

A consciousness survey on the perception difference toward companion animals between members of horse-riding club who had experienced a disaster and those who had not.

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Abstract

We conducted a study to investigate the difference in perception toward animals after disasters between members of two horse-riding clubs. The questionnaire was also administered to visitors in the hot spring inn. Of the six categories related to animals after disasters, the participants were asked to rate the level of importance on a five-point scale (very important to not important). In group comparisons, only one category showed no differences (the need for public knowledge for both the owner and the pet to seek refuge at a shelter during a disaster). In contrast, horse-riding club members who had experienced a disaster placed a significantly lower level ($P < 0.05$) of importance on other five question items. The analysis indicates the need for more people to understand the perspectives of those who have experienced severe disasters rather than provide donations.

Key words : animals after a disaster, evacuation, horse-riding club

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Japan is located in the East Asian, and is often inundated during rainy seasons and typhoons. Japan is also subject to many destructive earthquakes. In addition, the geographic location of Japan makes it vulnerable to damage from other natural disasters such as heavy snowfall, volcanic eruptions, and high tides. During past disasters, many owners of companion animals such as dogs and cats have struggled with providing shelter for their pets. As a result, in the year following the Great Hanshin Earthquake in 1995, four groups (the Japan Society for the Prevention of Cruelty to Animals, the Japan Animal Welfare Society, the Japan Pet Care Association, and the Japan Veterinary Medical Association) established the Japan Headquarters for the Relief of Animals in Emergencies (now referred to as the Association of the Relief of Pets in Emergencies). In the event of a major disaster, this

association aims to provide logistical support in areas of personnel, relief supplies, and funding 1). From the day after the Great East Japan Earthquake in March, 2011, this association engaged in information gathering and began providing assistance such as distributing pet food after 1 week 2). In 2013, the revision of the Act on Welfare and Management of Animals mandated that measures to provide for the appropriate feeding and safekeeping of animals be formulated in the Promotion Plans for Welfare and Management of Animals provided at the prefectural, metropolis, and district levels 3). Furthermore, the Japan Ministry of the Environment issued Guidelines for Aiding Pet Animals during a Disaster, which stipulated the responsibilities of pet owners and established appropriate measures that they must fulfill in such a situation 3). The Ministry of the Environment also compiled records about the handling

of animals in disasters after the Great East Japan Earthquake 4). Based on hygiene considerations and those who disliked animals and those who had allergies to animals, many local governing bodies struggled with handling of animals in shelters and temporary housing. Hunt et al. 5) reported that many people who chose not to use shelters after damage due to tornados cited difficulties in finding shelter for their pets as the reason for their decision. Therefore, finding shelter for animals is directly linked to protecting the lives of their owners. In addition, stray animals are subject to sickness and death, which is not desirable from the perspective of animal protection, public safety, and hygiene. On the other hand, because the authors were not able to find previous quantitative studies on animals in disasters, conducting research with respect to animals in disasters is considered important in dealing with animals in future disasters. Thus, a consciousness survey was conducted in this study.

The consciousness of members and staffs in a horse-riding club, had experienced the Great East Japan Earthquake were compared with that in other groups. Since it was thought that horses are more difficult to shelter because of their greater physical size, it was thought that they have a more real vision for sheltering of companion animals.

MATERIALS AND METHODS

The study involved interviewing a total of 59 members and instructors from two horse-riding clubs. One club in Tochigi Prefecture had experienced the Great East Japan Earthquake and comprised 26 females and 9 males (mean age 38.15 ± 2.39 years). The comparison club in Shizuoka Prefecture, who had not experienced a disaster, comprised 16 women and 8 males (mean age 45.75 ± 2.61 years). Before the interview, they were verbally informed that the focus of the interview was on dogs and cats as pets and excluded horses. However, the questionnaire included a column for those wishing to comment on the shelter of horses. The questionnaire was also administered to visitors (17 females and 3 males, mean age 56.55 ± 2.83 years) in the hot spring inn located near the Kanto region. The business manager in this inn was engaged in raising money and accumulating rescue materials for post-disaster animals in outlying regions and for abandoned animals. Answerers for questionnaire have donated money and resources to animals. The questionnaire for this group did not contain a column for comments regarding horses. This questionnaire research was surveyed in

2014.

Participants were asked to indicate their gender; age; and whether they had any experience in raising animals (and, if so, the type of animal). The questionnaire also covered whether they had knowledge of animals in disasters, and whether they were interested in the relief and protection of abandoned animals or the relief and protection of animals that suffered during a disaster. Possible responses to these questions were “yes,” “neither,” and “no.” Finally, the participants were asked to rate the relative importance of the following six categories: 1) the need to provide relief and protection for pets during a disaster; 2) the need for public knowledge for both the owner and the pet to seek refuge at a shelter during a disaster; 3) the need for the training and development of volunteers who provide relief and protection for pets during a disaster; 4) on a national basis, the need to maintain a stockpile of relief materials for pets during a disaster; 5) the need to conduct presentations at universities or groups for civilians regarding animals after a disaster; and 6) the need to accumulate charitable donations and relief material for pets during a disaster. For each category, participants were asked to rate the degree of importance from 1 to 5, with 1 = not important, 2 = not too important, 3 = cannot say either way, 4 = somewhat important, and 5 = very important. The objective of the study was verbally explained to the participants, and the questionnaire was only administered to those who consented to participate. Before survey, we obtained the answerer's agreement to questionnaire investigation.

Questionnaire responses were tabulated using Microsoft Excel 2013. Results were displayed as mean \pm standard error of the mean. Statistical significance was determined with the two-tailed Mann-Whitney U test (two variate) and Kruskal-Wallis test (three variate). We used Scheffe's method for the post-hoc comparison of the three groups (BellCurve for Excel, Social Survey Research Information Co., Tokyo, Japan). The statistical significance of the detection rate of differences among the three groups was determined using Fisher's exact test.

RESULTS AND DISCUSSION

First, participants were divided into two groups based on their familiarity or unfamiliarity with the term “disaster animal.” Participants who were familiar with the term “disaster animal” ($n = 61$) placed greater importance on the three categories than the 18 who were not familiar with the term ($p < 0.05$) (Fig. 1). These

results suggest that participants who were familiar with the term “disaster animal” showed greater interest in the subject matter and placed greater importance on these topics.

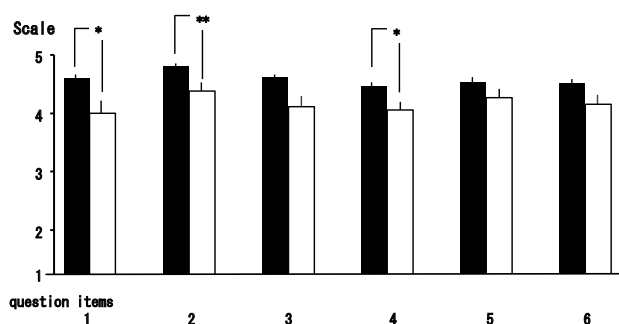


Fig. 1

A sex-based analysis of all participants (20 males, 59 females) showed that only females placed greater importance on “on a national basis, the need to maintain a stockpile of relief materials for pets during a disaster” ($p < 0.05$, data not shown). No further sex-based analyses were conducted given the imbalance of sample size between men and women. However, Mitchell 6) reported that women have more eye and physical contact with animals than men. In a previous study, we found that women placed greater emphasis on interaction with horses than on horse-riding skills 7). Because there may be differences between men and women in terms of perception toward animals after disasters, this issue should be verified in a follow-up study with a larger sample size. On the other hand, there was a statistically significant difference between the mean age of horse-riding club members that had experienced a disaster and the relief group. Thus, we examined the effects on age-based differences. As a result, no significant correlation ($p > 0.05$) between age and the responses to the questionnaire categories among the groups.

In first investigation, after analyzing the responses from participants divided into two groups by familiarity or unfamiliarity with the term “disaster animal,” we observed that those who were familiar with the term placed greater importance on all six categories. For that reason, we investigated the difference among rate of the three groups in terms of knowledge about disaster animals. In conclusion, no statistically significant difference among rate of the three groups was observed in terms of knowledge about disaster animals ($\chi^2 = 4.70$, $p = 0.100$). Thus, we conducted a comparative analysis of horse-riding club members that had experienced a disaster, horse-riding club members that had not

experienced a disaster, and the visitors in the hot spring inn (Fig. 2). The column in which participants could enter comments on the rescue and protection of horses allowed us to assess differences in the perception of the rescue and protection of horses between the club members who had experienced a disaster and those who had not. This was of particular interest given that horses are more difficult to shelter because of their greater physical size. The horse-riding club that had experienced the Great East Japan Earthquake had dealt with the difficulty of feeding horses because of disruption in transportation, supply of goods, and damage to facilities. In addition, these participants from the horse-riding club had endured a post-disaster situation in which their energy was focused on just taking care of their own horses, and they were unable to accommodate requests to accept horses from other severely damaged horse-riding clubs. The comments of this group reflected a dire reality, including the need for feed in large quantities; the risk posed by wandering horses; the fact that horses should be rescued, but humans come first; and the importance of raising public awareness of this disastrous situation. In contrast, comments from horse-riding club members who had not experienced a disaster were more idealistic, such as establishing a shelter facility; reaching an agreement with other clubs or ranches to shelter horses; and prioritizing the safety of humans as well as protecting horses. The lower level of importance given by horse-riding club members, who had experienced a disaster, to the two categories of “the need to provide relief and protection for pets during a disaster” ($\chi^2 = 10.62$, $P < 0.01$) and “the need to accumulate charitable donations and relief material for pets during a disaster” ($\chi^2 = 14.45$, $P < 0.01$) reflected a more realistic understanding of a disaster situation than horse-riding club members who had not experienced a disaster. Their responses indicated an awareness that, in a disaster, it would be more challenging to provide shelter for animals and accumulate relief money or

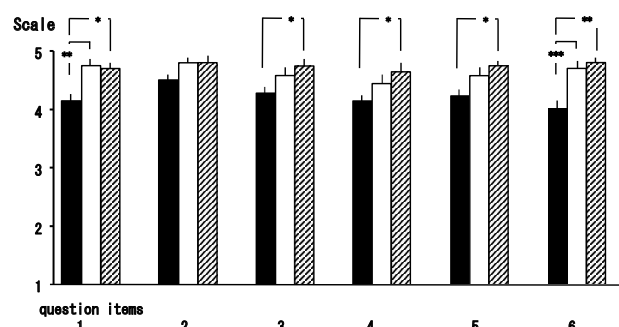


Fig. 2

charitable contributions compared with efforts for humans.

In a comparison with the visitors in the inn, the above differences in perception were even more magnified. There were no statistically significant differences between horse-riding club members that had not experienced a disaster and the visitors in the inn. However, when the visitors in the inn was compared with horse-riding club members who had experienced a disaster, we observed similar differences in perception of “the need to provide relief and protection for pets during a disaster ($\chi^2=7.12$, $P<0.05$)” and “the need to accumulate charitable donations and relief material for pets during a disaster ($\chi^2=14.45$, $P<0.01$),” as in the comparison of the two horse-riding groups. In addition, the visitors in the hot spring inn placed greater importance on the three categories: “the need for the training and development of volunteers who provide relief and protection for pets during a disaster ($\chi^2=7.37$, $P<0.05$),” “on a national basis, the need to maintain a stockpile of relief materials for pets during a disaster ($\chi^2=8.78$, $P<0.05$),” and “the need to conduct presentations at universities or groups for civilians regarding animals during a disaster ($\chi^2=6.70$, $P<0.05$)”. No significant difference ($\chi^2=6.17$, $P=0.051$) was only observed in “the need to public knowledge for both the owner and the pet to seek refuge at a shelter during a disaster” among the three groups. This reflects a high importance placed on these categories by also horse-riding club members who had experienced disasters. Horse-riding club members who had experienced a disaster placed a lower level of importance on the charitable contributions and support category (specifically, “the need to accumulate charitable donations and relief materials for pets during a disaster”), with some feeling that it was not important (Fig. 3a). Fig. 3b shows that, although horse-riding club members that had experienced a disaster tended to place less importance on some categories compared with the other two groups, no participant in that group felt that the categories were not important. The results in above indicate that the need to understand the perceptions of those who have actually experienced a desperate situation during a disaster may be even more important than charitable contributions.

Of the 79 participants overall, only four had no experience of caring for animals. Of the visitors in the hot spring inn, 19/20 had either a dog or cat. Since they have donated money and resources to animals, it was expected that they have affinity for animals. It is also

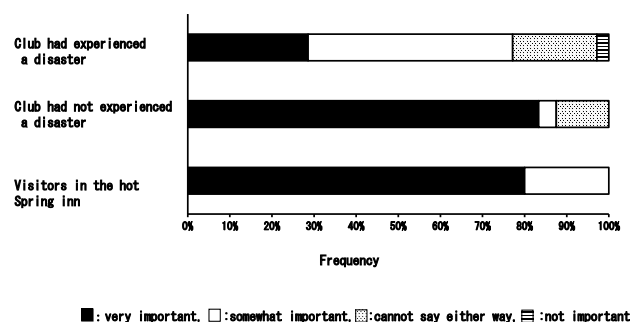


Fig. 3a

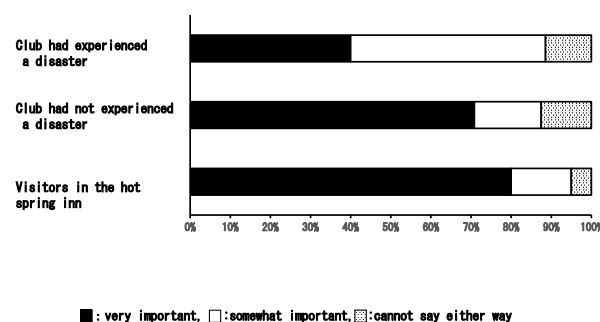


Fig. 3b

thought that people who join clubs such as horse-riding clubs are those who have an affinity for animals. In the event of a disaster, given that the presence of those who dislike animals can have a major policy impact, there is a need to conduct further studies focused on the perceptions of those who have no interest in or dislike animals. Since, it was thought that horses are more difficult to shelter due to their greater physical size, the scope of the investigation object must be also widened in the further studies.

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Figure and Legend

Fig.1.

Results obtained from the comparison of two groups into familiarity (black bar) or unfamiliarity (white bar) with the term "disaster animal." Item, 1: the need to provide relief and protection for pets during a disaster; 2: the need for public knowledge for both the owner and the pet to seek refuge at a shelter during a disaster; 3: the need for the training and development of volunteers who provide relief and protection for pets during a

disaster; 4: on a national basis, the need to maintain a stockpile of relief materials for pets during a disaster; 5: the need to conduct presentations at universities or groups for civilians regarding animals after a disaster; and 6: the need to accumulate charitable donations and relief material for pets during a disaster.

* $p < 0.05$, ** $p < 0.01$

Fig. 2.

Items considered important for disaster-experienced club (black bar), disaster-inexperienced club (white bar) and visitor in the inn (oblique line bar). Item, 1: the need to provide relief and protection for pets during a disaster; 2: the need for public knowledge for both the owner and the pet to seek refuge at a shelter during a disaster; 3: the need for the training and development of volunteers who provide relief and protection for pets during a disaster; 4: on a national basis, the need to maintain a stockpile of relief materials for pets during a disaster; 5: the need to conduct presentations at universities or groups for civilians regarding animals after a disaster; and 6: the need to accumulate charitable donations and relief material for pets during a disaster.

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Fig. 3.

The response of the three groups for the six categories. Fig.3a; frequency of responses for the importance of "the need to accumulate charitable donations and relief materials for pets during a disaster. Fig. 3b; frequency of responses for the importance of "the need to provide relief and protection for pets during a disaster."

被災を経験した乗馬クラブ関係者と他集団の伴侶動物に対する意識の違いに関して

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要 約 被災を経験した乗馬クラブの集団、被災を経験していない乗馬クラブおよび動物への寄付行為を行った集団を対象とし、被災動物に対する意識調査を行った。被災動物に対する6項目からなる設問に対して、「重要である」から「重要ではない」の5段階より選択してもらった。被災乗馬クラブに対する非被災乗馬クラブ、動物への寄付行為を行った集団、それぞれの比較で、いずれの比較においても、有意差がなかった項目は、「被災時に、ペットと同行し避難できるように一般に知識を持ってもらうこと」の1項目のみであった。他の5項目に関しては、いずれも被災乗馬クラブで、重要視する傾向が有意 ($p<0.05$) に低い成績が得られた。以上のことは、被災乗馬クラブにおいて、寄付金などの援助よりも、まず多くの人の理解が必要であることを被災現場において切実に体験したことを示唆するものと考えられた。

キーワード：被災動物・避難・乗馬クラブ

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