Level of anxiety and perception of dog stress in human mothers and non-mothers

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Abstract: The aim of the current study was to assess whether and how the presence of a dog can influence the level of anxiety in mothers with a child and women without children. Moreover, the ability of female dog owners with or without children to recognize signs of stress and to assess the level of stress in their pet was evaluated. For these purposes, 58 mothers of a child (0-6 years old), owning a dog, 84 mothers of a child (0-6 years old) who did not own a dog, and 87 women with a dog but without children filled in two questionnaires. The first questionnaire was the State-Trait Anxiety Inventory Form Y (STAI-Y), consisting of 20 questions for the evaluation of the state anxiety and 20 for the trait anxiety. The second questionnaire was aimed at analysing owner's perception of stress in their dog.

It was found that female dog owners without children showed a lower trait anxiety. Mothers perceived a lower stress level in their dogs, compared to owners without children. However, mothers resulted less able to identify the canine signs of stress and the potentially stressful situations for dogs and this could explain the previous result. This lack of communication between owners (in particular mothers) and dogs may lead to a condition of poor dog welfare and turn into canine aggression and dangerous behaviors towards family members, especially children.

Key Words: anxiety, children, dog, mother, stress, welfare.

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Introduction

In the recent past, several studies were carried out on dog-man relationship (e.g. see Mariti et al., 2013a,b; Gazzano et al., 2013). Consequently, the knowledge of the benefits of companion animals for human mental and physical health is substantially increased (O’Haire, 2010). Many studies have demonstrated several benefits due to owning a dog, such as decreasing heart disease risk factors (Anderson et al., 1992), a better survival rate after a heart attack (Friedmann et al., 1980) and improvement in psychological well-being, e.g. self-esteem (Serpell, 1991). Moreover, dogs are strong facilitators to recovery from ill-health (Friedmann & Thomas, 1995), and urinary oxytocin levels in the owners increase after interacting with their dogs (Nagasawa et al., 2009).

In addition to health benefits, animals can also reduce physiological and psychological parameters linked to stress such as anxiety, depression and arousal. The presence of a dog or petting it can reduce blood pressure and heart rate, inducing a relaxing effect on people (Katcher, 1981, 1985; Katcher & Beck, 1983). In addition, non owners show more psychosomatic symptoms linked to anxiety such as headache, lack of appetite, skin diseases, cardiovascular problems and depression than dog-owners (Bergler, 1992).

Nevertheless there is a need for studies on the possible health effects that people have on animals, looking at the animal side of the bond (Beck & Katcher, 2003), as well as on how the welfare of animals can be protected (Endenburg & van Lith, 2011). For instance, the ability of owners to recognize
the behavioural signs of stress of their pet is an important factor in avoiding pet welfare problems (Kerswell et al., 2009; Mariti et al., 2012). Although most dog owners report that they have a good understanding of the emotional state of their dogs, they seem to have low appreciation of the sign that dogs display in the early stages of emotional arousal (Kerswell et al., 2009; Mariti et al., 2012).

The aim of this study was to assess if and how owning a dog can influence the level of anxiety in women and the ability of female dog-owners to recognize canine signs of stress and in assessing the level of stress in their dog. For these purposes, two different questionnaires were used. Serpell & Hsu (2001) suggested that questionnaire methodologies have a potentially broad applicability for measuring dogs’ behavior in situations where other conventional means are not easy to use, based on the fact that owners know their dogs’ behavior better than anyone else. In fact, this method has been used in many other studies on dog behaviour (Hiby et al., 2004; Rooney & Bradshaw, 2004) also related to stress (Mariti et al., 2012).

**Subjects, materials and methods**

A sample of 229 women recruited in public areas of three different Italian towns (La Spezia, Pisa and Sassari) participated in this study. The sample was composed by three groups. Fifty-eight women (36.1±6.0 years old), mothers of a 0-6 year old child and dog-owners formed the first group (G1). The second group (G2) was formed by 84 women (34.5±5.1 years old), mothers of a 0-6 year old child and non-dog owners. The third group (G3) was composed by 87 women (33.1±11.1 years old) who were dog-owners and did not have children. All three groups filled in two questionnaires: a State-Trait Anxiety Inventory Form Y (STAI-Y), for anxiety evaluation in humans, and a questionnaire for dogs’ stress evaluation.

The STAI-Y, developed by Spielberg (1983), is a self-report measuring the intensity of feelings of anxiety. It distinguishes between state anxiety (STAI State, items 1 to 20), that assesses how respondents feel “right now, at this moment”, and trait anxiety (STAI Trait, items 21-40), that targets how respondents “generally feel”. Respondents are asked to rate themselves in each item on the basis of a 4-point scale, ranging from “not at all” to “very much” for the STAI State and from “almost never” to “almost always” for the STAI Trait (Grös et al., 2007). The STAI-Y was administered to the women, in the presence of a researcher and in accordance to privacy laws. The questionnaire had to be filled in within 10 minutes and anonymously.

The second questionnaire, based on the one used by Mariti and colleagues (2012), consisted of 4 questions for G2, and of 12 questions for G1 and G3. The questionnaire items, multiple-choice and half-open questions, were divided into 3 sections about: respondent’s data (age, profession, previous pets, and recent changes in the family balance), dog’s data (age, sex, breed, and activity), and owner perception of dog’s stress. In the last section, a multiple-choice question was aimed to understand what owners meant with the term stress (see Results for the possible answers provided). Moreover, owners were asked to indicate which of the behaviors listed in Table 1 could indicate stress in dogs. The final question aimed at identifying the owners’ opinion regarding the level of stress of their dogs: low (the dog is seldom stressed = 1), medium (the dog is stressed only in specific situations = 2), high (the dog is often stressed = 3), or very high (the dog is always stressed = 4).

**Statistical analysis**

The STAI-Y data was analysed through Kruskal-Wallis test and then through Mann-Whitney test (p<0.05).

The stress level of the dogs owned by women belonging to G1 and G3 was compared using the Mann-Whitney U test (p<0.05).
The Chi-Square test ($p<0.05$) was used to compare $G_1$ and $G_3$ ability to recognize the stress signals of their dogs. When the number of positive answers was lower than 5, the Fisher test ($p<0.05$) was used.

### Results

**STAI-Y questionnaire**

Questionnaires completed by women who stated that recent events had changed their family balance were removed from the analysis of STAI-Y results, as such events may have affected their emotional state. After that

<table>
<thead>
<tr>
<th>Behaviors</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aggressiveness</td>
<td>Beerda et al., 1999; Casey, 2002; Schildler and van der Borg, 2004; Tod et al., 2005; Rooney et al., 2009</td>
</tr>
<tr>
<td>Autogrooming</td>
<td>Beerda et al., 1998, 1999; Rooney et al., 2007, 2009</td>
</tr>
<tr>
<td>Crying (yelp, whining, howling)</td>
<td>Schildler and van der Borg, 2004; Beerda et al., 1997; Rooney et al., 2007, 2009</td>
</tr>
<tr>
<td>Eating and/or drinking much</td>
<td>Beerda et al., 1998; Tod et al., 2005</td>
</tr>
<tr>
<td>Excessive barking</td>
<td>Beerda et al., 1998; Schildler and van der Borg, 2004; Tod et al., 2005; Rooney et al., 2009</td>
</tr>
<tr>
<td>High activity</td>
<td>Beerda et al., 1997, 1998; Casey, 2002; Rooney et al., 2007</td>
</tr>
<tr>
<td>Hypersalivation</td>
<td>Beerda et al., 1997; Casey, 2002; Dreschel and Granger, 2005</td>
</tr>
<tr>
<td>Looking elsewhere</td>
<td>Rooney et al., 2009</td>
</tr>
<tr>
<td>Low activity</td>
<td>Beerda et al., 1997, 1999</td>
</tr>
<tr>
<td>Low appetite</td>
<td>Casey, 2002</td>
</tr>
<tr>
<td>Nose licking</td>
<td>Beerda et al., 1997, 1998; Schildler and van der Borg, 2004; Tod et al., 2005; Rooney et al., 2007, 2009</td>
</tr>
<tr>
<td>Panting</td>
<td>Beerda et al., 1997, 1999; Hennessy et al., 1998; Casey, 2002; Schildler and van der Borg, 2004; Dreschel and Granger, 2005; Rooney et al., 2009</td>
</tr>
<tr>
<td>Paw lifting</td>
<td>Beerda et al., 1997, 1998, 1999; Schildler and van der Borg, 2004; Rooney et al., 2007, 2009</td>
</tr>
<tr>
<td>Sleep disturbance</td>
<td>Bowen and Heath, 2005</td>
</tr>
<tr>
<td>Trembling</td>
<td>Beerda et al., 1999; Dreschel and Granger, 2005; Tod et al., 2005; Rooney et al., 2009</td>
</tr>
<tr>
<td>Turning around/circling</td>
<td>Beerda et al., 1997, 1998, 1999; Casey, 2002; Schildler and van der Borg, 2004; Dreschel and Granger, 2005; Rooney et al., 2007</td>
</tr>
<tr>
<td>Turning head</td>
<td>Schildler and van der Borg, 2004; Rooney et al., 2007</td>
</tr>
<tr>
<td>Urination and/or defecation</td>
<td>Beerda et al., 1998, 1999; Casey, 2002; Tod et al., 2005</td>
</tr>
<tr>
<td>Yawning</td>
<td>Beerda et al., 1998; Hennessy et al., 1998; Schildler and van der Borg, 2004; Dreschel and Granger, 2005; Tod et al., 2005; Rooney et al., 2007</td>
</tr>
</tbody>
</table>

The Chi-Square test ($p<0.05$) was used to compare $G_1$ and $G_3$ ability to recognize the stress signals of their dogs. When the number of positive answers was lower than 5, the Fisher test ($p<0.05$) was used.

**Fig. 1. State and Trait anxiety scores in the three groups**

$G_1$=mothers of a 0-6 year old child and dog owners; $G_2$= others of a 0-6 year old child not owning a dog; $G_3$=female dog owners without children.
removal, G1 was formed by 48 women (82.7% of the starting group), G2 by 77 women (91.7% of the starting group) and G3 by 68 women (78.2% of the starting group).

No statistical difference was found in the State anxiety scores of the three groups (G1: median=35.5, minimum-maximum range=21-59; G2: 36, 20-62; G3: 36, 21-59; p=0.498; $\chi^2=1.394$) (Fig. 1).

Trait anxiety resulted different among the three groups ($\chi^2=9.945; p=0.007$) (Fig. 1). In detail, trait anxiety was lower in G3 compared to G1 (U=1169.5; p=0.009), and to G2 (U=1916; p=0.005), whilst no difference existed between G1 and G2 (U=1789.5; p=0.766).

**Questionnaire on perception of dog stress**

Into each group, the most represented women aged between 30 and 50 years: 82.7% in G1 (mean 36.1 ± 6.0 year); 73.8% in G2 (mean 34.5 ± 5.1 year) and 43.6% in G3 (mean 33.1 ± 11.1 year). In this last group a high percentage was represented by women between 20 and 30 years of age (42.5%) while this range of age was less represented in the other two groups (G1=15.5%; G2=26.2%).

Among women of G1, 51.7% were workers; such category was lower in G2 (38.1%) and in G3 (40.2%). In G3 a high number of interviewees were students (36.8%), and this proportion was statistically higher compared to G1 (3.4%; $\chi^2=19.082; p<0.001$) and to G2 (1.2%; $\chi^2=31.619; p<0.001$).

Almost all the respondents belonging to G1 and G3 (respectively 81.0% and 98.8%), owned or had owned other animals, especially dogs (85.1% of G1 and 95.3% of G3). Only 50% of women belonging to the G2 reported that they had owned other animals, and 47.6% of them had owned dogs in the past.

With regards to dogs’ data, both those owned by mothers and childless women were almost half mixed breeds (46.5% of G1 and 41.4% of G3) and almost all were kept as companion animals (94.8% of G1 and 92% of G3).

More than half of the respondents of G1 (58.6%) correctly considered stress as a short or long-term alteration of the psycho-physical balance of the animal that could develop into an illness; 12.1% believed instead that it is a short-term alteration of the psycho-physical balance with no consequences for the dog. In G3 the proportion of correct answers was slightly higher (69.0%), and only 6.9% believed that stress has no consequences for the dog.

72.2% of G3 reported their dogs were stressed in specific situations, especially in case of loud noises (28.6%), while interacting with dogs or other animals (17.5%) or when they were left alone (15.9%). The proportion of G1 owners who believed that their dogs were stressed in specific situations was statistically lower (41.4%; $\chi^2=12.702; p<0.001$) and the most reported sources of stress were being left alone (29.2%), loud noises (16.7%), or crowded places (16.7%). A statistically larger number of dog owners with a child (32.8%) compared to a relatively
small number of childless dog-owners (10.3%; $\chi^2=9.828; p=0.002$) answered they did not know if their dogs were stressed in specific situations.

Although there was not a statistically significant difference in score of dog stress levels, G3 respondents considered their dogs more stressed than G1 did ($U=2176.0; p=0.084$) (Fig. 2).

Table 2 reports the percentages of owners of the two groups who believed that each mentioned behaviour was a possible indicator of stress in dogs and the results of the statistical analysis comparing G1 and G3. The women of G3 were able to recognize more indicators of stress in dogs compared to women of G1 (except for excessive barking).

### Table 2. Proportion of behaviors regarded as possible indicators of stress in dogs by respondents and relative results of the statistical analysis (*=p<0.05; G1=mothers of a 0-6 year old child and dog owners; G2=others of a 0-6 year old child not owning a dog; G3=female dog owners without children).

<table>
<thead>
<tr>
<th>Behaviors</th>
<th>G1 (%)</th>
<th>G3 (%)</th>
<th>$X^2$</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aggressiveness</td>
<td>24.1</td>
<td>28.7</td>
<td>0.374</td>
<td>0.339</td>
</tr>
<tr>
<td>Autogrooming</td>
<td>15.5</td>
<td>25.3</td>
<td>1.976</td>
<td>0.114</td>
</tr>
<tr>
<td>Crying</td>
<td>20.07</td>
<td>27.6</td>
<td>0.887</td>
<td>0.229</td>
</tr>
<tr>
<td>Eating/drinking much</td>
<td>3.4</td>
<td>3.4</td>
<td>0.000</td>
<td>0.667</td>
</tr>
<tr>
<td>Excessive barking</td>
<td>36.2</td>
<td>16.1</td>
<td>7.689</td>
<td>0.006*</td>
</tr>
<tr>
<td>High activity</td>
<td>10.3</td>
<td>23.0</td>
<td>3.780</td>
<td>0.040*</td>
</tr>
<tr>
<td>Hypersalivation</td>
<td>8.6</td>
<td>27.6</td>
<td>7.823</td>
<td>0.004*</td>
</tr>
<tr>
<td>Looking elsewhere</td>
<td>6.9</td>
<td>18.4</td>
<td>3.867</td>
<td>0.039*</td>
</tr>
<tr>
<td>Low activity</td>
<td>22.4</td>
<td>19.5</td>
<td>0.175</td>
<td>0.414</td>
</tr>
<tr>
<td>Low appetite</td>
<td>22.4</td>
<td>21.8</td>
<td>0.007</td>
<td>0.546</td>
</tr>
<tr>
<td>Nose licking</td>
<td>5.2</td>
<td>5.7</td>
<td>0.022</td>
<td>0.596</td>
</tr>
<tr>
<td>Panting</td>
<td>13.8</td>
<td>31.0</td>
<td>5.649</td>
<td>0.018*</td>
</tr>
<tr>
<td>Paw lifting</td>
<td>1.7</td>
<td>6.9</td>
<td>2.026</td>
<td>0.152</td>
</tr>
<tr>
<td>Sleep disturbance</td>
<td>13.8</td>
<td>18.4</td>
<td>1.250</td>
<td>0.535</td>
</tr>
<tr>
<td>Trembling</td>
<td>19.0</td>
<td>35.6</td>
<td>4.698</td>
<td>0.040*</td>
</tr>
<tr>
<td>Turning around/circling</td>
<td>13.8</td>
<td>14.9</td>
<td>0.037</td>
<td>0.524</td>
</tr>
<tr>
<td>Turning head</td>
<td>5.2</td>
<td>9.2</td>
<td>0.803</td>
<td>0.288</td>
</tr>
<tr>
<td>Urination and/or defecation</td>
<td>12.1</td>
<td>11.5</td>
<td>0.011</td>
<td>0.557</td>
</tr>
<tr>
<td>Yawning</td>
<td>3.4</td>
<td>21.8</td>
<td>9.503</td>
<td>0.001*</td>
</tr>
</tbody>
</table>

### Discussion

One of the aims of the current study was to assess whether and how the presence of a dog can influence anxiety in women with or without a child. For this reason, a STAI-Y test was used to indicate the intensity of feelings of anxiety (Spielberg, 1983). Although the state anxiety did not differ between the three groups, trait anxiety was lower in the female dog-owners without a child than in the other two groups, allowing the hypothesis of a dog beneficial effect in this group. The difference between G3 and G1 could be explained in terms of time spent with the animal: owners without a child have more time to dedicate to their dogs, benefitting more from dogs than mothers do. Mothers of a 0-6 year old child, as suggested by Albert & Bulcroft (1988), may have little time and energy for maintaining a pet, due to the time-intensive process of caring for infants and preschool children: consequently a pet can become less important in the family after a baby is born (Albert & Bulcroft, 1988). Similar results were found by Blouin (2013), who remarked that it was not unusual for people...
to admit that the relationship which had with their animal had changed according to the changes occurred in their lives.

Furthermore, considering that the interest towards animals decreases with increasing age (Kellert, 1993; Bjerke et al., 1998; Hagelin, 2003), dog-owners with a child, because of their older age, could be less attentive to animals and, therefore, benefit less from them.

The higher beneficial effect of dogs on the interviewees belonging to G3 could also be due to the presence, in this group, of many students, a category of people that profit from owning a pet, especially as a source of social support (Staats et al., 2008). Conversely, in G1 a large number of respondents were workers; due to the scarce amount of time available to spend with the companion animal, the benefits on the states of anxiety is usually lower in female workers (Watson & Weinstein, 1993).

Another aim of the current study was to evaluate the ability of female owners with or without young children to recognize canine signs of stress and to assess the level of stress in their dog.

Dogs show a range of behaviors that reflect their emotional state (Beaver, 1981, 1982) and owner's ability to recognize the behavioral signs of stress is important, as it permits the animal to avoid related welfare problems (Kerswell et al., 2009) and it favors a rapid recovery of psychophysical homeostasis by interrupting the progression to over-stress and distress (Mariti et al., 2012). Similarly to what found by Mariti and colleagues (2012), our results show that trembling was one of the behavioral indicators of stress more recalled by owners, followed by aggressiveness, excessive barking, crying, panting, and low appetite.

For owners assessing the welfare of dogs is often challenging, due to variations in daily stressors and home environments, based on the routine and lifestyle of the families (Burrows et al., 2008). Data obtained in this study show that the percentage of women of G1 who believed there were stressful situations for their dogs was lower than that of G3 and they also considered their dogs less stressed. Although these results seem to indicate that a life in a family with children is less stressful for the dog, such findings could be explained in a different way. As a matter of fact, a high percentage of dog-owners with a child stated they were unable to understand the emotional state of their dogs. This finding may be due to the scarce attention paid to the animal's behavior, probably for the short time they can spend with their pet and/or to the lack of knowledge of canine ethology (Mariti et al., 2012).

Owners without children showed also a better knowledge of canine behavioral indicators of stress compared to mothers, better recognizing the subtle signs such as yawning and looking elsewhere, besides behaviors easier to interpret like trembling. It is well known that owning a dog or living with him is not sufficient to correctly understand his behaviour, for which it is necessary to have a strong and interactive relationship with him by playing, walking, feeding and petting him (Poresky & Hendrix, 1990; Ascione & Weber, 1996; Meyer et al., 2014). So, it is possible that the high percentage of students belonging to G3 spent much time with their dogs, sources of support for college students in moments of great stress (Barlow et al., 2012), observing their dog's behaviors in different situations and having, for this reason, a better knowledge of behavioural stress indicators. Dog owners who had a child instead were more prone to indicate excessive barking as a possible sign of stress in dogs. It is possible that dogs belonging to mothers of young children tend to bark more in order to attract their owners attention, due to the reduced amount of time/attention owners pay to them. As excessive barking is usually very annoying, it is likely that such a sign was more easily detectable for dog-owners with children.

Many of the dog owners with a child, even though they can spot a potentially stressful situation for their dog, were not able to recognize the behavior shown by the dog in that situation, denoting a lack of communication with their animal. The repercussions of this inability to interpret and understand dog language should not be underestimated, as it prevents the owner from acting correctly when the animal is stressed and represents a potential cause of behavior problems in the dog (Mariti et al., 2012). A stressed dog is prone to show aggression to communicate his discomfort, and it can be worsened in case the communication to owners is problematic (e.g. ineffective). This
is particularly serious if children are present, being the category of people who are the most frequent victims of canine bites. A mother owning a dog should know the animal behavior and teach her children how to approach and how to live with the pet. For example, parents should teach their children not to interfere or not to disturb the dog when he is eating, or avoid any approach with a dog showing signs of fear. These instructions can increase awareness in children, facilitating a more positive interaction between children and their pets (Ascione, 2007). In their turn, dog owners should be aided by animal behaviorists in the task of interpreting the behavior of their dog (Gazzano et al., 2008).

Although the majority of mothers who own a dog were able to identify an appropriate definition of stress, a significant part of them believed that stress in dogs has no physical or psychological consequences and therefore maybe they do not consider taking measures to change that. This could influence dog welfare, since owner assessment may be a useful tool in preventing and treating cases of poor welfare (Mariti et al., 2012).

A correct reading and understanding of the canine body language is essential, not only for a good relationship between humans and animals, but also to prevent undesirable behaviors or dangerous incidents (Shepherd, 2002).

References


Livello di ansia e percezione dello stress del cane in donne proprietarie di cani, con o senza bambini

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Sintesi

Lo scopo di questa ricerca è stato quello di verificare se la presenza di un cane possa influenzare il livello di ansia di donne con un figlio di età inferiore ai 6 anni ed in donne senza figli. Inoltre è stata valutata la capacità delle proprietarie di cani con e senza figli di riconoscere i potenziali segni di stress nel cane. A questo scopo, 58 madri di bambini di 0-6 anni proprietarie di un cane (G1), 84 madri di bambini di 0-6 anni che non possedevano un cane (G2) e 87 donne senza figli ma proprietarie di un cane (G3) sono state reclutate per compilare due questionari al fine di valutare il loro livello di ansia e la loro percezione dello stress del cane.

Il primo questionario, denominato “State-Trait Anxiety Inventory Form Y” (STAI-Y) consisteva in 20 domande per la valutazione dell’ansia di stato (cioè quella presente al momento dell’intervista) e di altre 20 domande per identificare l’ansia di tratto (tipica della personalità).

Il secondo questionario era formato da 4 domande per le madri che non possedevano un cane (anagrafe) e da 12 per le proprietarie di un cane. Le domande miravano ad analizzare l’interpretazione del proprietario di situazioni potenzialmente stressanti per il cane.

I risultati della ricerca indicano che le donne proprietarie di cani e senza figli sono meno ansiose per quanto riguarda l’ansia di tratto rispetto a donne con figli con o senza cani. Non esistono invece differenze tra i 3 gruppi per quanto riguarda l’ansia di stato. La differenza rilevata può dipendere dal tempo passato con il cane: le proprietarie senza bambini hanno più tempo da dedicare all’animale, traendone maggiori vantaggi. Un altro fattore da tenere in considerazione è il calo dell’interesse nei confronti degli animali che si verifica con l’aumentare dell’età. Il gruppo di donne proprietarie di cani senza figli era costituito da una maggior percentuale di persone giovani, di età compresa tra i 20 ed i 30 anni, e da un più alto numero di studentesse, altro fattore che potrebbe aver influito sulla possibilità di beneficiare della compagnia di un cane. Al contrario nel gruppo G1 erano presenti molte donne lavoratrici, il cui livello di ansia può aver risentito meno della presenza del cane, per il poco tempo disponibile da trascorrere con l’animale.

Per quanto riguarda la relazione con il cane e la capacità di riconoscere i potenziali segni di stress, la percentuale di donne che ritengono che il proprio cane viva delle situazioni stressanti è inferiore nel gruppo G1 rispetto al G3. Se a prima vista questi risultati farebbero supporre che i cani che vivono in famiglie con bambini siano meno soggetti allo stress, in realtà ciò è dovuto al fatto che le donne che appartengono al gruppo G1 sono risultate essere meno capaci di individuare i segni di stress nel proprio animale. Ciò può essere conseguenza di una scarsa attenzione prestata all’animale, probabilmente per il poco tempo trascorso con esso o per una scarsa conoscenza dell’etologia del cane.

Molte donne del gruppo G1, anche se in grado di riconoscere le situazioni stressanti per il proprio cane, non sono capaci di riconoscere i segnali di stress, manifestando un deficit di comunicazione con il proprio animale. Questi problemi nella comunicazione tra cane e proprietario possono avere serie conseguenze, soprattutto quando siano presenti bambini, i quali necessitano di una guida per interpretare il comportamento del cane ed evitare incidenti.