

WELFARE OF CATTLE AT LOCAL MARKETS IN KADUNA STATE: HANDLING AND TRANSPORTATION AS A MAJOR CONCERN

S. M. NDAZO^{1,2} AND O. A. JOSEPH²

¹College of Agriculture and Animal Science, P.M.B. 2134, Division of Agricultural Colleges, Ahmadu Bello University, Mando-Kaduna, Nigeria

²Department of Physiology, Faculty of Veterinary Medicine, Ahmadu Bello University, Zaria, Nigeria
Correspondence: mnsalka@yahoo.com

ABSTRACT

The aimed of the study was to evaluate the welfare of cattle at local markets in Kaduna State, based on means of transportation by road, loading and unloading methods, abusive behaviours by stakeholders and stress-related behaviours of the animals. Ten different villages within Kaduna State were visited twice each during their market days. During the visits, a total of 700 cattle were observed and the methods by which the animals were handled, their means of transportation and behavioural responses were assessed, and, in addition, photographs were obtained. The cattle were transported mostly in buses (60%) and cars (55%), followed by pick-ups (35%) and trucks (20%). There were no loading or unloading ramps in all the markets visited. The most common abusive behaviour was beating of cattle with stick or club (80%), closely followed by horn/neck pulling (60%) and neck twisting (50%). The most common stress-related behaviour of the cattle was aggression (70%), followed by panting and repeated vocalisation (40% each). In conclusion, cattle transported for sale at various local markets in Kaduna State were abused, handled poorly and inhumanely, and transported by means not specifically meant for animal transportation. The compromise of the welfare of the cattle may adversely affect their health, productivity and meat quality.

Keywords: Cattle, behaviour, transportation, welfare.

INTRODUCTION

Animal welfare is the state of animal as it responds to environmental challenges (Broom, 2003). An animal is thought to be in a better state of welfare, if it demonstrates good biological functioning within its environment; that is, good general physical and mental health, productivity and growth (Broom, 2003; Brydges and Braithwaite, 2008). Animal welfare is increasingly becoming an issue of great importance in Nigeria because animal farming is no longer seen as merely a means of food production, but also as an ethical concern (FGN-ADC, 1988). There is an increasing public sense of responsibility for animals which are under human care. Moreover, in consumers' minds, the well-being of farmed animals is strongly associated with the quality and even safety of food. The handling of animals in developing countries has been a subject for critical discussion for a long time and requires further research. The intensity and specialisation of livestock production and the demand for livestock, including their products, to be marketed and slaughtered outside the places of

their production have necessitated the transportation of food animals throughout the world (Minka and Ayo, 2007). Transportation of livestock by road, which includes handling, regrouping, loading, the journey proper and unloading, is one of the major management practices that often compromise animal welfare (Minka and Ayo, 2010, 2016). The conditions under which cattle are transported may cause injury, reduce performance, cause increased morbidity and mortality rate, and, consequently, resulting in substantial economic losses due to loss of liveweight and poor meat quality (Knowles *et al.*, 1999; Minka and Ayo, 2007). There are limited or no studies that evaluated the common practices of handling, loading and unloading of cattle in local livestock markets in Nigeria. The present study was aimed at evaluating the welfare of cattle, transported for sale in local markets in Kaduna State, based on their handling techniques, behaviour and means of transportation by road to and from the markets.

MATERIALS AND METHODS

The field study was conducted at 10 different local animal markets in Kaduna State during the hot-dry season. The animal markets, located in the villages, were visited on the market days, and the following procedures were performed: Visual identification of the methods used in handling, loading and unloading of cattle at local markets; 2. Means by which the cattle were transported to and from the markets; 3. Abusive behaviour by stock handlers; 4. Stress-related behaviour by the animals; and 5. Photographs/video clips of the entire handling, loading and unloading processes at various cattle markets were taken. A total number of 750 cattle were observed in all the markets, which comprised 25 groups, with an average of 30 animals per group. The behaviour of the cattle at the markets was outlined and defined, based on human and animal behaviour (abusive handling and stress-related animal behaviour) (Hemsworth, 2003; Jerlström, 2013). Scan sampling method was used in evaluating the behaviours (Altmann, 1974). A group of five to ten cattle was randomly chosen and observed by instantaneous recordings for 10 minutes, then a break of 10 minutes and another observation for 60 minutes. Photographs/video clips of some animals were obtained in order to make registrations repeatable. During observation, abusive behaviours against the cattle, and all behaviours expressed by the animals themselves were recorded in a behavioural survey as a frequency; that is, number of animals in the group performing same behaviour. The behavioural observations were recorded by four trained persons. On each observation, the date, number of animals in the group and condition of animals were recorded. In each group of cattle, a frequency of all expressed behaviours was calculated as percentages. These were then summarised within each of the behaviours and divided by number of animal groups per market in order to obtain average values. In order to calculate the most common transport system of the animals, the average value was calculated by dividing the number of groups of animals that were transported by pick-up or car or bus or any means with total number of animal groups that were transported. The results were presented in simple percentiles.

RESULTS

Various means of transportation were used to convey the cattle to and from the markets. Majority of the cattle were transported in buses (60%) and small cars (55%), while some were even transported on motorcycles (20%) and wheel barrows (5%). The most common abusive behaviour was beating of cattle with stick or club (80%), closely followed by horn/neck pulling (60%) and neck twisting (50%) (Figure 2). The most common stress-related behaviour of the cattle was aggression (70%), followed by panting and repeated vocalisation (40% each) (Figure 4). There were no loading or unloading facilities in all the markets visited.

DISCUSSION

The results showed that transportation of cattle in buses, cars and even motorcycles was a common practice in all the markets visited, and it was a serious abuse of animal welfare which should be discouraged. In spite of the fact that these means of transportation are not recommended for cattle, the animals were packed together in such a manner that there was little or no space left in between them. The animals were tied to the vehicle sides to control their movements. The ropes were secured at the neck, legs, horns or nose, and it was observed that this restraint method was improper, and, in some cases, may impair respiration, cause discomfort, rope rubbing injuries, and abrasion or laceration injuries from rubbing against the walls of the vehicle. The animals were forced to remain in such stressed conditions for several hours inside the vehicle. The very process of loading and unloading animals into vehicles was very strenuous and constituted welfare problem, and most of the changes in body parameters of the transported cattle were, apparently, caused as a result of poor handling, loading and unloading. The lack of loading and unloading ramps in all the local livestock markets visited was a serious welfare problem. During loading, the cattle were simply carried up and thrown into the vehicle by stock handlers, and then dragged through the perforated and rusted floor of the vehicle with such a force that may inflict injury to the animal. Such acts constituted a break in the dynamic stereotype and may impair the homeostatic mechanisms of the cattle. Similar findings that handling constitutes a major welfare problem to

animals have been reported (Brown *et al.*, 1999; Knowles *et al.*, 1999; Minka and Ayo, 2007). The high rate of abuse of the cattle by all stockholders in all the markets visited is an unacceptable practice and worrisome to animal welfarists. The present observation agreed with the result obtained in Ethiopian cattle market (Bulitta, *et al.*, 2012). The stockholders believed that only way to control and make the animal move is by beating and pulling. It is unfortunate that the cattle were subjected to painful treatment throughout the period of stay at the markets and during transportation. Such abuse on the animals often results in aggression, repeated vocalisation and increased respiratory rate or panting due to frustration, which often leads to traumatic injuries. This compromises the animal welfare, health and, consequently, cause poor meat quality and low productivity. Similar observations were made by Hemsworth (2003) and Jerlström (2013). In conclusion, cattle were transported in vehicles not meant for their transportation, poorly and inhumanely handled with no loading or unloading facilities in all the local cattle markets visited in Kaduna State. The stakeholders abused the cattle indiscriminately and the animals responded by aggressive behaviour. The welfare of the cattle was compromised, which may adversely affect their health, productivity and meat quality.

ACKNOWLEDGEMENTS

The authors are grateful to the 2015 National Diploma II students of the College and managements of the various local markets visited for their assistance and cooperation.

REFERENCES

- Altmann, J. (1974). Observational study of behaviour: Sampling methods. *Behaviour*, 49: 227-267.
- Broom, D.M. (2003). Causes of poor welfare in large animal during transport. *Vet. Res. Comm*, 27: 515-518.
- Brown, S.N., Knowles, T.G., Edwards, J.E. and Warriss, P.D. (1999). Behavioural and physiological responses of pigs to being transported for up to 24 hours followed by six-hour recovery in lairage. *Vet. Rec*, 145: 421-426.
- Bulitta, F., Gebresenbet, G. and Bosona, T. (2012). Animal handling during supply for marketing and operations at an abattoir in developing country: The case of Gudar market and Ambo abattoir. Ethiopia. *J. Serv. Sci. Manag*, Volume 5, pp. 59-68.
- Brydges, N. and Braithwaite, V.A. (2008). Measuring animal welfare: What can cognition contribute? *Ann. Rev. Biomed. Sci.* 10: T91-T103.
- Farm Animal Welfare Council (FAWC). (2003). *Farm Animal at Slaughter or Killing*. Part 1. Defra Publication. Admail, London, FAWC.
- Federal Government of Nigeria Official Gazette-[ADC ???] (FGN-ADC) (1988). *Animal Diseases (Control) Decree 1988*. The Federal Government Press, Lagos, Nigeria, pp. 477-491.
- Hemsworth, P. (2003). Human-animal interactions in livestock production. *Appl. Anim. Beh. Sci.* 81(3), pp. 185-198.
- Jerlström, J. (2013). Animal welfare in Ethiopia: Transport to and handling of cattle at markets in Addis Abeba and Ambo. Degree Project in Animal Science. Swedish University of Agricultural Sciences, Faculty of Veterinary Medicine and Animal Science.
- Knowles, T.G., Warriss, P.D., Brown, S.N. and Edwards, J.E. (1999). Effects on cattle of transportation by road for up to 31-hours. *Vet Rec*, 145: 575-582.
- Minka, N.S. and Ayo, J.O. (2007). Effects of loading behaviour and road transportation stress on traumatic injuries in cattle transported by road during the hot-dry season. *Livest Sci*, 107: 91-95.
- Minka, N.S. and Ayo, J.O. (2010). Physiological responses of food animals to road transportation stress. *Afri. J. Biotechnol*, 9(40): 6601-6613.
- Minka, N.S. and Ayo, J.O. (2016). Effect of wet-cold weather transportation conditions on thermoregulation and the development of accidental hypothermia in pullets under tropical conditions. *Inter. J. Biometeorol*, 60: 373-380.

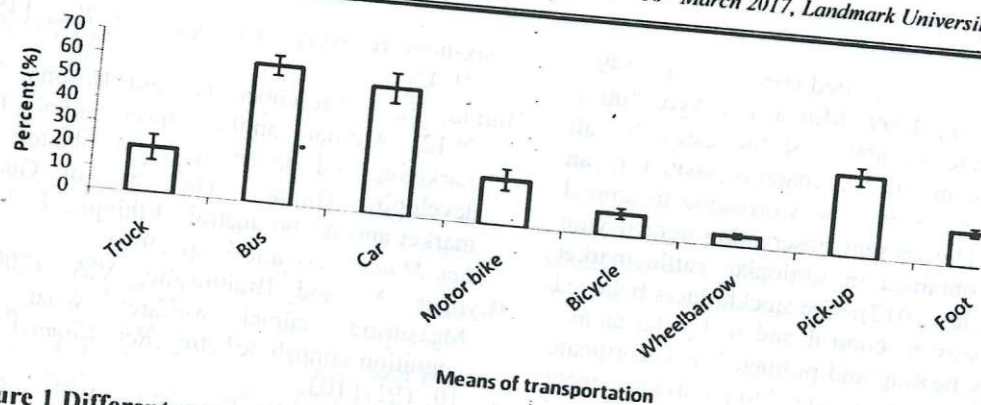


Figure 1 Different means by which cattle were transported to and from local markets in Kaduna state.

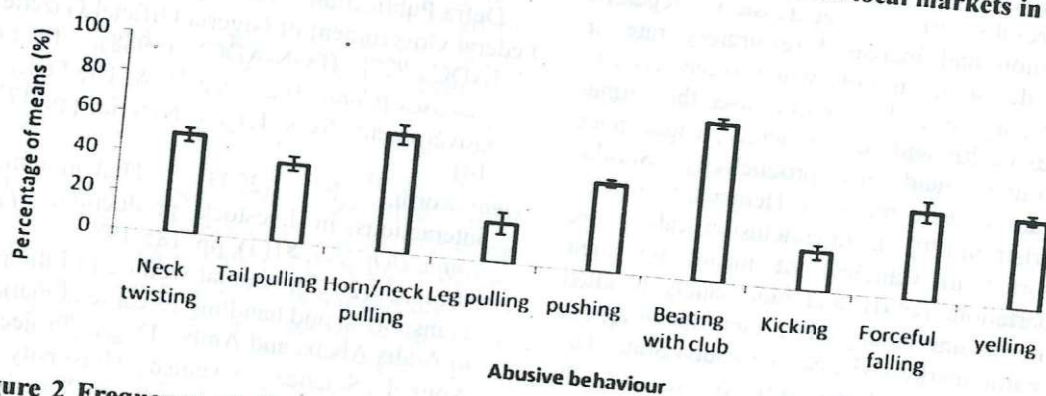


Figure 2 Frequency of abusive behaviours by stakeholders at local markets in Kaduna State, Nigeria.

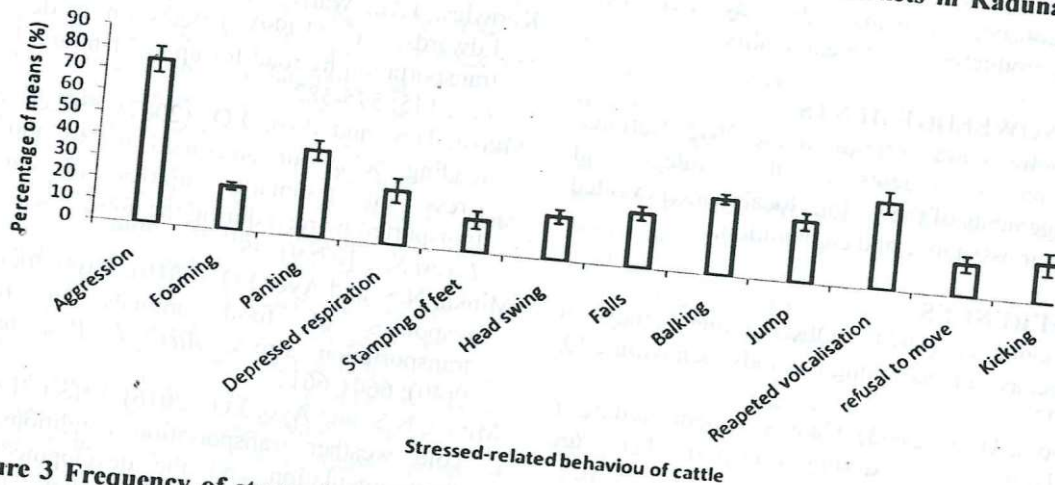


Figure 3 Frequency of stressed-related behaviours of cattle at local markets in Kaduna State, Nigeria.