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Original Research

Animal Handling in Horro Guduru Wallaga Zone: Care and Welfare Perspectives

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Abstract

Insufficient treatment and below-average well-being of animals were identified as major hurdles to animal production globally, resulting in substantial economic losses in terms of product and productivity. Hence, a study was carried out in chosen districts or districts within the Horro Guduru Wallaga zone of the Oromia regional state to assess how animals were handled and the state of their welfare. To achieve this, a semi-structured questionnaire was formulated and voluntarily administered to 240 respondents from four districts, namely Abay-choman, Horro, Abedongoro, and Jarte-jardega. Then, the collected data were analysed, which revealed that animals in these study sites were subjected to mishandling and subpar welfare. More specifically, the study indicated that 40% of participants reported using improperly fitting harnesses, resulting in various physical injuries. Furthermore, 35%, 14%, 27%, and 43% of informants reported that chickens were transported in inverted positions, witnessed sheep and goats tied up on the top of public transportation vehicles, reported the presence of feed and water shortages during dry seasons, and housing animals in open-air barns locally known as "Dalla," respectively. Consequently, the animals were exposed to heavy summer rain and cold weather and lacked proper resting areas. In conclusion, the study demonstrated severe animal handling practices and unfavourable welfare conditions. Therefore, it is recommended that the government establish regulations for animal handling and welfare while also increasing awareness among the public regarding the current state.

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INTRODUCTION

Animal welfare refers to the well-being of animals in their living conditions. A favourable state of welfare is achieved when animals are healthy, content, nourished, secure, able to display their natural behaviour, and free from any unpleasant conditions like pain, fear, or distress. Ensuring good animal welfare entails disease prevention, veterinary care, suitable shelter, proper management, nutrition, and humane treatment involving handling, slaughter, or euthanasia. In essence, animal welfare refers to the overall condition of an animal and the care it receives (OIE, 2012).

The commonly accepted definition of welfare is based on the "Five Freedoms" (Brambell *et al.*, 1965), which have undergone

revisions over time. These "Five Freedoms of Animal Welfare" encompass freedom from hunger and thirst, freedom from pain, injury, and disease, freedom from fear and distress, freedom from discomfort, and freedom to express natural behavior. Alterations in animal behaviour can indicate poor welfare, such as reduced activity and responsiveness (Warris, 2000).

The coexistence of humans and livestock can be considered symbiotic, benefiting both parties. Owners have the responsibility to provide adequate care, nutrition, and protection against predators, parasites, diseases, injuries, and extreme weather. Animals should be worked within their physical capabilities and handled safely. In return, animals work for the owners, fulfilling transportation and power needs, while owners must ensure the animals' well-being (Sambraus, 1992).

Promoting good scientific practices involves reducing animal suffering through improved husbandry and procedures (ILAR, 2008; NHMR, 2010; Reinhardt, 2006). Animals should receive humane training to understand requirements and learn necessary skills and commands. They should work alongside compatible animals of similar size and species. Their work should align with their physical capabilities, and considerate handling is crucial (NSPCA, 1999). For instance, foot care and shoeing should be provided when necessary for horses used in carts by skilled individuals without resorting to violent acts such as tail-crushing, eye-grasping, or ear-pulling by animal handlers (OIE, 2012).

There are various factors that can contribute to animal suffering throughout their lives. Poor handling and compromised welfare can be associated with early separation from the mother, transportation, trapping, unsuitable housing, inadequate healthcare, scientific procedures and their repercussions (both expected and unexpected), husbandry procedures like cleaning and identification, as well as euthanasia or release (Nuffield Council, 2010; Mason *et al.*, 2004).

Animal welfare has received greater attention in developed countries compared to developing nations, where animals often experience poor treatment and inadequate care due to misunderstandings and limited resources. The developing world frequently witnesses substandard treatment and inadequate well-being of livestock due to misconceptions and scarcity of resources. Western countries have implemented policies to ensure proper welfare standards, even if it means restricting the import of livestock products and potentially conflicting with international trade agreements.

Ethiopia, being one of the developing countries, mishandling of animals is commonly practiced, subjecting various species of domestic animals to mistreatment. For example, pack animals are often overburdened without proper equipment, while pet animals like dogs and cats are inhumanely poisoned each year for rabies control in different parts of the country. Sick animals are not taken to clinics for treatment, and farm animals lack appropriate shelter, being exposed to harsh sunlight and unpredictable rainfall. Despite Ethiopia's significant population of farm animals, pets,

and equines, the country has not fully benefited from their potential due to inadequate handling. Insufficient research has been conducted on animal handling and welfare in Ethiopia, with limited guidelines and regulations formulated by the ministry of agriculture. Thus, this study aimed to assess animal handling and the state of welfare in the Horo Guduru Wallaga zone from a care and welfare perspective.

MATERIALS AND METHODS

Description of study area

The current study was conducted in Horro Guduru Wallaga Zone, encompassing four chosen districts in the Oromia regional state of western Ethiopia. Shambu town serves as the zone's capital and is situated at an average distance from the other three study sites. It is located 314 km west of Finfinne (Addis Ababa), the capital city of Oromia (Ethiopia). The geographical coordinates of the area range from 09º29´N to 37º26´E, with an approximate elevation of 2,296 metres above sea level. The region experiences a single peak rainfall pattern, ranging from 1200mm to 1800mm. Rainfall predominantly occurs from April to mid-October, with the highest precipitation observed in June, July, and August. The temperature reaches its peak between 23 and 27°C from January to March, while the minimum temperature ranges from 7 to 15°C during October and November. The primary farming system in the area is characterised by a mixture of crops and livestock, with natural pasture and crop remnants serving as the primary feed sources for livestock.

Study populations

The target study populations were owners of cattle, equines, shoats (sheep and goats), pet animal owners, animal science experts, animal health practitioners, and knowledgeable elders who were assumed to have detailed knowledge about animal handling in their vicinity. A total of 195 animal owners, 15 animal science experts, 8 animal health practitioners, and 22 knowledgeable individuals were interviewed by employing closer approaches to collect data relevant to the study. Out of the total respondents, the majority of the study participants were male, which was decided by taking into consideration the role of men associated with all animals in general and livestock in particular in agricultural activities.

Study design and sampling method

A cross-sectional study was carried out in four districts of Horro Guduru Wallaga Zone to collect essential data from voluntary animal owners, animal health practitioners, and any knowledgeable people within these study sites. The study participants were purposely selected with a view to gaining detailed knowledge about animal handling. For this study, a semi-structured questionnaire was developed and administered to the individuals that participated in the survey to collect data related to animal handling from care and welfare perspectives in the study areas. A questionnaire survey was carried out at the study sites by interviewing illiterate respondents and allowing the literate respondents to fill out the questionnaires.

Study methodology

The study was conducted through questionnaire surveys and interviews designed for all of the study participants in the selected study sites in the Horro Wallaga zone. A total of 240 individuals were involved in the survey from the whole selected study districts within the Horro Guduru Wallaga zone by applying a face-to-face approach. The structured questionnaire was dispatched to the literate respondents to collect pertinent data in relation to animal handling from care and welfare aspects, and an interview was applied for illiterate interviewees. In the questionnaire, the level of education, family size, level of knowledge about animal handling of the study participants, and other important issues were included.

Data management and analysis

Following the collection of raw data from the study participants through structured questionnaires and interviews, the raw data were stored in the 2007 Microsoft Excel spreadsheet. Prior to analysing the coded data, they underwent a filtering process. Subsequently, the raw data were analysed using SPSS (Version 24), employing descriptive statistics to determine frequencies and relevant statistical computations.

RESULTS

In the present study, a total of 240 individuals participated in the study by adopting a structured questionnaire. These individuals represented various age groups and educational backgrounds within selected districts of Horro Guduru Wallaga Zone, where a mixed crop-livestock farming system is commonly practiced. In this assessment study, the majority of participants were male individuals, surpassing the number of female participants (Table 1). The age of the respondents was also considered significant for collecting relevant data regarding the handling and welfare issues faced by different animal species. Notably, individuals between the ages of 31 and 45 accounted for a significant proportion of 60% of the total number of respondents (Table 1). Regardless of their educational attainment, participants from diverse educational backgrounds, whether they were literate or illiterate, were included in the study, as they had exposure to various farm and pet animals, including equines, within their localities (Table 1).

Table 1

Sex, age and educational background of respondents

S/N^{O}	Parameters	Descriptive	Frequency	Percentages (%)
1	Sex	Male	231	99.2%
		Female	9	0.8%
2	Age	18-30	24	10.0%
		31-45	144	60.0%
		46-65	62	25.0%
		>65	10	4.2%
3	Educational background	illiterate	32	16.1%
		1-4	57	18.75%
		5-8	68	28.3%
		9-10	39	16.25%
		11-12	28	11.2%
		Diploma	12	8%
		1st degree	4	1.4%

Based on the findings of the current investigation, it was observed that a majority of the animals were housed in open-air barns. Surprisingly, according to the respondents, it was revealed that pregnant cows and horses in their final trimester were kept in muddy and open-air barns, locally known as "*Dalla*." This exposed them to harsh weather conditions, such as heavy summer rain and extreme winter cold. Moreover, these pregnant cows and horses were housed alongside different species of livestock. The respondents also reported that these pregnant animals were subjected to various forms of harsh and cruel treatment throughout their pregnancy. Similarly, injured and sick animals were managed in a similar manner, enduring unkind actions.

Furthermore, the study participants revealed that housing animals of different ages and species together led to fights between them, resulting in severe physical injuries and even abortions in some pregnant livestock. Additionally, 69.0% of the participants stated that livestock owners did not provide separate housing for their animals, living together with sick animals in the same house (Figure 1). In contrast, 31.0% of respondents revealed that animals like sheep, goats, cows, and pet dogs were kept in separate houses when the owner had a small number of them (Figure 1).

Additionally, according to the respondents, thi s investigation revealed that 10% and 4% of p articipants in the current study revealed that b ovines and equines had distinct housing on the basis of animal species. Likewise, 17.0% of the respondents informed us that sheep, goats, and chickens were housed in separate shelters. The respondents also pointed out that, even though some animals had separate houses in the study area, these structures lacked essential qualities. For instance, only 0.8% of the houses in the area had relatively good ventilation, and 1.3% of them were clean, dry, and had a non-slip surface, commonly found around district towns. Similarly, none of the houses had proper bedding materials on the floor. The study also indicated that the floors of these houses were cleaned very infrequently.

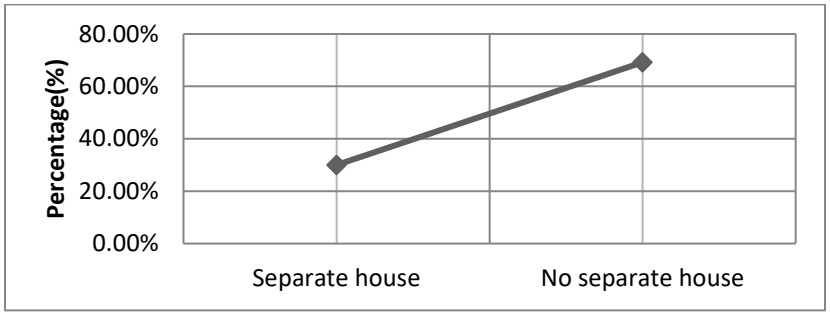

Figure 1: *Line-graph showing separate house for injured, sick and pregnant animals.*

The recent examination revealed that different farm animals and equines had been mistreated and had poor welfare conditions. Moreover, the study participants in the selected study sites reported cruel and harmful incidents, such as animals travelling long distances in search of water, a lack of adequate nourishment, and insufficient veterinary care

for sick and injured animals. The respondents also disclosed that these animals in the study areas suffered numerous physical injuries resulting from dangerous handling practices. The most frequently reported risky activities in the study sites included inadequate provision of food and water, excessive working hours that caused stress to draught animals, and the occurrence of diseases. Additionally, this study demonstrated a significant variation in the owners' level of understanding when it comes to seeking veterinary care for diseased animals in the study sites (see figure 2).

Figure 2: *Pie chart showing measures taken by the animal owners when the animals fall sick*

Furthermore, the current investigation exposed instances of animal mistreatment leading to various health issues among different animal species. The respondents to this study stated that they lacked a separate enclosure or isolation pen for diseased or injured animals, no prompt carcass disposal system for dead animal bodies, and a structured vaccination programme to prevent commonly occurring diseases. The respondents also indicated that draught animals, even though they were in a state of injury or illness and suffering from severe physical injuries, were compelled to work alongside their healthy counterparts in most areas of the study region. About 66.0% of the participants in this study admitted to utilising injured or diseased animals for agricultural tasks, particularly when there was a scarcity of such animals. The survey also identified multiple causes behind the injuries sustained by these working animals, with ill-fitting harnessing materials accounting for 40%, cohabitation of different animal species and age groups comprising 22.0%, physical trauma contributing 24.0%, and 14.0% originating from other related factors (Figure 3).

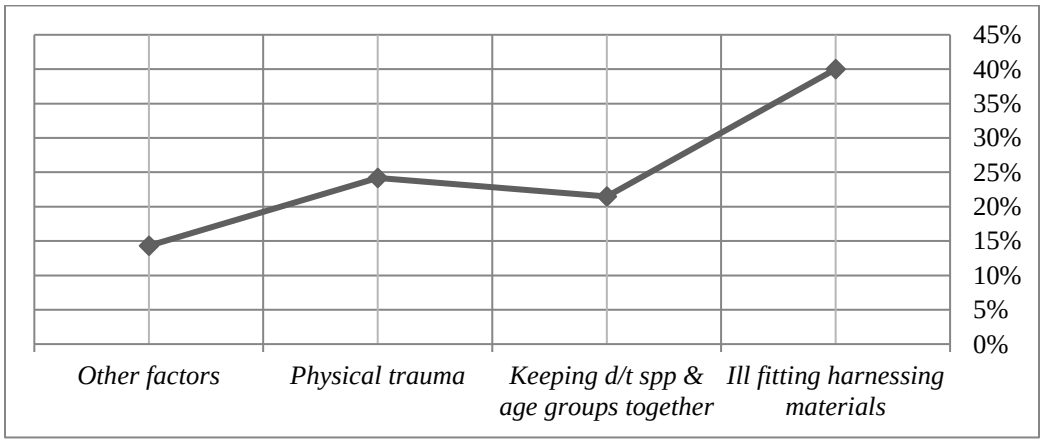

Figure 3: *Line-graph pointing out different causes of injury to different animals.*
Keys: *d/t-different, spp-species, vet-veterinary*

During the current investigation, it was evident that animals endured different forms of abuse and neglect. Respondents to this study informed me that all domesticated species examined in this study were subjected to unnecessary mistreatment. Surprisingly, almost all of the interviewed individuals committing these crimes against these voiceless creatures were unaware that animals, like humans, experience pain resulting from improper treatment. The respondents also clarified that their focus was solely on completing their tasks, oblivious to the suffering endured by these voiceless creatures. Furthermore, the present study indicated that animals were transported to market centres without access to adequate provisions such as water and feed, sometimes enduring journeys lasting two days or more to reach market centers. Disturbingly, cattle and equines, particularly donkeys, were transported from one area to another in unsuitable vehicles, while poultry was carried upside down. According to the respondents, sheep, goats, and other groups of livestock were haphazardly tied to the roofs of inappropriate transport vehicles frequently (see Figure 4).

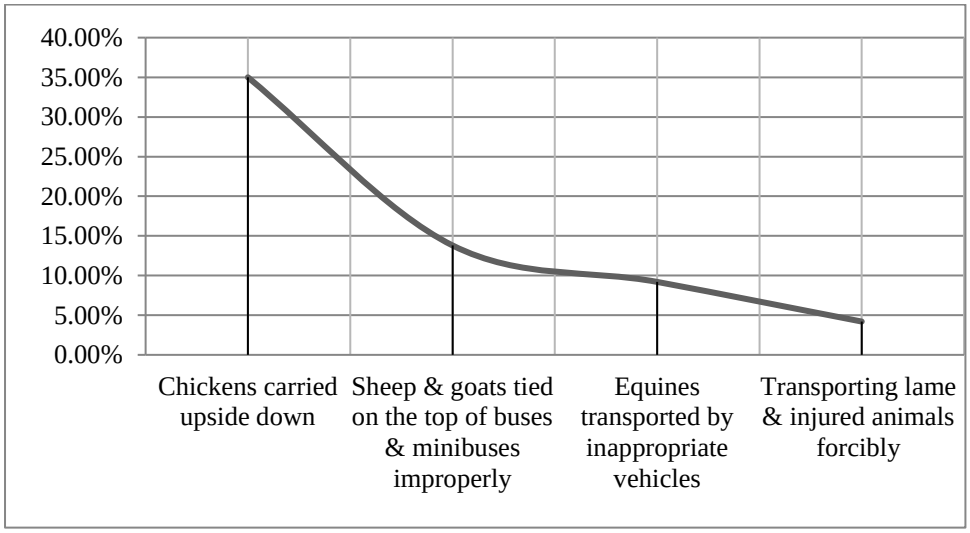

Figure 4: *Line-graph showing maltreatments committed against animals during transportation*

The present investigation also discovered that some of the animals affected by various ailments or injuries perished without receiving any veterinary care. The current study indicated that approximately 31.0% of the affected animals in this study site succumbed or died due to financial constraints faced by their owners; approximately 46.0% died because there was no veterinary clinic in their vicinity; roughly 15.0% perished because there was no tradition of seeking veterinary treatment for diseased animals and instead relied on traditional herbal remedies; and the remaining 12.0% died due to other factors.

The current survey also revealed that some equine owners were unaware of the appropriate load capacity for pregnant mares (female horses) and Jennies (female donkeys).

Surprisingly, participants disclosed that farmers utilised their pregnant equines to transport crops and other materials from their threshing fields and to market centres, even during the late stages of their pregnancy. Based on the present findings, approximately 69.0% of pregnant equines carry less than 50kg, around 23.0% carry between 50 and 100kg, and about 9.0% bear the same load as their male counterparts (Figure 5).

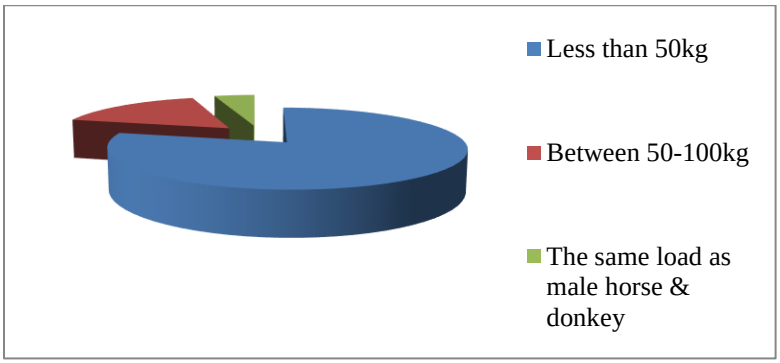

Figure 5: *Pie chart showing weight of load of sack that pregnant equines carry*

DISCUSSIONS

Agriculture is evidently the mainstay of the economies in the most developing countries. It predominantly relies on small-scale farming systems, with livestock production playing a significant role. Women, in particular, play a crucial role in these agricultural activities centred on livestock (Senkondo, 1992). In this study, the majority of respondents were male farmers. This result was anticipated because, in Ethiopia as a whole and specifically in the present study area, men tend to spend more time with their livestock and other animal species. Conversely, women allocate a considerable portion of their time to activities related to family well-being, such as caring for children and preparing meals in the household. Furthermore, this study revealed that instances of animal mistreatment and abuse were primarily committed by male farmers. This can be attributed to the extended periods of contact they have with various livestock as compared to their female counterparts. This finding coincides with a research report by Mollel and Mtenga (2000) from Tanzania.

Moreover, the present study found that the age of animal owners also influenced proper animal handling practices. According to the study, owners who worked with drought animals and fell within productive age groups tended to exploit and abuse animals more severely. This behaviour could stem from their strong desire to enhance agricultural production and productivity. In contrast, respondents in non-productive age groups, particularly older or younger individuals, demonstrated a lesser tendency to mistreat animals. Additionally, the respondents' level of education and their individual experience handling animals showed positive correlations with animal welfare practices. It is assumed that as one's education level increases, their empathetic regard for other creatures also

improves. Specifically, this study found that higher education levels corresponded to better animal handling practices. This correlation can be attributed to individuals with advanced education recognising that animals possess emotions akin to human beings. Consequently, they treat animals with care, meeting their physiological needs without causing harm. This finding aligns with reports by Frimpong (2009) and Ljungberg et al. (2007) concerning the mistreatment of animals in agricultural production systems. It is obvious that livestock are essential to crop-livestock producers' livelihoods in the Ethiopian highlands, especially in the current study locations. Despite their significance, the absence of nearby access to food and water presents difficult problems for various animal species. This drives them to travel great distances in search of food and water, frequently without adequate resting areas to shield them from sunburn, especially during the dry winter months. Domestic animals, especially cattle, are also exposed to brutal treatment when being transported to both local and larger livestock markets, including being severely beaten, intimidated, forced to cross rivers without bridges, and being prodded. Similar findings were also confirmed by Fufa et al. (2012) in the west Showa zone.

Undoubtedly, draught animals have made a remarkable contribution to non-mechanised agriculture, not only in the present study areas but also in other rural parts of Ethiopia. Despite their role in fulfilling various societal needs, such as ploughing, cart pulling, and transportation, they are subjected to inappropriate handling practices. They are mercilessly killed for food and other products by their owners and exploited in other ways, including improper transportation, lack of veterinary care, physical trauma, and deprivation of essential needs in the study locations and elsewhere in Ethiopia. Moreover, they lack adequate shelter, resulting in prolonged exposure to direct sunlight and unpredictable summer rainfall. This finding aligns with a previous study by Asebe et al. (2016).

In reality, animal handlers and owners should possess sufficient experience and competence when dealing with various farm animals, pets, and equines. However, it is common to observe domestic animals facing diverse challenges due to the unsatisfied demands of their owners. For instance, in this study, some domestic animals were subjected to torture and murder by angry owners who sought to vent their anger on these sentient beings, even though the animals did not pose any harm or threat to their owners. These animals are cruelly punished in public for perceived wrongdoing and often confined without access to water or food for extended periods. Furthermore, pack animals such as horses, mules, and donkeys are forced to carry excessive loads over long distances, even when female pack animals are in the final stage of pregnancy. When these draught animals are unable to bear the burden or are forced to move faster, they are prodded and beaten, despite their significant contributions to the daily agricultural activities of their owners. These actions may stem from ignorance about proper and humane animal care, a lack of empathy towards sentient creatures, personal amusement, and uncontrolled emotions directed at animals,

which supports the present findings (Dijk, Duguma, Gil, Marcoppido, Ochieng, Schlechter, Starkey, Wanga, & Zanella, 2011).

According to respondents, the well-being of animals at the study sites was severely compromised. These domestic creatures were experiencing various physical and psychological conditions. Specifically, the present study sites witnessed a significant violation of the five freedoms animals should have: freedom from hunger and thirst, freedom from discomfort by providing suitable surroundings, freedom from pain, injury, or diseases, and freedom from fear and distress from any source. However, the current study revealed that none of these freedoms were granted to any animal. Moreover, it was observed that diseased working equines, particularly those affected by drought, were compelled to work without receiving proper veterinary care, which aligns with a similar study conducted in South Africa by Wells and Krecek (1998) that reported comparable findings.

The current investigation also revealed that the availability of feed for working animals, particularly draught animals, as well as other domesticated animals in general was commonly deemed insufficient. This scarcity was observed to be particularly high during the dry winter season, which is also prevalent in other regions of Ethiopia. Consequently, these draught animals tend to be in a substandard state of health, negatively impacting their productivity. They are often compelled to exert excessive effort in order to carry out normal tasks, mainly due to their diet consisting primarily of meagre and low-quality sources such as crop residues and leftover stalks from agricultural fields. The study participants also noted the absence of organised cultivation of fodder crops and insufficient grazing land. Additionally, respondents pointed out that encroachment on communal pasturelands and bushes was a prevalent issue in the research area, resulting in environmental degradation. This phenomenon aligns with similar reports documented in rural areas of India by Ramaswam (1995).

In our current investigation, working animals or draught animals were forced to work using ill-fitting harnesses and were kept in the company of different species and age groups, which often led to severe physical injuries. As reported by the study participants, the animal-drawn implements, carts, and other equipment used by these farmers were of crude design, adhering to traditional practices, with minimal advancements made in their design over the centuries. The utilisation of these implements relied on the local availability of materials, simple design, and low cost. This lack of attention towards improving animal-drawn implements could be attributed to historical neglect spanning from ancient times to the present in Ethiopia.

Furthermore, according to the respondents, allowing animals to fulfil their physiological needs and engage in social interactions with their companions was largely unrecognised by the majority of animal owners. Additionally, most of the domesticated animals belonging to the respondents lacked separate shelters, likely due to a lack of knowledge and attention towards animal housing throughout generations. Moreover, although it is a

fundamental principle of animal handling to prevent inducing excitement in animals, in the present study, the animals experienced distress due to improper handling, such as carrying chickens upside down, tethering young pigs on the roofs of vehicles, and transporting unhealthy or injured animals. These harmful practices may be a consequence of the absence of a legal framework addressing these unnecessary actions against sentient animals. This finding aligns with MoARD (2008).

CONCLUSIONS

In conclusion, in the current survey study, the owners of pet and farm animals, including equine owners, hadn't recognised these animals as sentient beings and had feelings just like those of human beings. More specifically, food animals and equines were exploited in order to fulfil the interests of their owners, even though they were seriously affected due to different mishandling and welfare problems such as using ill-fitting harnessing materials, shortage of sufficient feed and water, transportation by inconvenient vehicles, absence of treatment for sick animals, absence of a suitable house that could prevent rain, and other heavy environmental influencers. Thus, based on the above conclusion, the following points were forwarded for intervention:

- The government should set down rules and regulations regarding how to handle farm animals, pet animals, and equines.
- Training concerning how to feed and drink, use fitting harnessing materials, address housing issues, and handle animals safely should be provided to the farmers and other stakeholders.
- The five "Freedoms of Animal Welfare," which include: freedom from hunger and thirst; freedom from pain, injury, and disease; freedom from fear and distress; freedom from discomfort; and freedom to express normal behaviour, should be recognised by the government and protected by farmers and other stakeholders.

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