



Research Journal of
**Veterinary
Sciences**

ISSN 1819-1908



Academic
Journals Inc.

www.academicjournals.com

Assessment of the Human Aspect Regarding the Welfare of Cart Horses: Perspectives of Jimma town, South-West Ethiopia

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ABSTRACT

A cross sectional survey was undertaken from March-July, 2011, to evaluate the general awareness and to assess the most common malpractices towards the sick horses as part of welfare problem as well as to identify the prospect of the possible attitudinal change of the community on welfare aspect of their animals in Jimma town, south west Ethiopia. Semi-structured questionnaire was developed, pre-tested and administered to one hundred cart-horse owners of various age, educational status and experiences of keeping horses. Out of the cart horse owners interviewed, 62% did not have awareness about animal welfare at all whereas only 38% had the awareness albeit not practicing it appropriately. Keeping sick animals with the healthy ones, using sick horses for the cart, hot iron branding as a means of traditional treatment and abandoning the severely sick, were prominent among the most common delinquencies towards the sick horses. Statistically significant difference ($p < 0.05$) was observed in the awareness regarding animal welfare among the diverse educational status as well as between the age groups of the respondents but not ($p > 0.05$) among those having various experiences of keeping horses. After the notion of animal welfare has been briefly enlightened to them, virtually all of the participants supported the idea and displayed their inclination to practice it. In, conclusion, the study disclosed that there was paucity of information among the community about animal welfare in general. Hence, education of the population with regard to awareness creation and application of the principles of animal welfare in the area is strongly recommended to ameliorate the status quo.

Key words: Animal welfare assessment, cart-horses, Ethiopia, human health aspect

INTRODUCTION

Animals are “sentient beings” that experience states such as pain, suffering and satisfaction, thus they are reckoned as having fine condition of welfare whenever they are in good physical shape and health, secure, provided with sufficient feed, allowed to exercise natural activities and not being afflicted with throbbing, trepidation and misery (OIE, 2008). Avoidance and management of pain and anguish in animals are commonly considered as ethical necessities in scientific research and teaching. Hence, high-quality animal welfare entails appropriate disease prevention and veterinary cure, suitable sanctuary, management, nourishment, gentle handling and benevolent slaughter (OIE, 2008).

The welfare of mankind and animals are directly associated; accordingly, the health and productivity of animals depends on their well-being which in turn determines food security

for humans. In addition, animals are the source of several diseases of humans and thus, the prevention and control of these animal diseases is imperative to provide safe food for human. Moreover, caring for animals is a main source of cultural recognition for many people (FAO, 2009).

It has been suggested that more than half of the world's population depends on animals for power, income, social status, security as well as food and clothing. The welfare of their animals is therefore essential for their livelihood. With current efforts of increasing productivity, animals fall at the centre of development, whether as food or work animals (Wilson, 2003; Kay, 2007).

Underprivileged group of people living in urban and rural areas of developing countries use equines as the main resource of energy in farming and transportation, since they are cheaper and easily available. Furthermore, for those who keep these animals, they are indispensable means of income generation. The use of equines in door-to-door transport service also provides urban dwellers with the opportunity of income generation. Their use in these contexts is expected to continue (Biffa and Woldemeskel, 2006; Swann, 2006; Mekuria and Abebe, 2010).

There are thousands of working equines throughout Ethiopia, particularly in towns such as Jimma, where large numbers of cart-horses carry and haul extremely heavy items, including people. Their owners depend on these animals for their livelihoods; however, the welfare of these equines is usually abused. Hence, it is imperative to give the necessary attention to improve the well-being of these animals. To this end, very few studies have been undertaken to assess the human aspect as far as the welfare of such animals is concerned. Thus, the objectives of this study were to evaluate the general awareness and to assess the most common malpractices towards the sick horses as part of welfare problem as well as to identify the prospect of the possible attitudinal change of the community on welfare aspect of their animals in Jimma town, south west Ethiopia.

MATERIALS AND METHODS

Study area: Jimma town is the capital city of Jimma zone which is located 355 km away from the capital city of the country, Addis Ababa, south west Ethiopia with latitude of 70°42'N and longitude of 36°50'E having an elevation of 1750 m above sea level. The area receives mean annual rainfall of 1530 mm. The mean annual minimum and maximum temperature are 11.4 and 28°C, respectively. According to the report of CSA (2009), the population of equines in Jimma zone is 74,574 horses; 49,489 donkeys and 28,371 mules.

Study design: A cross sectional survey was undertaken from March-July, 2011, to evaluate the general awareness and to assess the most common delinquencies and measures towards the sick horses as part of welfare problem as well as to identify the prospect of the possible attitudinal change of the community on welfare aspect of their animals in Jimma town, south west Ethiopia.

Study population: The study was conducted on one hundred cart-horse owners of various age, educational status and experiences of keeping horses. The respondents were randomly selected from eight villages of Jimma namely: Bechobore, Setosemero, Mendera, Ginjogudru, Jiren, Kitofurdisa, Bosaadis and Hirmata. The villages were purposively chosen based on relatively large number of animals.

Data collection: A semi-structured questionnaire with regard to evaluating the general awareness, perception and support of cart-horse owners as well as assessing the most common malpractices and measures taken to the sick horses was developed, pre-tested and administered to one hundred cart-horse owners.

Data management and analysis: Data for the questionnaire survey were entered in to a Microsoft Excel spread sheets program and then were transferred to SPSS version 16 for analysis. Descriptive statistics were computed. Pearson's chi-square (χ^2) was used to evaluate the relationship of different variables. The p-value less than 0.05 (at 5% level of significance) were considered significant in all analysis.

RESULTS

Demographic data: The participants belonged to eight villages of Jimma town with the following composition: Bechobore (21%), Setosemero (22%), Mendera (8%), Ginjogudru (18%), Jiren (4%), Kitofurdisa (12%), Bosaadis (6%) and Hirmata (9%). All of the respondents were males of 15 years old and above. Accordingly, 55 (55%) of them were 15-30 years age, whereas the rest 45% were 31-years old and above. Based on educational level, 10% were unable to read and write, 24% able to read and write, 17% had educational level of grade 1-4, 27% had educational level of grade 5-8 and the rest 22% had educational level of grade 9-12. According to the experience in keeping horses, 50%, 27% and 23% had 1-5 years, 6-10 years and above 10 years of experience, respectively (Table 1).

Awareness of cart-horse owners about animal welfare in general: Out of one hundred cart horse owners interviewed, 62% did not have awareness about animal welfare at all whereas only 38% had the awareness albeit not practicing it appropriately. Statistically significant difference ($p < 0.05$) was observed in the awareness about animal welfare among the diverse educational status as well as between the age groups of the respondents but not ($p > 0.05$) among those having various experiences of keeping horses (Table 1).

The most common malpractices and measures taken by the owners towards sick horses: Keeping sick animals with the healthy ones, using sick horses for the cart, hot iron branding as a

Table 1: Awareness of animal welfare among the different categories of the respondents

Parameters	Awareness about animal welfare			df	χ^2	p-value
	Yes	No	Total			
Age (years)						
15-30	27	27	54	1	7.175	0.007
31 and above	11	35	46			
Total	38	62	100			
Educational status						
Unable to read and write	1	9	10	1	33.390	0.000
Read and write only	3	21	23			
Grade 1-4	4	13	17			
Grade 5-8	11	16	27			
Grade 9-12	19	3	22			
Total	38	62	100			
Experience in keeping horses (years)						
1-5	23	27	50	2	5.383	0.068
6-10	5	21	26			
Above 10	10	14	24			
Total	38	62	100			

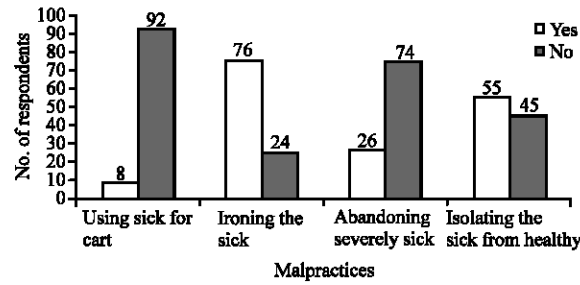


Fig. 1: The most common malpractices of the owners towards their sick horses

Table 2: Measures taken to the sick according to various categories of respondents

Parameters	Measures taken to the sick				df	χ^2	p-value
	Take to vet clinic	Go for traditional practices	Both	Total			
Age (years)							
15-30	30	11	13	54	2	9.296	0.010
31 and above	14	22	10	46			
Total	44	33	23	100			
Educational status							
Unable to read and write	1	7	2	10	4	14.061	0.080
Read and write only	9	11	4	24			
Grade 1-4	10	2	5	17			
Grade 5-8	12	7	8	27			
Grade 9-12	12	6	4	32			
Total	44	33	23	100			
Experience in keeping horses (years)							
1-5 years	23	20	7	50	2	5.388	0.068
6-10 years	7	10	9	26			
Above 10 years	6	12	6	24			
Total	36	42	22	100			

means of traditional treatment and abandoning the severely sick were prominent among the most common delinquencies towards the sick horses in the study area (Fig. 1). Majority of the respondents gave evidence that, horses usually became unwanted owing to diseases of poor prognosis. Abandoning horses for diseases the owners deem incurable significantly varied ($p < 0.05$) among the different age group, educational status and experience of keeping horses. Accordingly, the rate of such malpractice was relatively lower in younger age group (8%) and less than 5 years of experience of keeping horses (5%) as compared to older age group (18%) and greater than 5 years of keeping horses (21%). With regard to educational status, little proportion of owners (3%) with fairly better status of education (equivalent to high school) claimed to reach to such decision of abandoning horses for severe cases of illness; the remaining 23% out of the total 26% of those abandoned their horses belong to less than a high school level of education indicating that the rate of abandonment was relatively high in less educated individuals (Table 2).

With a significant difference among the age categories ($p < 0.05$) and a slight difference among the various educational status of the owners, the community used to take the sick animals to the local veterinary clinic. Thirty percent of the owners with younger age group and 24% of those in

Table 3: The decision of the owners to abandon horses suffering from severe diseases

Parameters	Abandoning horses			df	χ^2	p-value
	Yes	No	Total			
Age (years)						
15-30	8	46	54	1	7.633	0.006
31 and above	18	28	46			
Total	26	74	100			
Educational status						
Unable to read and write	6	4	10	4	11.215	0.024
Read and write only	9	15	24			
Grade 1-4	4	13	17			
Grade 5-8	4	23	27			
Grade 9-12	3	19	22			
Total	26	74	100			
Experience in keeping horses (years)						
1-5 years	5	45	50	2	23.387	0.000
6-10 years	6	20	26			
Above 10 years	15	9	24			
Total	26	74	100			

Table 4: The prospect of the possible attitudinal change of the community on welfare aspect of their animals

Parameters	Support the idea of animal welfare			df	χ^2	p-value
	Yes	No	Total			
Age (years)						
15-30	54	0	54	1	1.186	0.276
31 and above	45	1	46			
Total	99	1	100			
Educational status						
Unable to read and write	9	1	10	4	9.091	0.059
Read and write only	24	0	24			
Grade 1-4	17	0	17			
Grade 5-8	27	0	27			
Grade 9-12	22	0	22			
Total	99	1	100			
Experience in keeping horses (years)						
1-5	50	0	50	2	3.199	0.202
6-10	26	0	26			
Above 10	23	1	24			
Total	99	1	100			

a relatively better educational status (greater than 5 grades) showed better propensity to take their sick animals to veterinary clinic up on need. Regardless, significant proportion (33%) still relied on traditional treatments whereas and 23% used both (Table 3).

Attitude of the cart-horse owners towards the support of the idea of animal welfare: An attempt has been made to assess the prospect of the possible attitudinal change of the community towards the well-being of their animals. Accordingly, as shown in Table 4, after the notion of

animal welfare has been briefly enlightened to them, virtually all of the participants (99%) regardless of their age, educational status and experience of keeping horses supported the idea and displayed their inclination to practice it except one owner belonging to older age group who was indifferent to it. In essence, statistically significant difference was not observed ($p>0.05$) among the various categories of owners in their decision to support the notion of animal welfare.

DISCUSSION

Animal welfare is a complex issue with implications on cultural, political, technical and economic levels (OIE, 2010). As similar studies done previously elsewhere (Becerril-Herrera *et al.*, 2007; Roldan-Santiago *et al.*, 2011; Sejian *et al.*, 2011) this study focused on assessment of the human component. To this effect, the survey conducted in Jimma regarding the welfare of their animals disclosed that virtually two thirds of the population (62%) lack awareness about animal welfare at all while only about one third of the owners (38%) had the awareness which they never practiced it appropriately. This might be attributed to the fact that, until recent years, animal welfare was not a public or political issue in Ethiopia due to poverty; thus, people seem to lack respect for animals and may treat animals in a non-friendly way as supported by previous reports by Bracke (2009).

Noticeably, statistically significant difference ($p<0.05$) in the level of awareness about animal welfare among the diverse educational status as well as between the age groups of the respondents in the study area on one hand could suggest that education of the community as well as awareness creation is an important tool to make the community imbued with the concept of animal welfare; since our survey revealed that younger individuals are in a better educational status than older ones. In agreement with our work, age and education related attitude change has been well described in previous studies done by Muldoon *et al.* (2009) and Williams *et al.* (2010). According to these authors, children generally have positive attitudes towards animals in early development. The peak of interest in animals appears to be in the 7-12 year age range, with a decline occurring in early adolescence; secondary school age children appear to be more directly interested in Animal Welfare (issues relating to cruelty and exploitation).

On the other hand, absence of significant difference ($p>0.05$) in the awareness of the cart-horse owners about the welfare of animals among those having various experiences of keeping horses could also be due the fact that awareness is mainly created by education and not by the experience of horse-keeping. In support of this idea, Lawrence *et al.* (2010) stated that animal welfare should be represented in the education system at all levels to help societal understanding of legal responsibilities to animals, inform development of citizenship and exploits the reciprocal benefits that could emerge from enhanced human-animal relations.

With regard to the measures taken to sick animals, nearly half of the community used to take their sick animals to veterinary clinic, one third of the respondents said that they prefer traditional treatment, while almost a quarter of the interviewee equally look for both veterinary clinic and traditional treatment (Table 2). Notwithstanding, among the traditional means of treating sick animals, hot iron branding, as claimed to be used by the majority of carthorse owners (Fig. 1), warrants consideration as a serious animal welfare abuse. Understandably, it could be reckoned as the worst practice that imposes psychological and physical anguish on the animals intended to be treated from their ailments. As compared to the previous reports on various welfare issues of various animals by different authors (Becerril-Herrera *et al.*, 2007; Bulmer and Gil, 2008; Bracke, 2009; Dennis and Cheng, 2010; Singh *et al.*, 2010; Mota-Rojas *et al.*, 2011; Umpapool *et al.*, 2011; OIE, 2011; Roldan-Santiago *et al.*, 2011), this type of ostensibly "treatment of animals" is the most severe one as it is inadvertent cruelty to animals.

As shown in Fig. 1, more than a quarter of the respondents (26%) experienced abandoning their sick horses if they deem the ailment is incurable; moreover, virtually half of the respondents use to keep the sick animals with the healthy one which enhances the risk of disease transmission and related welfare problems which is in line with Singh *et al.* (2010). However, the significant difference ($p < 0.05$) that was observed in such decisions among the various categories of respondents (Table 3) might be indeed due to the difference in attitudes towards the welfare of their animals related to their age and educational status as described before.

As stated by the majority of the respondents, horses usually became unwanted due to diseases of poor prognosis. This is in accordance with the description of Unwanted Horses Coalition (2009), that defined unwanted horses as equines that are no longer useful to their owners due either to characteristics of the individual horse, such as illness, injury, age, misbehavior and unmarketable qualities, or owner situations such as physical or financial inability to provide care for that animal, a need to decrease herd size, or a loss of interest in horse care and associated activities. Euthanasia, burial, sell the horse, or send to rescue facility are methods to deal with unwanted horses.

Furthermore, in most of the developed world there are equine rescue and sanctuary facilities to take care of unwanted horses (Cross, 2008; Hazard, 2008; Messer, 2008). Nevertheless, horse owners of most of the developing countries including Ethiopia do have neither the awareness nor the possibility and capacity to do so at the moment. Hence, they ultimately succumb to abandon their indispensable animals which are consistent with Biffa and Woldemeskel (2006) and Pritchard *et al.* (2006).

Strikingly, as most of the family's income of the owners depends on these animals, certain carthorse owners still use sick animals for the cart purpose if they reckon the condition is not severe (Fig. 1), suggesting a prolonged exploitation of these animals despite their deteriorated health status. Previous studies disclosed that lengthy use of horses may expose them for abnormal behavior pattern as seen in confined horses where horses develop an indiscriminate eating habit like wood chewing, ingestion of pieces of rope and wood shaving when fed on grains (Mshelia *et al.*, 2010). Wood chewing horses tend to exhibit a desire for roughage or cellulose as do animals that eat their bedding.

By nature, horses spend much of their time grazing and if this activity is curtailed, such as when stabled them likely to pick other materials to consume. As reported by Mshelia *et al.* (2011), ingested foreign materials may remain within the large colon for considerable periods before passing further to produce obstruction and impaction. Consequently, stressful situation is created. Moreover, prolonged work may lead these animals to be affected by dehydration and hyperthermia which still exacerbates the welfare of these animals which is in accord with Pritchard *et al.* (2006), Biffa and Woldemeskel (2006) and Roldan-Santiago *et al.* (2011).

After a brief explanation has been made to them, virtually all of the respondents irrespective of their age, educational status or experience of keeping animals, reflected a positive attitude plus a total support towards the idea of animal welfare and expressed their willingness to practice it (Table 4). This emphasizes the importance of public education in significantly improving the welfare of concerned animals. On top of that, it implies that promising results could be achieved in relation to attitudinal change of the community if welfare related information is disseminated to the community through all possible means.

Even though there are few non-governmental organizations dwelling in Ethiopia and animal welfare has been included in the curriculum of veterinary schools, increasing the understanding that an animal is a sensible being is reported as a difficult task to be achieved in short period of

time, because human beings still suffer and the status of the animal sometimes is inferior to the one of man (OIE, 2010). To this end, animal welfare is indeed of less important priority for politicians and civil society. Hence, there is a need to increase its importance.

As, Fraser (2008) indicated, formerly, much of the research on farm animal welfare was motivated by concerns over the welfare of animals in industrialized production. Hence, it tended to be focused on production systems typical of countries with developed economies. Nonetheless, since the majority of animal production at the moment occurs in countries with developing economies, there is a need to redefine the field of animal welfare science more broadly, so that the benefits can easily be practical in other parts of the globe.

CONCLUSIONS AND RECOMMENDATIONS

The study disclosed that there is paucity of information among the carthorse owners about animal welfare in general. Keeping sick animals with the healthy ones, using sick horses for the cart, hot iron branding as a means of traditional treatment and abandoning the severely sick, are among the most common delinquencies towards the sick horses. Despite all these, the support of the idea of animal welfare and the inclination to practice it, as demonstrated by virtually all of the respondents indicates the significance of public education in considerably ameliorating the welfare of animals. To this end, education of the population with regard to awareness creation and application of the principles of animal welfare in the area is strongly recommended.

ACKNOWLEDGMENTS

We would like to thank Jimma University College of Agriculture and Veterinary Medicine for sponsoring this work. Authors also would like to extend gratitude to Oromia Rural Capacity Building Program for their financial support to this work.

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