INTERNATIONAL JOURNAL OF CURRENT RESEARCH IN CHEMISTRY AND PHARMACEUTICAL SCIENCES

(p-ISSN: 2348-5213: e-ISSN: 2348-5221)

www.ijcrcps.com

DOI: 10.22192/ijcrcps Coden: IJCROO(USA) Volume 7, Issue 5 - 2020

Review Article

DOI: http://dx.doi.org/10.22192/ijcrcps.2020.07.05.004

Review On Animal Welfare

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Abstract

The welfare of animals is a matter of growing concern in developed countries as well as in the developing world. Ethiopia is a developing country which is struggling to reduce poverty and attain food security. The livestock sector of its economy is very high although it has not been utilized properly so far. But, it is still contributing about half of the agricultural sector of the national economy. Wild life is also contributing very much. Hence it is highly necessary to improve the health, welfare and productivity of such very big resource in order to fulfill the desired development goal. The demand for improvements in animal welfare practices has been growing in recent years. Consumers and the society at large are showing greater concern about the conditions in which farm animals are reared, transported and slaughtered for food. This concern is reflected in the adoption of animal welfare breeding practices mandated. While some countries impose more specific and binding norms than those lay out by the in specific areas, important gaps in implementing and enforcing legislation remain in many cases. Such gaps may be the result of difficulties faced by farmers and food industries in adopting improved practices and animal welfare standards, and/or differences in consumer demand for food products produced under higher welfare schemes.

Keywords: Animal, Welfare, Gondar, Ethiopia

1. Introduction

The welfare of animals is a matter of growing concern in developed countries as well as in the developing world. Animal welfare is coming to be recognized as a core component of responsible livestock practices and can be generally defined as “the avoidance of abuse and exploitation of animals by humans by maintaining appropriate standards of accommodation, feeding and general care, the prevention and treatment of disease and the assurance of freedom from harassment, and unnecessary discomfort and pain(*www.fao.org)*

Ethiopia is one of Africa's largest exporters of livestock animals and produced 19.32% of Africa’s cattle production in 2011. The national economy is one of the fastest growing in the world and 47% of gross domestic production (GDP) involves the agricultural sector. However, access to the global market is limited by the country's problems with animal disease, lack of hygiene and animal health. At the same time, the western countries request an increasing amount of meat available for import and demand a structured and clear supply chain with consistent quantity and quality (Rich et al., 2009)

As meat is the main source of protein for humans, it should be clean and safe. However, the hygiene and animal welfare are today suffering because of a lack of knowledge and economic problems in developing countries. The transport of livestock animals for meat production in Ethiopia are currently mostly done by foot (trekking) or in best cases by vehicle, mostly during long distances (Gebremedhim, 2007). This results in long distance journeys with no sufficient food or water and minimal rest, factors that cause severe stress to the animals The World Organization of Animal Health, OIE, together with the Farm Animal Welfare

Council, FAWC, give recommendations on how to treat animals for livestock production. The Five Freedoms, stating that any animal kept by humans should be protected from unnecessary suffering, are backed by FAWC. Though, Ethiopia has no guidelines or laws regarding animal welfare and has no or little knowledge about animal handling for food production(A Grönvall 2013)

There is a strong public expectation that animal welfare standards will be robustly enforced by local authorities. However, the laws, and their specific requirements, are often decades old, and difficult to adapt to the changing types of animal-related businesses, and to new standards of good practice in animal welfare. Moreover, the current process is complex and burdensome for both businesses and local authorities (A Grönvall 2013).

Today, Ethiopia's earnings from export of livestock products are relatively low and found, in previous studies, that the central problems were continued use of traditional technologies, a limited supply of food and water, unstructured animal breeding and high disease prevalence. An improvement of hygiene in slaughterhouses and stricter animal welfare standards would mean easier access to the global market, which may result in a significant way out of the country's poverty (Gebremedhim2007).

2. Animal welfare

Animal welfare is a worldwide issue that is under more focus now than ever before. The western countries outline strict animal welfare regulations and organizations are fighting for animals' rights in a society where economics is often deemed the most important factor. In Ethiopia there are no animal welfare regulations or any constitution that protects animals from suffering (J Jerlström2013). However, there are six or seven organizations that work for animals' welfare; and the first was established as early as 1954. Still they have not yet accomplished the main objectives of their work to implement animal welfare, but it is under progress and hope full ready within near future (Bekele, 2009).

No significant definition if animal welfare is yet stated, but three general criteria's are used; the biological function, the affective state and the natural state (FAWC 2013). There are a variety of aspects affecting an animal's welfare and therefore a unified definition of thee desirable welfare state has not yet been adapted. However, the term animal welfare can be looked at from three different perspectives:

1. The biological state: describes welfare of an individual as good when the animal is healthy and grows and reproduces well;
2. The affective state: stresses potential for animals to suffer or to have positive experiences;
3. The natural state: explains differences between captive animals and the wild state where they origin from, and to what extent they are able to express natural behaviors (Mellor et al., 2009).

From the animals' perspective, the most important aspect is how it manages to cope with environmental stressors. When behavioral and physiological stress responses are thwarted orif it fails to maintain homeostasis, it is likely that the animal will express chronic stress. Symptoms of this can be injurious behavior to themselves e.g. self-mutilation, or chronic activation of the autonomic nervous system. This will evidently result in lowered animal welfare. Therefore, welfare of an animal is said to be good when

stress responses are not chronically activated and when the individual can cope with them successfully (J Jerlström2013).

The affective state includes positive experiences versus the experience of suffer. Last, the natural state explains the animals' welfare as the extent to how an animal is able to express most of its natural behaviors. The welfare of an animal includes both its physical and mental state and according to the Farm Animal Welfare Council any animal kept by humans should be protected from unnecessary suffering (FAWC, 2013).

The World Organization for Animal Health (OIE) implemented the first international guidelines for animal welfare in 2005. In total, 167 countries accepted these. However, there is still a lack of guidelines and regulations for animal welfare in Ethiopia (Bekele, 2009). The five freedoms were outlined in the 1970s in England and have since then been a fundamental basis for animal welfare all over the world.According to the Five Freedoms, the animal's welfare is considered as:

1. Freedom from Hunger and Thirst - by ready access to fresh water and a diet to maintain full health and vigour;
2. Freedom from Discomfort - by providing an appropriate environment including shelter and a comfortable resting area;
3. Freedom from Pain, Injury or Disease - by prevention or rapid diagnosis and treatment;
4. Freedom to Express Normal Behavior - by providing sufficient space, proper facilities and company of the animal's own kind;
5. Freedom from Fear and Distress - by ensuring conditions and treatment which avoid mental suffering (J Jerlström2013).

Furthermore, the World Trade Organization, OIE, gives recommendations on how to treat live domesticated animals in their Terrestrial Animal Health Code. According to article 7.5.2, "animals should be handled in such a way as to avoid harm, distress or injury. Under no circumstances should animal handlers resort to violent acts to move animals, such as crushing or breaking tails of animals, grasping their eyes or pulling them by the ears." additional on they make specifications on the conditions of lair age and state that animals kept in outdo or lair age should be given shelter from adverse weather conditions. Ethiopia is not a member of OIE yet, but has applied for membership in 2003. The Working Party met for the third time in March 2012 to continue the examination of Ethiopia's foreign trade regime. AWTO membership could contribute to the fight against poverty, since trade is a proven engine for economic development (OIE 2012).

When evaluating animal welfare, behavioral measurements are among the preferred methods, since the animals behave in response to the new environment. Furthermore, physiological responses such as hormones can be indicators used when studying animal welfare. It is also important to separate the different factors of expressed animal behaviors'; fearful animals may be easy to move while animals fearful of humans are likely to be the most difficult to handle (Hemsworth 2007).

In developing countries like Ethiopia, long-distance journeys, forcing animals to cross big rivers that have no bridge and journeys without sufficient food, water and resting time cause stress to animals. Furthermore, the animals are exposed to high temperatures and heavy rain both during transport and in lair age. The stakeholders during transport, at markets and in abattoirs are usually not educated for their job and have no or less sufficient knowledge and understanding about the welfare of animals. In general, poor animal welfare results in loss of weight, physical injuries, sickness and sometimes even death of animals (A Grönvall 2013).

2.1Animal Handling

The term animal handling originates from when humans started to domesticate animals and handling of animals to some extent became a daily routine. Since then, many researchers and Organizations have stated the importance of correct procedures for this. It has been shown that 6 handling routines that are stressful for animals can reduce their immune function and most likely

result in lowered productivity (e.g. growth rate, meat production, milk production etc.) Some cattle are said to be incontrollable and wild, which presents a safety risk to their handlers, make them cost more to own and harder to sell for profit (J Jerlström2013).

Besides, they are more predisposed to stress and their conversion of feed to meat is not as efficient as with calmer cattle. Genetics are another factor that affects animals' behavior and stress levels during handling. However, genetics and experiences interact and determine temperament of the animal and furthermore how the animal will behave during handling. In contrast, animals that are handled with minimum level of stress and low impact of aversive handling have less risk of injuring themselves, other animals and their human handlers. This will make handling procedures more effective since routines will take less time and demand fewer people, which is favorable from an economic standpoint (Price 2008).

It has been shown that an animals' fear of humans can limit productivity and welfare of farm animals. The expression fear is used when describing an animals' undesirable emotional state of suffering. Hemsworth revealed that associations between a positive handling, e.g. tactile contact and verbal effort, were negatively correlated with the use of negative tactile interactions, e.g. pushes, which were positively associated with an animals' fear of humans (J Jerlström2013).

Stress can be defined in many different ways, but the widely accepted term was defined by Walter Cannon (1929) as the disturbance of an organism's physiological homeostasis or physiological well-being. Stakeholders, who have inadequate attitudes towards animals when interacting with them, are believed to affect the behavioral response of animals towards humans. Thus, productivity of animals is affected and likewise, associated with increased fear of humans. This is believed to reduce animal welfare (Figure 1) (Hemsworth, 2003).

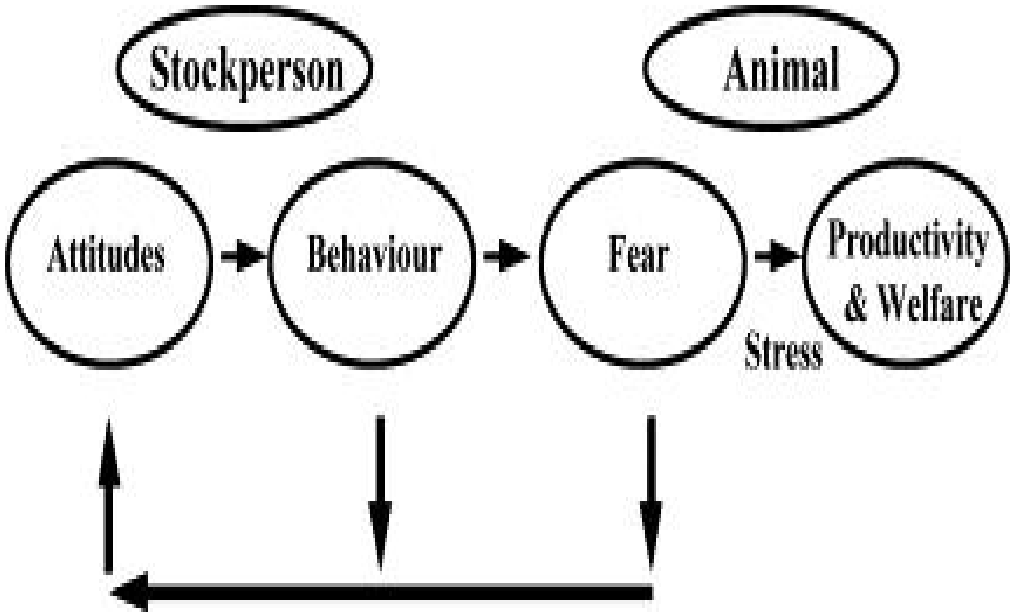

Figure 1the model of human-animal interactions

In order to establish the level of fear and stress an animal expresses, there are three different types of measurements that are routinely done. The first, most commonly used, is measuring distance that an animal either keeps between stakeholders, or approaches a stakeholder at. Other factors taken into consideration here can also be latency to make contact or the duration the contact lasts for. The theory is that fearful animals will keep greatest distance from handlers. Another method is to perform handling tests, meaning that animals are observed while being handled and different behaviors' associated with fear are recorded. The third method is using of rating scales with base from either descriptions of behaviors' or assessment of the animals' overall temperament (de Passillé & Rushen, 2005). These authors stress the importance of how the described factors would affect outcome of behavioral measurements, i.e. animal welfare, feeding and housing environment.

2.1.1Animal Handling in Ethiopia

The handling of animals in developing countries has been a subject for critical discussion for a long time and is in need of further research. A recent study indicated that stakeholders inEthiopia handle animals in an aversive way, which has been shown to increase prevalence of death and injuries. By measuring behavioral or physiological conditions, animal handling can be explained to a higher extent and a welfare concept implemented (The Scientific Committee on Animal Health and Animal Welfare, 2002).

When adult male cattle are mixed in lair age or during transport, they express higher levels of fighting behavior which can be recorded and measured as a welfare indicator. Another established method for this is to use the fact that farm animals that are handled or transported remember previous situations where they have been exposed to aversive handling by stakeholders. The larger the hesitance animals show, the greater the previous aversion must have been (Broom, 2000).

2.2 Slaughter of Animals

As meat is the main source of protein to humans, it should be clean and free from diseases. Previous studies by found that there was a significantly high amount of rejected carcasses at HELMEX abattoir, Debra Zeit. Out of 2688 sheep and goats, 50.1% livers and 42.9% lungs were prohibited from international markets major due to parasites and pneumonia. The main factors causing this were animals transported on foot with no or less food/water and in open, overcrowded vehicles According to The World Organization of Animal Health, OIE, the veterinary service of the exporting country has ultimate responsibility for certification of slaughtered animals (A Grönvall 2013).

However, the process of this is still a worldwide problem, which is particularly critical within developing countries. If the animals are stressed before and/or during slaughter, it affects not only animal welfare but can also give non-wanted consequences on the meat quality (Gregory *et al.,* 2010).

As early as 1944, found that an elevated pH of dark-cutting meat was directly related to a deficiency of muscle glycogen before slaughter. Dark-cutting meat is a quality defect characterized by raised pH, high water-holding capacity, and a dark-red, dry, firm and sticky texture to the lean muscle. It occurs if the animal is handled under poor animal welfare conditions before slaughter. The concentration of glycogen varies greatly at the time of slaughter depending on the muscle, species and nutritional status of the animal, but most of all on the level of pre-slaughter stress. In previous studies dark-cutting meat are used as indicators for duration of restraint and isolation stress, during for example long-term and short-term transportation, animal handling and food withdrawal. (Apple *et al.*,2005).

In Ethiopia, most of the cattle are slaughtered without stunning, not only due to religious reasons, but also because of continued traditions and lack of further knowledge about modern slaughter techniques. When cattle are slaughtered without stunning some animals may take several minutes before they lose brain function and die. The delay can be a combination of many factors, such as false aneurysms in the severed carotid arteries and sustained blood flow 6 to the brain (Blackmore, 1984) and previous studies have shown that 8% of cattle slaughtered without stunning can develop false aneurysms in the carotid arteries (Grönvall 2013).

Aspiration of blood into the upper respiratory tract and lungs can also cause suffering during slaughter without stunning (Gregory et al., 2010). Furthermore, OIE (2012) states, in their article 7.5.9, international recommendations for slaughter of animals. To reduce the risk of possible failure when cutting both carotid arteries and hence causing severe pain during and after cut, the OIE recommends the abattoirs to have personal with high level of competency and who are supplied a very sharp knife of sufficient length (FAO, 2013).

During slaughter, bad hygiene or the wrong techniques can mean severe consequences to the meat quality. For example, the step where the carcass is divided into two is a stage during the slaughter of high risk. As soon as the bone marrow is touched, the risk of spreading the infectious disease Bovine Spongiform Encephalopathy, BSE, is very high (Helps et al., 2002).

Furthermore, the hygiene during slaughter is of high importance and dirt and soil are the primary sources of contamination of carcasses (FAO, 2013).

Right now there is no substantial knowledge in Ethiopia regarding animal welfare and hygiene in slaughterhouses and there are no explicit rules and regulations on how animal handling in slaughterhouses should be done. The issue concerning the regulation of animal welfare is being discussed more and more internationally but it requires a broader range of scientific studies in order to implement a legislative change. In order to secure greater market access in other countries more extensive studies on animal welfare need to be carried out and stricter requirements on hygiene in animal handling and slaughter are needed (Rich et al., 2009).

2.2.1Slaughter Process

During the recording of the slaughter process, the animals were observed. Throughout the slaughter, the animals were observed expressing stress-related behaviors; such as vocalization, head swings and moving forward. The environment inside the slaughter hall was stressful for the animal with high volume and lots of activity by humans and animals. The first problem to observe during the slaughter process was the wet and slippery floor due to a constant water and blood flow. When the animals resisted moving, they easily slipped on the wet floor and both the butchers and animals were exposed to high risk of injuries. The constant water flow could also be observed as a hygiene problem; the water in Ethiopia is contaminated with lots of bacteria's (FAO, 2013) and shall not be in contact with the carcass.

To use water during slaughter can also be a health risk in itself, since wet slaughter has been shown to have a higher risk of letting bacteria's grow in the wet environment on the carcass To avoid this, the slaughter should be done in a dry environment, non favorable for the bacteria's growth. In this aspect, it is also important to further investigate the time of slaughter; how long does it take between killing and delivery of meat should be concerned (Helps c, 2002).

The time of slaughter is important in many aspects and can be an important factor for the meat quality. Another hygiene and health problem is the step where the carcass is divided into two, by using an axe and cut directly on the bone marrow. As soon as the bone marrow is touched, the risk of spreading possible Bovine Spongiform Encephalopathy, BSE, is very high (Helps c, 2002).

The carcass and meat quality was also observed. At the body, large amounts of bruises could be detected clotted blood collected as darker areas on the carcass. The bruises were mostly detected in the back areas, around the upper back and on the hind limbs. The head and legs were separated from the carcass and could not be inspected. However, the meat was not examined further and no pH-value was recorded; measurements necessary for further studies of the DFD and PSE.22 (Grönvall, Antonia, 2013).

Regarding the animal handling during slaughter, animal welfare was not taken into consider. The knowledge about animal welfare among the employees at the abattoir was lacking and the international guidelines from the World Organization for Animal Health were not followed. During the killing, the animals are fully aware and feel pain. In this study, the eye reflex could be observed during both the stabbing of the animal's neck and cutting of their head, results that verify the previous studies about animals feeling pain(OIE, 2012). Regarding the impact of observers during slaughter, the butchers' behaviors were not taken into consideration. You can assume that observers influenced the butchers while taking pictures and video filming, but this is not something that was further investigated fig 1&3).

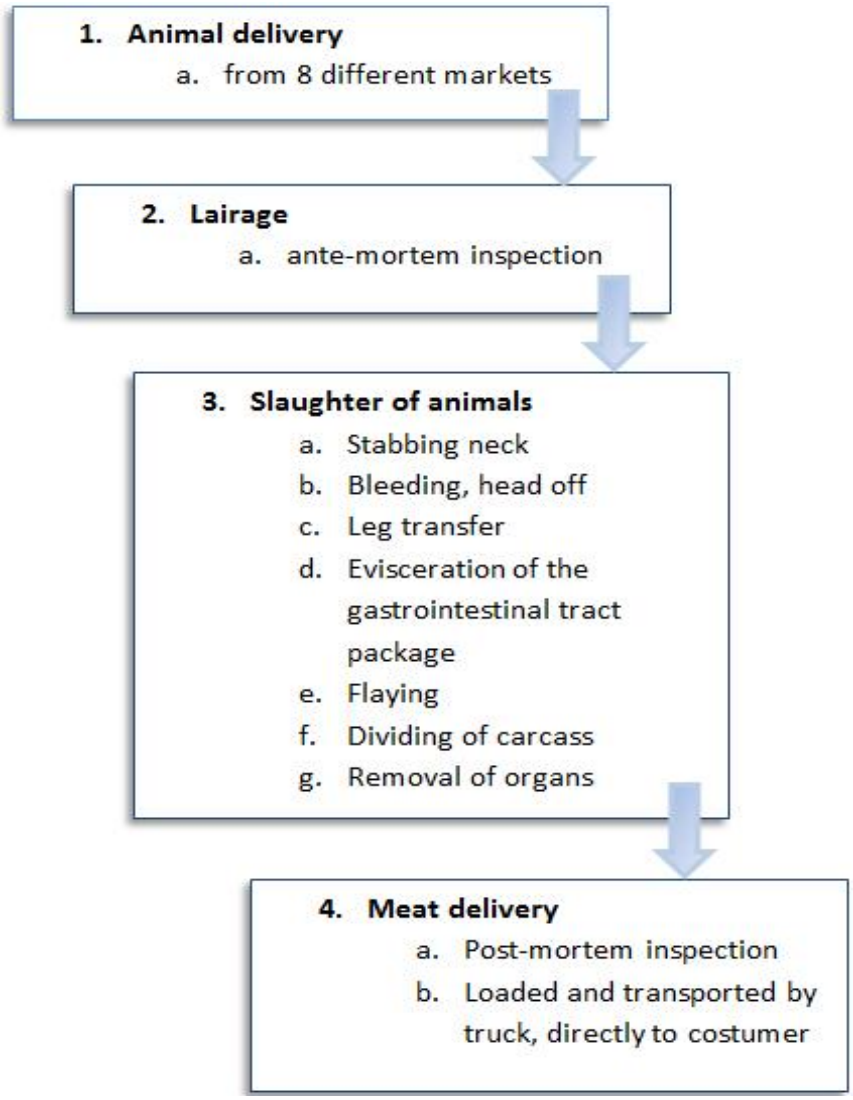

Figure 2 Slaughter process

Figure 3photo of the slaughter process.

2.3Animal Transportation

In developing countries the transport of animals are mainly by foot, or by ordinary vehicles not designed for animal transport. Almost all livestock in Ethiopia are transported by people on foot. In rare cases during longer distances vehicles are used, but usually not preferred since trekking is cheaper than transporting the animals with vehicles. It can vary as much as between 16 ETB/animal for trekking and 60-80 ETB/animal for vehicles for a distance of 200 km (Gebremedhim, 2007).

However, traders prefer the vehicles, to avoid weight loss and declined body condition. In a previous study 318 cattle were followed and observed during trekking from Gudar Market to Addis Abeba. Of these, 16% died with 7.1% due to car accidents and the rest from lack of water and food, bad condition and/or injuries. The education of the stakeholders during transport is varied and license is only required in some areas of Ethiopia (Gebremedhim, 2007).

In Tigray, Oromia and SNNPR no license is needed for transport of animals and the reasons given for the absence include the difficulty to control the trading business as the traders are mobile from place to place found that stakeholders asked for better infrastructure in livestock production with improved food and water supply, better market information and developed supply chains between farmers and markets. In previous studies shows that importance of using proper transport vehicles for animal transport (J Jerlström2013).

The vehicles should be equipped with necessary devises to improve animal welfare. States of the beneficial consequences of reducing transport time and distance is not only as an economic aspect but also in an animal welfare perspective. Stress including factors, such as transport time and road condition, are included together with measured responses and the possible end product. In the stress factors, both behavioral and physiological changes are included, based on a previous study made by (Broom, 2000). Using these factors and measurements, animal welfare and meat quality can be studies during animal transports (Aradom, S 2012).

The mixing of cattle during transport may cause them to fight with each other, which in turn is an important behavioral measure of welfare during transport. Similarly, cattle that were regrouped on a stationary vehicle expressed higher frequencies of exploratory behaviors, sexual behavior, and were head-butting each other more as compared to resting values (Kenny & Tarrant, 1987).

The mortality occurrences during transport can be used to give information about welfare during transport. Broken bones are categorized as extreme injuries and are mostly caused by personnel without sufficient training expertise, who intend to move animals but do it in an unnecessarily cruel way. Although measurements on live animals are good indicators of transport situation, information on dead animals is needed in order to make improvements. Bruising and lesions can be scored in order to downgrade carcasses, and meat quality problems such as dark, firm, dry (DFD) meat can be detected. This can be used for indicating poor welfare and can be used in order to prevent problems associated with transport (EFSA, 2004).

The different behaviours that an animal expresses are good indicators of how the animal is coping with the situation. If behaviours change, i.e. animal refuses to move, or animal freezes or vocalise, it may indicate where in the situation there is a problem. Apart from behavioral measurements, physiological measurements are usually performed. This involves measuring heart rate, body temperature and hormonal changes (e.g. vasopressin, cortisol, creatine kinase, lactate dehydrogenase, etc.) (Aradom S 2012).

Furthermore, injuries on animals are shown to increase if vehicle is poorly constructed or simply if they are hit by handler. Some factors that influence animal welfare during handling and transport are:

1. The attitudes of stakeholders and their driving skills;
2. Laws and codes of practice;
3. Genetic differences between breeds, and different selection pressure;
4. The design of vehicle for transport and design of equipment used for loading;
5. The stocking density of animals and mixing of unfamiliar animals;
6. Payment of persons working with animals;
7. The actual physical condition such as temperature, humidity and risk of disease transmission;
8. The methods used during handling, loading and unloading (Broom, 2003).

The transportation of indigenous *B. Indicus* breeds during the hot-dry season in Nigeria was associated with multiple stress factors. These were shown to affect health, productivity and market value of animals. Additionally, this study emphasized that the different levels of expressing behaviors were a combination of breed, production and management of animals. Lastly, it has been shown that transport conditions, level of vibration on vehicle, behaviours the animal expresses and changes of stress hormones, contradict animal welfare to a great extent (J Jerlström2013).

2.3.1 Animal Transportation in Ethiopia

The most common way of transporting animals in Africa is by foot since there is a great lack of vehicles with sufficient capacity. Walking animals by foot often leads to injured, dead or stolen animals. Furthermore, he found that lameness and injuries such as swelling of legs commonly occur. This has also been proven to be a problem when animals are transported by vehicle and also alludes to the problems which accompany a lack of rest, water and feed (J Jerlström2013).

2.4 Animal Markets

According to Gregory (2008) there are four major aspects that need to be considered when selling animals on markets:

1. The difficulties with tracing meat back to original farm;
2. The transmission of disease on markets;
3. The effect on animal hygiene;

4. The compromised welfare of those animals sold on markets compared to welfare of animals transported directly to abattoirs.

The last aspect is supported by evidence that prevalence of bruising is higher in cattle sold at markets, and that fear, distress, dehydration and injuries are believed to affect welfare.
Furthermore, cattle sold at markets were more thirsty and tired when they arrived at abattoir than cattle that were sent directly from farm. This will affect cattle's abilities to keep their balance and will lead to injuries exclusively from transport (A Grönvall 2013).

2.4.1Animal Markets In Ethiopia

Animal trading is carried out only on special markets in Ethiopia. These markets could be fenced or without fencing, and trading occurs mostly with farm animals. They are usually of local breeds and trading with male animals dominates over females. Farmer generally sells their ox at an age of five years, with main purpose of meat, and selling typically increases during holidays such as Easter. The price is often negotiated between seller and buyer but it is affected by several factors: age, weigh, color, body condition of animals, value of hides and skins, distance of travel to sell animals and ease of bringing animals back with them (Gebremedhin et al., 2007). Consumers either buys live animals from terminal market, i.e. bigger markets located in cities, slaughter them by themselves or buy meat from markets or butchers, where in both cases meat has been processed at abattoirs. However, these methods of acquiring meat are likely to spread zoonotic diseases and options need to be evaluated (Salomon & Workalemahu, 2003).

Even though Ethiopia is a country with high dependency on livestock and agriculture, various production systems are not market-oriented in extent that is needed. Most farmers sell their animals for income and in order to be able to keep up with costs their farms demand. However, selling of animals is usually not the first option.

There are varying reasons behind this; in the highlands cattle are kept as a draft power for crop production whilst in the lowlands cattle are a form of social security and also seen as a prestige (A Grönvall 2013).

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When trading with animals there are often many different kinds of stakeholders involved, which most commonly include farmers (animal owners), traders (small and big), merchants and butchers (buyers). Their involvement is described in four marketing systems in Ethiopia (Figure 4). At farm gate sales, main participants are local farmers and rural traders who operate at farm level with between one and two animals of varying species (either small or large animals) (A Grönvall 2013).

These small traders travel from various rural locations to bring their livestock to local markets. At local or primary market, traders purchase a few large animals or a sufficient number of small animals for selling on secondary market. On secondary market, large and small traders work together. Also, traders and butchers from terminal markets come to buy animals. Lastly, in terminal markets, big traders and butchers work with a large number of animals mainly for slaughter. The livestock markets are usually controlled by local authorities (Salomon & Workalemahu, 2003).

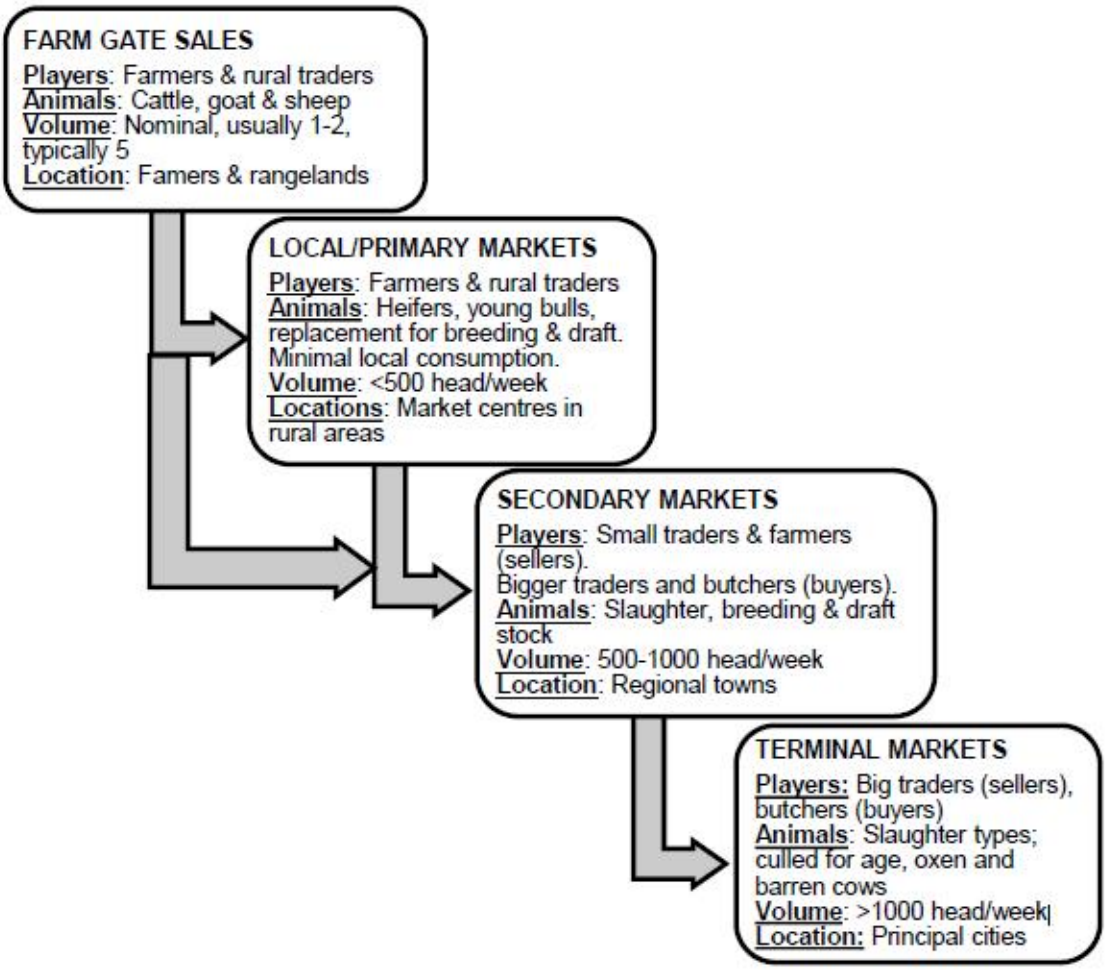

Figure 4Typical Ethiopian livestock structure on markets (Salomon & Workalemahu2003).

2.5Measuring of Animal Welfare

To talk about animal welfare it is crucial to see it from perspectives such as biological, affective and natural state point of view. Even though currently it is not able to develop a unified definition of the desirable welfare state adapted, the above three points of perspectives can be used as a base. According to (Mellor *et al.,* 2009), the above three perspectives are clarified as follows. The biological state: describes the animals' health growing and reproduction situation as a parameter of welfare; the affective state: stresses potential for animals to suffer or to have positive experiences and the natural state compares the differences between captive animals and the wild state where they origin from, and to what extent they are able to express natural behaviors.

When one observes injuries signs, such as self-mutilation, or chronic stimulation of the autonomic nervous system indicates clearly as there is a lowered animal welfare. In another approach, welfare of an animal said in good conditions when stress responses not chronically activated and when the individual can cope with them successful. It is true that ranges of animal's behaviors that an animal's expressions are good indicators of how the animal copes with certain situations. If one observes behavioral changes as when the animal refuses to move or vocalize in a high extent or different sound, these may indicate the extent of the problem, where the situation can be improved, or in need of better condition (Blokhuis H 1998).

2.6 Human Animal Interactions Enhance Animal Welfare

Humans have almost complete control over food and water availability, quality and variety, as well as other important features such as the space, environmental complexity and social groupings provided for many domestic and captive wildlife species. The decisions and behavior of humans therefore have the potential to both compromise and enhance animal welfare. Indeed, it has been argued that animal care personnel can have the most influence on an animal's welfare status (Hemsworth *et al*,. 2011).

This is because they must be able to anticipate problems, identify when problems have occurred and apply remedies, and also be able to identify, maintain and/or promote good welfare. Clearly, the person's knowledge, attitudes, skills, training and familiarity with the animals are important, but so are broader issues such as job motivation and satisfaction, working conditions, actions of co-workers and organizational policies and rules Importantly, targeted cognitive-behavioral training can improve attitudes and behavior towards animals, with consequent improvements in animal handling, welfare and, in the case of livestock, productivity Coleman (G.J *et al*,. H2014).

The promotions of "lives worth living" among animals in human care and control must therefore include consideration of these key features of human influence. Finally, an additional related factor which often has significant welfare benefits, especially with "hand-on" management of small numbers of animals such as occurs in zoos, in the home and as part of recreational sporting activities, is the development of a close human–animal bond Mellor& D.J.(2015).

2.7 Regulations and Rules in Ethiopia With Respect to Animal Welfare

As any African countries, Ethiopia has not formulated regular ways of awareness creation to the public and is not aware of what the minimal animal welfare standards to be esteemed. There are few attempts made by few non-governmental organizations such as The Donkey Sanctuary Project, Homeless Animals Protection Society introduction of Animal welfare to the curriculum of animal science and veterinary medicine fields of study from the government side it is true most proportions of Africans Livestock owners do not realize as animals are sensitive to beatings and mistreatment. In addition, many of them make branding or knives in order to identify their animals on prominent parts of the animal body (http://www.afdb.org).

Ethiopia as a country participated in development of animal welfare strategy and guidelines in IGAD-wide conferences. The IGAD conference dealt issues like developing relevant policy, national legislations and clear strategies on animal welfare matters, adoption of the existing international animal welfare standards in a science based animal welfare standards and guidelines. Ethiopia also move a good step in integrating the animal welfare issues in the educational system (curriculum) in particular in at the university level, specifically in veterinary and animal science fields of study (Ministry of Agriculture and Rural Development 2010).

Ethiopia support and facilitate the exercise of animal welfare, it has the legal frame in encouraging active participation of animal science professionals in the activities of animal welfare institutions through membership and active participation by offering advice, professional services, to these organizations and/or their representatives (Ministry of Agriculture and Rural Development 2010).

In Ethiopian, various proclamations tried to show as it condemn aversive actions done on animals. For instance, crime proclamation No.414/2004 of Ethiopia stated that contamination of water, feed and pasture counted as a crime. Crimes committed through production and distribution of substances hazardous to animal health, manufacture, adulteration and sale of fodder and products injurious to livestock and scandalous treatment of animals are included indicating animal welfare issues lightly in different articles

on the Criminal Code of the Federal Democratic Republic of Ethiopia The Criminal Code of the Federal Democratic Republic of Ethiopia (2005). Federal Negarit Gazeta of Ethiopia under the Proclamation No. 267/2002 stated about the prevention and control of animal diseases. In this proclamation, the primary concern is to prevent and control animal diseases in order to maximize the benefits obtained from the extensive livestock resource by keeping the wellbeing or welfare of animals. Whereas the Civil Society Organization stated as the Ethiopian government promotes nongovernmental societies to organize and work on animal welfare issues in the state. Ethiopian Veterinary Drug and Feed Administration and Control Proclamation No. 728/2011 also stated as clinical test shall be conducted with due care to animal welfare requirements The Criminal Code of the Federal Democratic Republic of Ethiopia (2005).

2.8Animal Welfare Law for Veterinarians

As a veterinarian, you have general responsibilities and specific roles under the *Animal Care and Protection*. As a person in charge of and dealing with animals, you have the same responsibilities to those animals under the Act as the rest of the community. However, the Act also allows you to:

- Undertake certain procedures in the interests of an animal's welfare (e.g. dock a horse's tail, declaw a cat)
- Administer harmful substances to an animal (e.g. Lethobarb).

The Act doesn't state how you should perform your role. For example, it doesn't say what to do when examining or treating an animal, or the time frames for this, as this is considered professional judgment. Discussion about appropriate treatment is an issue for the profession and is dealt with by the Veterinary Surgeons (https://www.business.qld.gov.au).

2.9 Veterinarians' Duty-of-Care Responsibilities

When examining and treating an animal, you have temporary custody of the animal and so have a duty of care. The duty of care includes appropriately handling the animal, providing appropriate conditions and, when the animal is held, providing appropriate housing. In deciding what appropriate care is, you must consider the animal's species, environment and circumstances, and the steps that a veterinarian would reasonably be expected to take under the circumstances. If an animal in your custody is in pain, you should use analgesics appropriately. Any manipulations done without analgesia should be kept to a minimum (e.g. to assist in diagnosis).A veterinarian's duty of care to an animal extends to members of staff associated with the practice.

2.10 Treatment Decisions

Because the animal's owner, or owner's representative, maintains duty of care, they are responsible for deciding what, if any, treatment you offer will be given. However, because you share this duty of care, you are responsible for giving the owner information about the animal welfare consequences of such decisions. If an animal suffers because of a decision (or lack of decision) by an owner who has been informed of the possible consequences, the owner is responsible.

2.11Inability to Pay For Treatment

If the owner prefers a particular treatment but cannot pay for that treatment, you may wish to negotiate further options. As a vet, you have professional ethical considerations; however, under the *Animal Care and Protection Act 2001*, the owner is responsible for the animal. Their inability to pay does not pass that responsibility to you (https://www.business.qld.gov.au).

3. Conclusion and Recommendation

Ethiopia is a developing country which is struggling to reduce poverty and attain food security. The livestock sector of its economy is very high although it has not been utilized properly so far. But, it is still contributing about half of the agricultural sector of the national economy. Wild life is also contributing very much. Hence it is highly necessary to improve the health, welfare and productivity of such very big resource in order to fulfill the desired development goal.

The demand for improvements in animal welfare practices has been growing in recent years. Consumers and the society at large are showing greater concern about the conditions in which farm animals are reared, transported and slaughtered for food. This concern is reflected in the adoption of animal welfare breeding practices mandated.

A number of international organizations have played a major role in the formulation of international legislation and standards concerning animal welfare. These are, in particular, FAO, OIE, the Council of Europe and the World Bank's IFC. However, the implementation of the animal welfare legislation in farming, transport and slaughter operations varies considerably from country to country.

While some countries impose more specific and binding norms than those lay out by the in specific areas, important gaps in implementing and enforcing legislation remain in many cases. Such gaps may be the result of difficulties faced by farmers and food industries in adopting improved practices and animal welfare standards, and/or differences in consumer demand for food products produced under higher welfare schemes. Overall, the animal welfare legislation applying to beef, pork and poultry production systems in countries is less comprehensive

Based on the above conclusion the following points are recommended

- ❖ Freedom from Hunger and Thirst, Freedom from Discomfort, Freedom from Pain, Injury or Disease, Freedom to Express Normal Behavior and Freedom from Fear and Distress should be applied.
- ❖ The formulation and enforcement of new legislation which is meant to reflect should be wide public agreement and which applies to the public in general.
- ❖ The development of private standards which are set by specific groups (e.g. industry associations) and apply only to their own members/clients should be governed under law of animal welfare.
- ❖ The use of private standards as a mean to promote products with specific characteristics is also regulated to a great extent by law, i.e. labels that refer to specific production practices have to be certified and controlled so that consumers are not misled.

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Access this Article in Online	
Quick Response Code	Website: www.ijcrcps.com Subject: Veterinary Sciences
DOI: 10.22192/ijcrcps.2020.07.05.004	

How to cite this article:
Wondimu Hailu and Tekalign Woldehana. (2020). Review On Animal Welfare. Int. J. Curr. Res. Chem. Pharm. Sci. 7(5): 35-50.
DOI: http://dx.doi.org/10.22192/ijcrcps.2020.07.05.004

