). With music, which is the most powerful means of expression of the world of human's unseen emotions, individuals can express their feelings in different ways. Music is expressed as an emotional language in which meaningful expressions that are composed of effective and harmonious sounds that cause people to be subtle, tender, and sensitive (Uluğbay, 2013). Relevant studies observed that music improved communication skills and empathy skills by improving the perception, interpretation, creativity, and thinking systems of individuals. In many studies, the empathic skills and self-respect levels, and harmony with themselves and their environment of adolescents playing piano and violin were found to be higher compared to adolescents, who did not deal with music (Clarke et al., 2015; Çağlak, Eker, 2020; Luca, 2018; Smuta & Buzas, 2017; Szelky, 2018; Tiszai, 2016; Vass & Deszpot, 2017).

As seen in the related studies in the literature, mostly the empathic tendencies of children, who keep pets, or play musical instruments were examined separately, but no study was found, in which these two variables considered important for the purpose of empathic tendency, were accommodated together. Accordingly, the present study aimed to examine whether keeping pets at home and playing musical instruments contribute to children's empathetic tendencies and whether they are related to each other.

METHOD

In this section, the research model, study group, data collection tools, data collection method, and data analysis are explained.

Research Model

The present study was based on relational survey design, a general survey model. Survey models are research approaches aiming at describing a past or present situation as it is/was. The important thing in this model is to be able to make observations on the subject without aiming at to change the existing situation. Relational survey models are the types of research that aim to determine the presence and/or degree of covariance status between two or more variables (Karasar, 2014).

Study Group

The study group was comprised of a total of 139 children, 72 girls (51.8%) and 67 boys (48.2%), attending the third, fourth, and fifth grades of a foundation primary school located in Denizli province, Turkey, who voluntarily participated in the study and for whom parental consent was obtained. 46 of the children attended to the third grade (33.1%), 46 of them to the fourth grade (33.1%), and 47 of them to the fifth grade (33.8%). While 56 children (40.3%) of 139 children

kept a pet at home, 83 children (59.7%) did not. The number of children playing a musical instrument was 76 (54.7%) and the number of children who did not was 63 (45.3%). At the same time, the number of children who did both was 33 (23.8%), the number of children, who adopted at least one of those two behaviors was 66 (47.6%), and the number of children, who did not adopt any of those two behaviors was 40 (28.6%).

Data Collection Tools

In the research, a Personal Information Form, consisting of questions about the sex of the child, the class he/she was attending, whether he/she was keeping a pet and whether he/she was playing a musical instrument, was used to collect information about children. In order to determine the empathic tendencies of the children from the third to the fifth grade, the *KA-SI Empathic Tendency Scale for Children and Adolescents - Children's Form* as developed by Kaya and Siyez (2010) was used.

The Cronbach Alpha coefficient, which indicates the internal consistency of the *KA-SI Empathic Tendency* child form, was .84 for the entire scale, .79 for the emotional empathy subscale, and .72 for the cognitive empathy sub-dimension; where the test-retest reliability coefficient of the scale was .74 for the entire scale, .71 for the emotional empathy subscale, and .69 for the cognitive empathy subscale. In this study, the internal consistency of the scale was examined and the Cronbach Alpha coefficient was found to be .78 for the entire scale, .71 for the emotional empathy subscale, and .67 for the cognitive empathy subscale. Since *KA-SI Empathic Tendency Scale* is a 4-point Likert type scale (1 not suitable for me at all, 2 somehow suitable for me, 3 very suitable for me, and 4 completely suitable for me) and that there are no negative items, then the score values of the responses were collected in parallel with the way of responding. The highest score in the emotional empathy sub-dimension is 28, the highest score to be obtained from the cognitive empathy sub-dimension is 24, and the highest in the total empathetic tendency score is 52. As the scores obtained from the scale increase, the empathetic tendency increases, and as it decreases, the empathetic tendency decreases (Kaya and Siyez, 2010).

Data Collection Method

In order to carry out the research, interviews were held with Denizli Provincial Directorate of National Education. After obtaining the institutional permissions, the schools were contacted. The research was carried out after the school principals gave their verbal permission. After obtaining the necessary permissions for the study, the study data began to be collected. Upon an interview with the principal of the primary school, where the study will be conducted, the purpose of the research was explained, and information about the procedures was provided, and the help and permission of the principal was sought. Information notes were sent to the families about the study through the school management and their consents were obtained from the families. Through the psychological counseling and guidance specialist of the school

and the school management, the purpose of the research was explained to the teachers by interviewing the class teachers of the relevant classes, and the days and hours of the scale application were determined with the teacher. Relevant classrooms were attended on the specified days and hours, and after the children were also informed about the study, they were asked whether they would participate in the study, and the children who agreed to participate in the study and whose consent was obtained from their families were included in the study. Data collection tools were applied to the children in groups by the researchers during the specified course time. Before the application, it was explained to the children that this study was carried out for the purposes of scientific research, that their answers would remain confidential, that it was important for them to act honest and sincere and give correct information in order to reach the outcomes that could help them in the future. The data were collected in the fall semester of the 2017-2018 academic year.

Assessment and Analysis of Data

SPSS IBM statistical package program was used to determine whether children's empathic tendency scores differ by the variables of keeping a pet at home and playing a musical instrument by using the KA-SI Empathic Tendency Scale for Children and Adolescents - Children's Form. It was first tested whether the data had a normal distribution or not, in order to be able to use parametric tests in the analysis of the data. Kurtosis and skewness values were examined to see whether the data had a normal distribution. If these values are between -1 and +1, this is indicative of the fact that the data has a normal distribution. In addition, whether the data has a normal distribution can be examined by graphical methods (Histogram, box diagram, QQ chart and PP chart etc.) and statistical tests (Kolmogorov-Smirnov and Shapiro-Wilk tests). (Çokluk, Şekercioğlu & Büyüköztürk, 2012) In accordance with the normality tests, parametric (*t*-Test) and non-parametric (Mann-Whitney, Kuruskal Wallis) tests were used in the analysis of the data.

FINDINGS

The findings of the present study, which was carried out to examine whether keeping a pet at home and playing a musical instrument contributed to children's empathetic tendencies and whether they were related to each other, were presented in tables and discussed accordingly.

Table 1. *T-test results with regard to children's empathic tendency scores by keeping a pet at home status*

	Keeping a pet at home	N	\bar{x}	S	Sd	t	P
Emotional Empathy	Yes	56	23.29	3.356	137	2.251	.026
	No	83	21.86	3.873			
Cognitive Empathy	Yes	56	20.21	2.909	137	.696	.488
	No	83	19.84	3.195			
Total Empathetic Tendency Score	Yes	56	43.50	5.166	137	1.786	.076
	No	83	41.70	6.241			

As a result of *t*-test, keeping a pet at home was associated with a significant difference in the mean emotional empathy subscale scores ($t_{(137)} = 2.251$; $p < .05$), it was not associated with a significant difference in the cognitive empathy subscale ($t_{(137)} = .488$; $p > .05$) and total empathic tendency ($t_{(137)} = .076$; $p > .05$).

Table 2. *T-test results with regard to children's empathic tendency scores by playing a musical instrument status*

	Playing a musical instrument	N	\bar{x}	S	Sd	t	p
Emotional Empathy	Yes	76	22.99	3.718	137	1.948	.053
	No	63	21.76	3.658			
Cognitive Empathy	Yes	76	20.82	2.642	137	3.611	<.001
	No	63	19.00	3.287			
Total Empathetic Tendency Score	Yes	76	43.80	5.716	137	3.131	.002
	No	63	40.76	5.682			

A review of Table 2 provides that the mean scores of children, who play a musical instrument (emotional empathy: 22.99; cognitive empathy: 20.82; total empathetic tendency: 43.80) are higher compared to the mean scores of children, who do not play a musical instrument (emotional empathy: 21.76; cognitive empathy: 19.00; total empathetic: 40.76). As a result of *t*-test, playing a musical instrument was not associated with a significant difference in the mean emotional empathy subscale scores ($t_{(137)} = 1.948$; $p > .05$), it was associated with a significant difference in the cognitive empathy subscale ($t_{(137)} = 3.611$; $p < .01$) and total empathic tendency ($t_{(137)} = 3.131$; $p < .01$).

Table 3. *Kruskal-Wallis test results regarding children's empathetic tendency scores with regard to the keeping/ not keeping a pet at home and playing/not playing a musical instrument*

Keeping/ not keeping a pet at home and playing/not playing a musical instrument		n	Rank Avg.	sd	X ²	p	Difference
Emotional Empathy	Doing at least one ^(A)	66	71.33	2	7.481	.024	(B-C)
	Doing both ^(B)	33	82.80				
	Doing neither ^(C)	40	57.24				
Cognitive Empathy	Doing at least one ^(A)	66	70.88	2	7.122	.028	(B-C)
	Doing both ^(B)	33	82.91				
	Doing neither ^(C)	40	57.90				
Total Empathetic Tendency Score	Doing at least one ^(A)	66	71.02	2	10.145	.006	(B-C)
	Doing both ^(B)	33	85.52				
	Doing neither ^(C)	40	55.53				

A review of Table 3 provides that the average rank (emotional empathy: 82.80; cognitive empathy: 82.91; total empathic tendency: 85.52) of children, who both keep a pet and play a musical instrument is higher compared to the average scores of children in other groups. As a result of the Kruskal-Wallis test, keeping/not keeping a pet at home, playing/not playing a musical instrument was associated with a significant difference in the average ranks of emotional empathy subscale ($X^2(2) = 7,481$, $p < 0.05$), cognitive empathy subscale ($X^2(2) = 7,122$, $p < 0.05$) and total empathic tendency ($X^2(2) = 10,145$, $p < 0.05$). As a result of the Mann-Whitney U test to determine, which group induced the difference, it was found that the difference was associated with to the average rank of children, who both kept a pet and played a musical instrument.

DISCUSSION

Children learn their environment through their direct experiences, so that sensory learning occurs by interacting with each other and pets become important at this point (Özen et.al., 2022; Williams et. al., 2010). Parents often buy a pet for their children can play with and care for. Parents think that keeping a pet helps their children with becoming more responsible and social and improves their character (Endenburg & Van Lith, 2011; Simonic, 2015). It is known that human-animal interaction has a positive effect on children's empathy skills. There are many studies that examine the relationship between attachment to pets during childhood, pet care at home, affection for pets, and attitude towards animals, and that pets accompanying children increase their social and emotional development, in particular. A review of the relevant studies suggest that children, who keep a pet at home and establish close ties with pets have increased empathic tendencies and are more empathic than children, who do not keep a pet at home (Arıkan et al., 2019; Ascione, 2004; Endenburg & Van Lith 2011; Hachey & Butler, 2012; Hawkins

& Williams, 2017; Longobardi & Badenes-Ribara, 2019; Myers, 2007; Renck Jalongo, 2018; Sobko et al., 2018; Thompson & Gullone, 2008; Taylor & Signal, 2005; Tu, 2006; Uttley, 2013; Ünal- Karagüven, 2015; Yotanyamaneewong, 2017). Attachment to pets also plays an important role in children's social, emotional, and cognitive development, mental health, well-being and quality of life. Hawkins and Williams (2017) examined the relationship between the attachment of children to pets and their care and friendship behavior, compassion and attitude towards pets, and concluded that attachment to pets significantly predicted positive attitudes towards animals. Direct contact with animals, such as caring for pets in childhood, may support the development of children's attachment to pets. Caring for pets can support the development of empathy by giving children the responsibility to take responsibility for another creature and contribute to having more humane attitudes later in their lives (Çalışkan et al., 2014; Hawkins & Williams 2017). Studies have shown that children's pet care at home promotes their social and human behavior (Büyükcebeci & Yılmaz, 2019; Haskaya Suna, 2019; Hawkins & Williams, 2017; Hosey & Melfi, 2014; Kertes, Hall & Bhat, 2018).

Music, another dimension of the study, is one of the art education techniques and is defined as the expression of mental processes (Aral et al., 2006; Blandford & Duarte, 2004; Dökmen, 2004; Kokatsaki & Hallam, 2007; Öztürk & Can, 2020; Petrie, 2020) Music leaves positive marks on the cognitive, affective, and dynamic structures of the individual for they can become balanced and satisfied, healthy and successful, sensitive and happy (Türkmen, 2010). Music helps people with such issues as perception, interpretation, creativity, development of thinking systems, and increasing communication skills of individuals. Many studies suggested that active interest in music or receiving music education positively affects individuals' empathic skills, self-respect, and respect for profession. Öztürk and Can (2020) examined the development of empathy skills in children by giving music education to children in the experimental and control groups. As a result of the education program that continued for 12 weeks, the children in the experimental group had significant differences compared to the control group in many social development areas, especially in the empathic skills of the children in the control group. Another similar study was carried out by Petrie (2020). In the research developed for high school students, children were given music and dance education. As a result of the research, it was concluded that children's working skills and empathy levels increased, there were significant differences in cognitive abilities and positive social skills were acquired. Empathy tendency will help to become a mentally and spiritually healthy and happy person by developing the ability to establish meaningful relationships with other people.

There is a widespread belief and there are many studies that the interaction the child will experience with a pet or a musical instrument he/she loves would be beneficial for the development of children (Endenburg & Van Lith, 2011; Rabinowitch et al., 2013). It is noteworthy that in all studies, which showed that pets positively affect the child's empathic development, it was importantly emphasized that the link between the child and the accompanying pet was a more reliable cause than having a companion pet. This is because of

the fact that it is necessary that the child develops a strong bond with that pet rather than just keeping a pet at home and whether these children are assigned with the responsibility for the pet. In addition, it must be said that while there are many studies arguing that children with pets show higher empathy; there are also studies criticizing this idea (Daly & Morton 2003). Likewise, recent research has provided evidence that musical interaction supports empathy. However, there is a limited information about the internal and social psychological processes involved in the development of empathic tendency as in the studies examining the relationship between keeping a pet and empathy. For example, it is a matter of curiosity, which types of music increase empathic tendency, which types of music decrease; what role empathy plays in identifying individual differences in the choice of music, perception, and performance (Clarke, DeNora Vuoskoski 2015; Greenberg, Rentfrow, Baron-Cohen, 2015). However, it is promising that there are studies providing evidence for contact with pets and music as a factor that encourages the development of children's empathic tendency.

As a result of the study, it was found that the average rank of the empathetic tendency of children, who both keep a pet at home and play a musical instrument was higher than the average rank of empathetic tendency of children, who dealt with one of them, and those who did not keep pets or play musical instruments (Table 3), and that the difference was significant. A review of the relevant studies provides that there is no study investigating whether there is a relationship between the children's behaviors of playing a musical instrument and keeping a pet at home and between their empathic tendencies. However, keeping a pet at home and playing a musical instrument can improve a child's empathic tendencies. Pets are friends, who play tirelessly, despite the child's inexhaustible energy. The presence of pets in the home can make the child connect to a creature and love it. While the children love that animal, they can take responsibility to fulfill their needs by putting themselves in their place, understanding if they are hungry and thirsty. Children's musical instruments, like pets, can be very good friends with children and share their loneliness. With the tenderness that music adds to the child's soul and its contribution in cognitive development, children can get the chance to be respectful and sensitive to the people around them. Therefore, it is suggested that the unique experiences gained by children by such behaviors as playing a musical instrument and keeping a pet can contribute to the development of empathy.

CONCLUSION AND RECOMMENDATIONS

As a results of the study, it was found that the mean empathic tendency scores of the children, who keep a pet at home or play a musical instrument was higher and the difference was significant. As a result of the study, it was found that the mean average rank of the empathetic tendency of children, who both keep a pet at home and play a musical instrument was higher than the average rank of empathetic tendency of children, who dealt with one of them, and those who did not keep pets or play musical instruments, and that the difference was significant. According to these results, the emphatic tendency levels increase as the positive attitude of

children towards playing a musical instrument and keeping a pet at home increases. The present study showed in children attending primary education, playing a musical instrument and keeping a pet at home, make a difference in their empathic tendencies. In this study, opinions of children were asked. In subsequent studies, information can be collected by referring to the opinions of teachers and parents. Longitudinal studies can be performed. With these studies, the reflections of keeping a pet at home and playing a musical instrument on later ages can be determined by monitoring the children for a longer period of time. Responsibilities can be assigned to children regarding keeping pets, which makes important contributions to empathic skill; children can be directed to music activities according to their interests, and awareness-raising activities can be conducted for parents and the close environment. Studies can be conducted with families and teachers to determine and support children's empathic tendencies, and in-service trainings can be provided.

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