

FACILITATING COLLECTIVE BEHAVIOUR CHANGE FOR IMPROVING LIVELIHOODS OF THE POOR

K. Kar

CLTS Foundation, R-109, The Residency, City Centre, Salt Lake, Kolkata, India

Introduction

More than 2.5 billion people of the world don't have access to basic sanitation facilities and the number of people practising open defecation (OD) globally is a staggering 1.8 billion. Due to large-scale practice of OD associated with other factors the global death rate of children is horrific and shocking – 1 child is dying every 15 seconds. While most of those lacking access to safe sanitation belong to poor and ultra-poor population of the world, interestingly not all those practising open defecation are poor. A large majority of the world's poor is landless, marginal. Often the poor depend on livestock rearing and/or on working animals for their livelihoods. The population of working animal-dependent poor is quite high in countries like India, Nepal, Bhutan, Egypt, Ethiopia, and most countries in sub-Saharan Africa. The practice of open defecation associated with a filthy living environment puts them at a higher risk not only of diarrhoea, typhoid, cholera, and other enteric diseases but many zoonotic diseases and other infections.

Among some of the underlying causes contributing to extreme poverty, an unhygienic behaviour pattern such as open defecation by communities is one. As much as social and economic exploitation and discrimination and marginalization by class, cast, etc., lack of public participation in achieving a safe and healthy environment through collective behaviour change often increases the disease burden and cripples communities by pushing them down the poverty ladder. Community-Led Total Sanitation (CLTS) has been very successful in building social solidarity by initiating collective local actions in achieving the 'common good' – an 'Open Defecation Free' environment – rather than achieving the 'individual good' of latrine acquisition by only a few in the community. Collective behaviour change could not only improve health but also arrest the economic downside by drastically reducing household medical expenses and enhancing family income.

Community-Led Total Sanitation

Community-Led Total Sanitation (CLTS) focuses on igniting a change in sanitation behaviour rather than constructing toilets. It does this through a process of social awakening that is stimulated by facilitators from within or outside the community. It concentrates on the whole community rather than on individual behaviour. Collective benefit from stopping open defecation (OD) can encourage a more cooperative approach. People decide together how they will create a clean and hygienic environment that benefits everyone. It is fundamental that CLTS involves no individual household hardware subsidy and does not prescribe latrine models. Social solidarity, help, and cooperation among the households in the community are a common and vital element in CLTS.

Community-Led Total Sanitation or CLTS has a huge potential for addressing the rural/urban sanitation situation in developing countries, enhancing human wellbeing, and contributing to the Millennium Development Goals (MDGs) by drastically reducing the incidences of enteric diseases and the burden of zoonotic and marginal infections, which are designated as 'diseases of poverty'.

CLTS as entry point activity for holistic development

CLTS could not only play a great role in triggering collective hygiene behaviour change but could also be an entry point for initiating many other interventions for improving wellbeing through a community-led process. Many good examples of such a development model have been created by empowered communities in many countries in ensuring food security, primary education, equal wages, local governance, and utilization of natural resources by groups of poor and landless, etc. The basic assumptions in the CLTS approach are radically different from the assumptions of traditional sanitation approaches where poverty, lack of local capacity, and ignorance of negative

health implications form the basis and are tilted mainly towards material-focused solutions suggested by outsiders. In CLTS the assumptions are heavily based on collective local strengths of communities, their sense of self-respect, and their capabilities to change.

How do we move from top-down delivery to interactive participation of the stakeholders?

Unlike earlier approaches to rural sanitation, in CLTS the outside facilitators visit communities not as advisers, educators, or providers of money or materials for improving sanitation. It is basically a learning exercise where a set of different participatory tools is used to facilitate visual analysis of the sanitation profile by the local communities. These visual analytical tools when used by the community members themselves, generate shame, disgust, fear, and self-respect and create an urge to move out of that situation through collective local actions.

How do we initiate community-led collective behaviour change?

The CLTS approach originates from Kamal Kar's evaluation of the traditional water and sanitation programme of WaterAid Bangladesh and its local partner organization, VERC ((Village Education Resource Centre – a local NGO), and his subsequent work in Bangladesh in late 1999–2000. This led to the discovery of the CLTS approach in which use of PRA methods enables local communities to analyse their sanitation conditions and collectively internalize the terrible impact of OD on public health and on the entire neighbourhood environment. When triggered systematically and combined with a 'no-hardware subsidy' policy and a hands-off approach by the facilitator, CLTS can provoke urgent collective local action to become totally ODF.

Triggering CLTS with communities

The process of facilitating participatory exercises using different tools of CLTS, where a local community realizes the bad effects of open defecation and decides to stop it through collective analysis of its own sanitation situation and profile, is called 'triggering'. Triggering exercises are facilitated separately for the adults, children, and, where necessary, for the women. The final outcome of the triggering exercise is the community realization of ingesting one another's faecal matter due to open defecation followed by their collective decision of stopping it as soon as possible.

Defecation area mapping

In a defecation area mapping exercise, members of the local community join together and draw a large ground map of their village/neighbourhood using different colour powders, sawdust, ash, rice husks, or other local materials. While indicating the outer boundary of the village, on the ground map they indicate their houses (using cards), main landmarks like schools, churches, temples, and mosques, main roads, bushes, forest, water sources, etc. Finally, they show places of open defecation using yellow powder on the map and draw lines to connect those areas with their respective homes.

Calculation of faecal matter

Generally this participatory analysis follows immediately after the defecation area mapping is done. Members of the community discuss and calculate the average amount of faecal matter 1 person produces per day. If they decide the amount of faecal matter produced per day is 0.5kg, each family will calculate how much faecal matter it produces. If there are 5 members of a family, they would write 2.5kg on the card. Finally the community adds up the amount written on all the cards and calculates the total amount of faecal matter spread by them in the open on each single day.

Calculation of household medical expenses

Communities do this analysis in the same way as they calculate the amount of faecal matter produced. Participating members discuss and decide the average amount of money they spend on treatment of diarrhoea, dysentery, and other enteric diseases caused by open defecation. Often the cost varies greatly between families. However, once most families agree an average amount of money spent per month or year per family, they write the figure on the card. Then they calculate the total amount of money going out of the village every year/over the next 10 years.

Defecation area transect

Members of the community gathered around the map are requested to take the facilitators to places which are being used for OD by many families. One or 2 groups of adults could visit more than one major OD area in and around the village. A lot of interesting discussions take place during OD area transects walks. Children are taken for transect walks separately from the adults. One of the main objectives of facilitating this exercise is to provoke an element of disgust and fear of contamination and disease.

Diagramming faecal–oral contamination route

Drawing attention to the huge amount of faecal matter produced and spread in the open on a daily basis, the community members are asked where it all goes. Some might say it gets in the water through rain, or is brought home by flies, domestic animals, shoes, bicycle tyres, etc. As the members of the community respond to the questions asked by the facilitators, their answers are written on separate cards and are placed on the ground and a linkage diagram is drawn. This exercise provokes extreme disgust amongst the community analysts. Often at this point the triggering process reaches its peak when people spontaneously say: 'We have been eating each other's faecal matter.'

Food and faecal matter

Facilitators often collect raw faecal matter from OD areas during transect walks and bring it to the gathering around the ground map where everybody assembles after the walk. A plate of food is kept next to the faecal matter quietly. Fresh food and raw faecal matter quickly attract flies, which start moving between the two. Community members notice the phenomenon very soon and begin to react. Often reactions lead to women spitting profusely or even vomiting. An extreme level of disgust is generated at this point, which results in triggering.

Water and faecal matter

A sealed bottle of fresh drinking water (or a glass of drinking water sought from a household) is offered to a few members of the community. After some drink the water, the bottle is taken back, and the lead facilitator plucks a hair from his/her head and touches it on the faecal matter and dips it in the drinking water in the bottle. After a couple of shakes the same bottle of water is offered again to the same persons. Though the water looks as fresh and clear as it was before, people refuse to drink or even to touch it. Questions are then asked as to how many legs a fly has/whether flies could bring more or less faecal matter on their legs/whether people throw away food or plates, or glass or drink, once flies land on them.

ODF declaration and celebration

Once the community stops the practice of OD totally and continues to maintain this status for a few months and shows almost no indication of reverting to the practice of OD, rigorous verification and certification procedures are followed before they are declared ODF. The concerned community, natural leaders from neighbouring ODF villages if any, and agencies associated with the process of triggering, follow-up, verification and certification jointly agree the declaration of ODF status before a celebration is arranged. Natural leaders run the show and offer their support to any community wanting to become ODF.

Emergence and role of natural leaders

Natural leaders are the ones who emerge spontaneously during the process of triggering and post-triggering stages. These are the people who take the lead role in cleaning up the community and in ending OD, as they best understand the meaninglessness of constructing a few more latrines rather than eradicating OD. They are the ones who really get charged up from the entire process, want to stop OD with immediate effect, and jump into action, involving the community/neighbourhood in eradicating the practice. They could be schoolboys or girls, young men or women, elderly people, religious leaders, or formal/informal leaders of the village or community. Often these natural leaders don't stop after the community achieves ODF status but carry on with their efforts, addressing other common needs of the community, such as food security, livelihood issues, education, or protection from natural calamities. They may initiate other collective local actions in addressing issues like solid waste management, cleaning of public toilets, drains, and other such aspects. Outside facilitators provide follow-

up in these communities and keep an eye on the emerging natural leaders, who are different and could be used as community consultants in helping nearby communities later.

Community award and penalty

In order to enforce the law of no open defecation the empowered communities often form sanitation committees who keep watch and continually discourage people from defecating in the open. After the date of declaration of ODF the community often rewards any one who identifies an offender or contributes substantially in changing the collective or individual behaviour pattern. The reward could be a small amount of money or public thanks to natural leaders at a large village gathering. Often a village chief offers the reward of a sheep or a goat to the small hamlet of the village that achieves ODF first. Likewise, offenders are sometimes fined or penalized for their offence, as agreed by the community.

Social solidarity

Social solidarity is a very strong element of the CLTS approach where the better off and the poor of village come together and make all efforts to achieve OF status. Often the rich of the village help the poor with local materials for construction of latrines, for example bamboo, wooden planks, polythene, or even space for the landless. The village youth often dig pits for the elderly or disabled in the community.

Global spread of CLTS and the future

Since its innovation CLTS has spread in over 34 countries in Asia, Africa, and Latin America and tens of thousands of villages have been declared ODF, benefiting at least 15–20 million people. Active promoters of CLTS include UNICEF, Plan International, the Bill and Melinda Gates Foundation, and the national governments of many countries.

References**Further reading**

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Films

BBC/TVE: Earth Report Part 1 Clean Living Part 1 (Bangladesh)
To order this please contact Dina Junkermann, TVE distribution manager: tel. +44 20 7901 8834, dina.junkermann@tve.org.uk.
A clip from the film can also be viewed on YouTube at www.youtube.com/watch?v=kSCFJxhjNqg

Knowledge Links, Delhi has produced the following films:

- No Shit Please!
- Understanding CLTS with Kamal Kar

- People and their Voices
- Ek Behtar Duniya Ke Liye (Hindi)

To order them, please contact knowledgelinks@gmail.com.

WSP: Awakening: The Story of Achieving Total Sanitation in Bangladesh

Part 1 <http://uk.youtube.com/watch?v=2ZOvVlrCzQ>.

Part 2 <http://uk.youtube.com/watch?v=HkiCi3AEa80&feature=related>.

For more information, contact Ajith Kumar, Ckumar1@worldbank.org

WSP: Awakening Change: CLTS in Indonesia (in English and Bahasa Indonesia)

Available from Water and Sanitation Program – East Asia and Pacific. Contact Djoko Wartono

dwartono@worldbank.org.

On YouTube

Plan, Bangladesh <http://uk.youtube.com/watch?v=SPtM4pZrf1g>

http://uk.youtube.com/watch?v=mOG_vUgQCDC&feature=related

IRSP Pakistan <http://uk.youtube.com/watch?v=mzpR-xVH8nQ>

Website

The CLTS website www.communityledtotalsanitation.org has much information about CLTS in different countries, publications, including research reports and conference papers, a library of photographs, and information about other websites and electronic sources.

MOVING FROM A TREATMENT-FOCUSSED TO PREVENTION-FOCUSSED APPROACH

S. Rogers

WSPA, 5th floor, 222 Grays Inn Road, London WC1X 8HB, UK
suzannerogers@wspa-international.org

Traditionally, World Society for the Protection of Animals (WSPA) equine projects, in partnership with our member societies, have focussed on providing affordable, accessible veterinary care to communities that rely on working equines. However, running static and mobile clinics is expensive and reaches only a limited number of equines. Furthermore, we questioned whether we were making a *meaningful* difference to their welfare. The veterinary activities and educational activities were not significantly changing the way owners worked and cared for their animals, thus our projects were not addressing the *causes* of the problem; rather, we were focussing on alleviating the *symptoms*. This paper describes our experiences in trialling the incorporation of lessons from the field of human behaviour change into our work, focussing on our projects in Cambodia, Uruguay, and the Palestinian territories.

Introduction

WSPA has a network of more than 1,000 member societies in over 150 countries, some of which become partners in projects. In the past our equine projects were treatment focussed – we ran static and mobile clinics to provide veterinary treatment alongside educational activities such as training farriers to improve their skills, and providing information to owners through leaflets and lectures.

Running clinics is expensive in terms of resources and cost, and the number of equines we were reaching wasn't a large enough percentage of the population to be really making a difference on a population level. We also questioned if we were making a *meaningful* difference on an individual level; although many of our activities were focussing on important preventative veterinary care, such as vaccination and deworming, or providing treatment of lesions to prevent pain, we did not feel we were making a difference to their daily lives. The member societies were reporting that veterinary activities and education were not significantly changing the way that owners managed and cared for their equines.

We wanted to make our projects reach more animals in a more impactful way by changing the focus from 'cure' to prevention. With help from Dr Whay from Bristol University, we researched the field of human behaviour change and social marketing (an application of marketing, along with other concepts and techniques, to achieve specific behavioural goals for a social good). This paper describes our experiences of trialling such approaches with communities reliant on working equines. I will explain how we are changing the focus of our work and will include examples of the changes owners are making that will improve the lives of their equines. The concepts behind the approach can be applied across different cultures and contexts to improve the effectiveness of many aspects of our work.

Methods

The field of human behaviour change covers the study of the motivations involved, stages of change, and methodology to promote change. WSPA is not seeking to re-invent this knowledge but to apply the lessons learnt from the humanitarian and social marketing sectors in the context of animal welfare. It can be expected to be more difficult to change human behaviour for the benefit of an animal rather than when behaviour change will benefit the human themselves.

Awareness is not the same as behaviour change – in the same way that we know that smoking is bad for us and vegetables are good for us but do not necessarily behave accordingly, equine owners know that their animals need a good diet and care but if they don't have the resources then this awareness does not change anything. To change

their behaviour people must feel involved and learn by 'doing' – telling people what to do, or giving them information does not automatically lead them to do this.

Methods of encouraging change are varied and include mass communication, incentives, capacity building, cognitive-behavioural modification, social marketing, and participatory action research. We have focused on participatory and social marketing techniques – within WSPA, we have called this type of work 'human behaviour change' (HBC). We use this term for changing the way that owners care for and work their animals, and for involving people in the planning, running, and evaluation of projects run by our member societies, as well as other activities such as lobbying and wider education programmes.

Results

We have built the capacity of our partner societies to improve their projects

For example, after training, our Cambodian vets changed the way they interact with owners during mobile clinic activities – they now focus on 'learning by doing' and emphasize the importance of prevention. Thus the member society is targeting its activities more effectively as well as giving the owners the tools to change their behaviour.

We have engaged with equine-owning communities

In 2009 we trained 85 owners as community facilitators across our projects; on average, each facilitator has gone on to encourage a further 20 people to consider, in a meaningful way (i.e. they have been involved in at least 2 exercises about animal welfare), the welfare of their equines. Thus, we have reached at least 1,700 owners (and many more animals), and the sphere of influence of this work is likely to be much larger as each project continues. For example, one community facilitator ran the exercises with children at a school and the teacher, although sceptical at first, ended up wanting to learn how she could incorporate welfare exercises into her work.

Owners have changed the way they care for and work their equines

In Cambodia prior to our work, owners did not provide water in the stables, but now our member society and community facilitators report that many of the owners always provide water in the stables. Also, the owners are starting to change the way they manage their income. In the past, they would spend their money straightaway; this was fine in the dry season when they made more money, however, in the wet season, when their income is lower, this could be problematic, especially as their ponies are more likely to suffer from infections and diseases. Now, the owners save their money in the dry season so they have reserves to take care of their ponies in the wet season. In the Palestinian territories children have been seen to chastise others who hit donkeys.

Communities have worked together to address some of the needs identified

For example, in Cambodia where the roads are badly made, 2 communities have been working together to fill the holes in the roads to make the journey smoother for horses pulling carts. In Uruguay, the community has worked together to plan a 'festival' at which horse owners prepare their horses and carts for a parade. This was planned because the community wanted to show off their healthy horses to each other, to promote interest in the project, and to inspire more people to change the way they care for their animals. The event will build a valuable base for further work together.

We have seen improvements in the welfare of equines

In Uruguay our partners have noticed that owners care more about their horses now. For example, many owners now provide their equines with water and a comfortable place to rest, and the stables and beds have been improved. Calls for veterinary care emergencies at 'Borro' neighbourhood where the HBC project is focussed, decreased from 87 calls in 2008 to 23 calls in 2009, tentatively suggesting that this improved care is preventing problems.

Lessons learnt

Obtaining data to provide scientifically robust evidence that our new approach is more impactful than our old one is difficult. However, we are improving our monitoring and evaluation methods and have many examples of changes of management practice and subsequent observed positive effects on the welfare of equines.

Mixing a service-based (i.e. mobile clinic) with participatory approach is not ideal. A project should start with a participatory approach and only after initial research and action will it be viable to consider how you could work with the community to provide a veterinary service. However, in some projects the mobile and static clinics are acting to bring the member societies and communities closer together. The mobile clinic can provide a good platform for educational activities, training, and advice on preventative care. Care needs to be taken that the preventative and husbandry advice is not lost with the owner focussing on the provision of medicines.

The HBC programme reaches further than working with individual horse owners. The concepts can also be applied to make workshops more effective, to change the way mobile clinic staff interact with animal owners, and to change the way vets teach owners or other vets about prevention.

Summary

The aim of WSPA's working equine programmes is to build the capacity of our member societies to improve the effectiveness of the work they do with equines. We are moving away from a treatment-focussed approach towards a prevention-based approach – working through member societies to reach horse-owning communities. The examples presented show that the methods used have potential to help us achieve our aim, but we need to improve the information we get back from the communities to truly evaluate the extent of changes made as a result of our projects.

WORKING AT DEEPER LEVELS TO ENABLE CHANGE

S. J. Price

The Donkey Sanctuary, Sidmouth, Devon EX10 ONU, UK
sally.price@thedonkeysanctuary.com

This paper discusses 2 frameworks that I found useful when working in the field of human behaviour change. I used them during 16 years of working in the humanitarian development work fields of HIV/AIDS, life skills, and post-conflict education. It discusses how I have applied these frameworks within the Donkey Sanctuary's community development and education programmes in our overseas projects.

The logical levels framework

Many behaviour change programmes work on the principle that if you give people skills then this will automatically lead to behaviour change. The logical levels identify all the levels that make up a person or a community, and how if we work at these levels we can greatly increase the chance of bringing about behaviour change [1]. These levels are interlinked and when we work at one level it can influence change in other levels too. The logical levels are:

- Beliefs
- Identity
- Spirituality
- Skills
- Behaviour
- Environment

Programmes aiming to bring about behaviour change fall short of engaging with the higher levels. However, it is often when we work at these levels that we can create a lever for change.

Beliefs

In any education programme, people's beliefs greatly influence its success or failure. For example, if people do not believe that something is relevant or true to them, or if they don't believe it is possible for them to do anything about their situation, then however engaging the programme is, it is unlikely to bring about behaviour change. Therefore, before designing education programmes, it is crucial to find out the beliefs that the people hold.

Identity

This level is linked to people's self-esteem. Often when we engage people as educators or as CAHW, or when we work in partnership, with active roles for them in implementation, their sense of identity and their self-esteem will increase

Spirituality

Spirituality is a level that development workers in the West often forget to consider; it can be a powerful motivator for change. Not necessarily having a religious context, this is more about how people feel connected to something bigger than themselves. People may be reluctant to change if they don't believe that the change will make a difference, but if they believe that their actions will affect a whole group of people and a bigger cause, they are more likely to be motivated to change.

In our community development programmes we work collectively with people, engaging them at the level of spirituality. When our Mexico team first started doing community education workshops in Chiquispac in Mexico State using participatory approaches, the community were able to realise the root causes of the welfare problems affecting their donkeys and the solutions to these problems. The community said our workshops on donkey welfare

had helped them to become more open in sharing their other problems and helping each other. Realizing that one member in the community had skills in farriery, after the workshops the community began to go to that person, which has greatly reduced the number of hoof problems in their donkeys.

Therefore community education programmes have the potential to bring communities together and make them stronger. Working in this way we are developing their critical awareness and inner life skills which have the potential to change how they view themselves, their lives, and their ability to do something to overcome their problems and improve their lives. What we are doing is potentially very powerful as we are facilitating the change of the collective consciousness of a community [2].

This framework interlinks well with the second framework that I use.

The life skills framework

These are the core life skills needed to be developed in people to bring about behaviour change [3]. They were first applied in HIV/AIDS behaviour change programmes, but are now universally recognized as key life skills to be developed in people while implementing any behaviour change programme. The principle is that inner life skills need to be developed in people before outer behaviour change can be created.

They are:

- Empathy and self-awareness
- Critical thinking and creative thinking
- Problem solving
- Decision making
- Dealing with stress and emotion
- Interpersonal and communication skills

Within donkey welfare education programmes these inner life skills are equally relevant. We need to develop people's empathy towards the animals: their ability to understand how a donkey thinks and behaves and therefore what the donkey needs. Their critical thinking skills are developed in relation to understanding cause and effect: 'if I do this, this could be the consequence to my donkey's welfare', or 'these are some of the root causes of donkey welfare in my community'. By developing their creative thinking skills we can enable people to come up with a wide and innovative range of choices or solutions that they could adopt for improving donkey welfare. Regarding communication skills we develop their skills in communicating with donkeys and how to understand the donkey's non-verbal body language, and also how to communicate with other people or groups in promoting donkey welfare. We develop the decision-making and problem-solving skills of the community by using participatory tools. Finally we may need to develop people's skills in how they deal with their stress and emotion, in places where they are using their donkey as a vehicle to express this.

Donkey welfare education programmes

These 2 frameworks have contributed, in a complementary way, to how we develop our programmes. Examples follow from the work that our Egypt team has been doing in the brick kilns in Helwan Province, Cairo.

In El Beshier brick kiln our Egypt team formed a donkey club because many donkeys had beating wounds and children collectively promised to stop beating the donkeys. However, on our next visit, some children were crying and trying to beat the donkeys with small strips of plastic. They were crying because they couldn't get the donkeys to move; both children and donkeys were confused. The educators had worked at the level of beliefs and thus increased their level of empathy, but hadn't given the children any new skills to replace the old behaviour. This experience served as a good reflection on the fact that, when we do raise people's levels of empathy, we also have a responsibility to equip them with the skills complementing their raised empathy. The educators then helped the children understand the different ways they could communicate and work with the donkeys without beating them. The children now wave their hands and use small sticks to encourage their donkeys to move, and there are no beating wounds on the donkeys.

When carrying out a participatory baseline survey in these brick kilns, our Egypt team found in their needs assessment that one of the main welfare problems was children beating the donkeys in the belief that it will make them work harder. One of the consistent beliefs that came out during focus-group workshops with the children was: 'Horses feel pain but donkeys don't.' Therefore although empathy education is very important, the team first had to address the belief the children held. The team first educated the children on the reasons why donkeys do not show their pain in the same way that horses do, going back to the donkey's origins. In this way the children were able to understand how a donkey thinks and behaves and the reasons behind this, which in turn increased their level of empathy and understanding towards donkeys. Another belief the children voiced was, that there is nothing they could do about not beating the donkeys, because if they do not work hard and beat the donkeys, the older boys and foremen would beat them. Up to this point the education programme had focused predominately on the children but from this the team realized all the different groups that had an impact on donkey welfare. Therefore when the Egypt team designed its programme they incorporated working in a participatory way with all these different groups including the owners, foremen, stockmen, drivers, older boys, and men working there, from the baseline survey to implementation and monitoring. A year later, in one of the kilns, there is a better working relationship between the children and the adult workers and there is no beating wounds in the donkeys.

Conclusion

The real test is long-term and sustained improvements for donkey welfare. However, these are sometimes difficult to measure due to other factors that have an impact on the lives of the generally poor people who use donkeys. However, we are working to improve the monitoring and evaluation in our programmes by involving the owners and the people who work with donkeys in the process.

A lot is talked about behaviour change and how difficult it is to change people's behaviour. However, by using these frameworks, we can identify resources that can help us to reflect and work at deep enough levels to unlock the potential for behaviour change in people and communities.

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IMPROVING EQUINE WELFARE THROUGH COLLECTIVE ACTION: THE ROLE OF COMMUNITY-BASED INSTITUTIONS IN INDIA

D. Kandpal, M. Ali, K. Guha, and N. Kumar

The Brooke Hospital for Animals (India), F-86 Preet Vihar, Delhi 110092, India
dev@thebrookeindia.org

Introduction

Working equines share a close interdependence with their owners. A large number of poor people in rural and urban India rely on these animals to earn a basic living. Though their subsistence requirements are not met fully from their animals, they have few alternatives [1]. In the absence of opportunities for credit, the equine owners are not able to organise themselves to pursue their common interests and often face difficulties in acquiring animals and meeting various needs [2]. Further, working equines are mostly overworked, underfed, and not well cared for [3, 4] which leads to low work outputs and reduces their longevity [5]. The situation is often compounded by a lack of accessible and affordable animal health services. A successful intervention to improve the welfare of equines needs to address these issues in combination and not in isolation with the active involvement of equine owners [6]. The adoption of good equine health, welfare, and working practices is an important means for traditional equine-owning communities in the developing world to secure their income.

The Brooke India, an animal welfare charity funded by the Brooke UK, has adopted a participatory community-based approach to improve the welfare of working equines in Delhi and Western Uttar Pradesh. One of the key strategies adopted by the Brooke was the formation of Equine Welfare Self-Help Groups (SHGs) to empower marginalised equine-owning communities. This paper describes the challenges faced by marginalised equine-owning communities in India and how their collective actions reduce their vulnerability and contribute towards equine welfare.

Methodology

A study was carried out in 7 districts of Western Uttar Pradesh and Delhi Union Territory, where the Brooke Hospital is providing services to understand the socio-economic profile of equine owners. About 154 equine owners were selected randomly in 15 villages and a few locations of Delhi Union Territory and a pre-tested structured schedule was used to elicit information on their education, land, livestock assets, occupation, income, recent crises, credit requirements, and support from financial institutions. Secondary data were collected from 9 districts of Western Uttar Pradesh (Ghaziabad, Baghpat, Bulandshahr, Saharanpur, Muzaffarnagar, Gautam Buddha Nagar, Aligarh, Bijnor, and Meerut) where 215 SHGs of equine owners were formed, and details of savings, loans, and collective action towards equine welfare were analysed.

Results and discussion

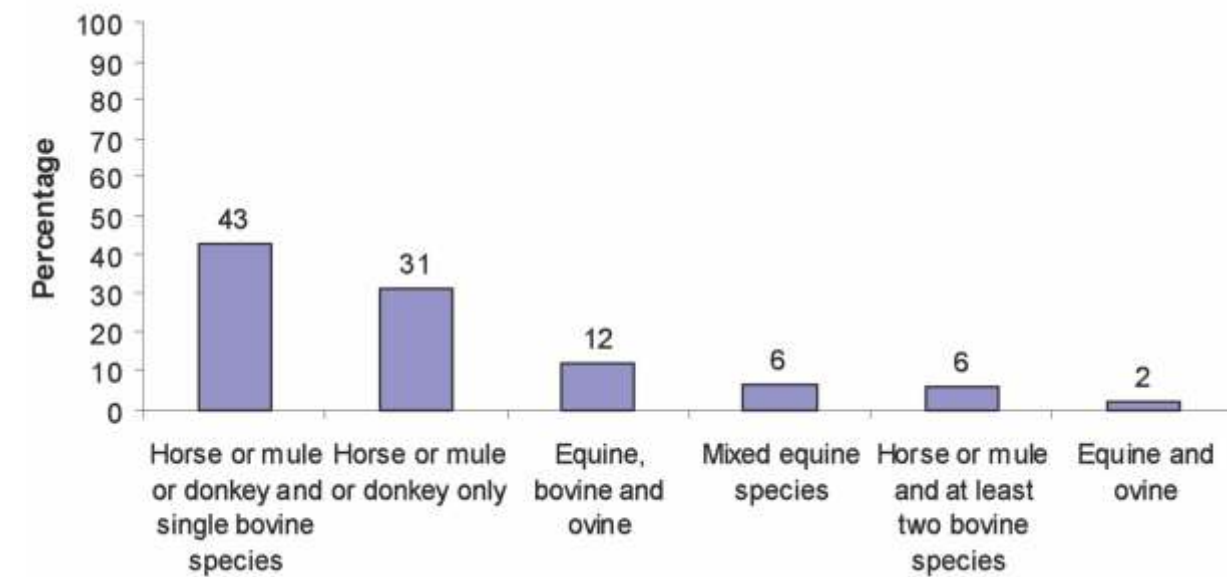
Profile of equine keepers

The study found that more than 74 percent of equine owners belong to the Hindu prajapati community and 15 percent belong to Muslim communities, such as prajapati, shekh, dhobi, darji, ansari, etc. About 50 percent of those studied indicated that they were either illiterate or did not have any formal education. Most of their communities are socially marginalised, politically powerless, and lacking in welfare schemes.

Traditionally the prajapati community is engaged in pottery making; however, as the demand for earthen vessels has declined over time, they rely on income from brick kilns. During the brick-kiln off-season equine owners either engage their animals in the business of transporting goods/people or sell their animals and depend on other livelihood activities such as dairy, agriculture, labour, etc. The majority of equine-owning communities are found to be landless and only 15 percent possess land with an average holding of about 1 hectare. Only 31 percent of equine owners keep a single species of equines while others rear cattle/goats along with equines as an additional

source of income (see Figure 1).

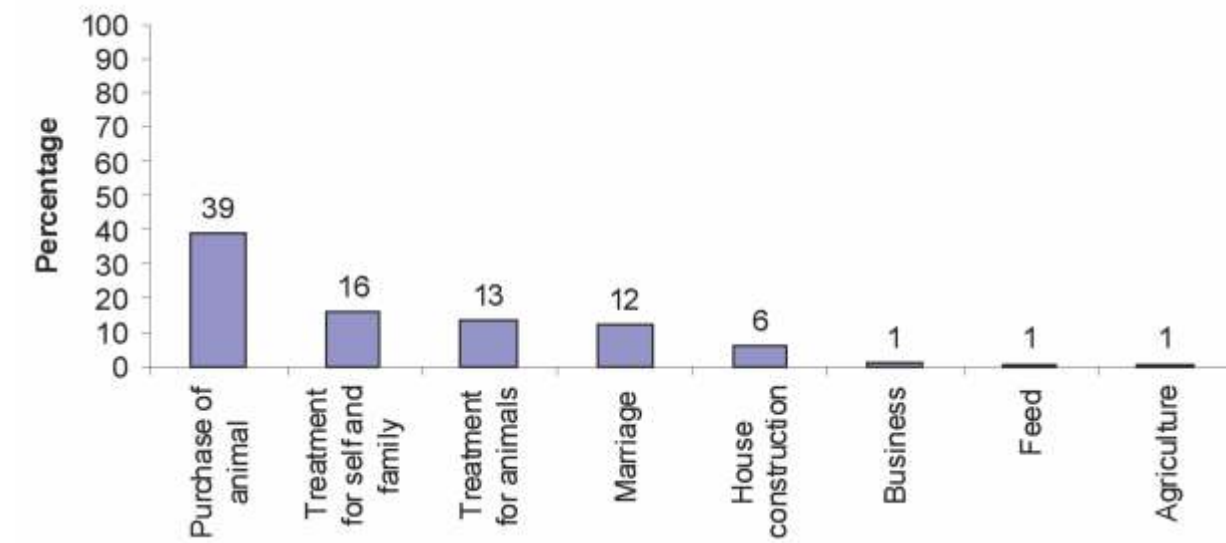
Figure 1 - Livestock assets possessed by equine owners



Around 15 to 25 equine-owning families are found in a few villages/clusters of a district where the Brooke is delivering equine treatment services. The lack of cohesiveness among these communities due to their scattered location, fragmented work place, seasonality of employment, and migration is a major challenge for sustaining any equine welfare initiative.

It was found that 22 percent of equine owners earn less than a dollar a day, far below the poverty line. About 50 percent of them indicated that they had faced a crisis situation during the last few years primarily due to death of their animal and sickness of family members. It was found that 88 percent of equine owners required credit for the purchase of animals, treatment costs for family members and animals, and marriage (see Figure 2). Lack of access to credit at an affordable rate was found to be a major impediment for equine-owning communities and their animals, especially in the case of death of an animal. The study found that only 3 percent of equine owners could avail themselves of a loan from a bank while most of them depended on local money lenders who offer loans at high rates of interest and usually against collateral (66 percent). This indicates that limited access to credit can jeopardise the health and welfare of working equines and the livelihood system of equine owners. To empower equine-owning communities to overcome these challenges, Brooke India started to facilitate the formation of SHGs in its operational areas.

Figure 2 - Areas of credit requirement



SHGs in the context of equine welfare

In India, SHGs evolved around rotating mutual savings and credit, as a stable and viable alternative to the poor. In the last two decades several development organisations have successfully mobilised and built the capacity of poor and marginalised communities to tackle various issues through the formation of SHGs. In the context of equine welfare, common interest or affinity groups of 10–20 men or women from equine-owning communities were promoted.

Role of community-based institutions

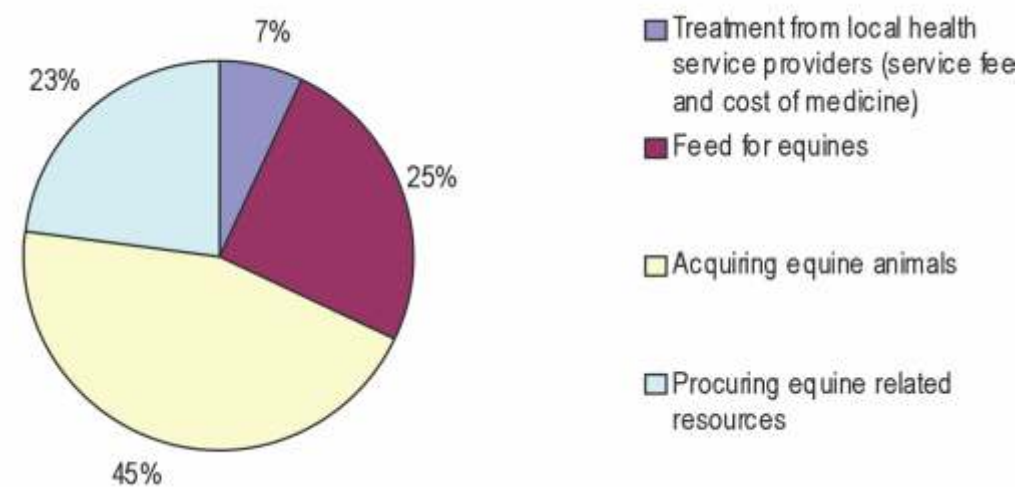
Between 2007 and 2009, 215 groups were formed in 9 districts of the project area of Brooke India. The total number in these groups was 2,753 with saving of 3.2 million rupees (Rs.3,232,091) (see Table 1). Such a group formation with substantial credit at its disposal helped the members to meet their various basic needs at a low rate of interest and without any collateral. More than 48 percent of total loans availed by the members was spent on equine-related activities. The highest number of such loans was taken for acquiring equines, followed by feed and resources such as carts, farriery, saddles, etc. Only 7 percent was spent on treatment services from local service providers (see Figure 3). The remaining 52 percent of loans related to marriage, treatment, education of children, and income-generating activities. The community-based institutions evolved their own rules, regulations, and systems.

Members of these groups undertook several collective initiatives for improving the health and welfare condition of their animals (see Table 2). Through these initiatives they developed the capacity for negotiation, bargaining, and conflict resolution leading to improved access to high-quality services at an affordable rate. Brooke India facilitated periodic meetings of group representatives where they shared their achievements with other members of equine-owning communities, and thus their innovative practices were adopted and replicated.

Table 1. Status of equine welfare SHGs formed 2007–9 in Western Uttar Pradesh

Sl. No.	Name of Brooke India intervention districts	Total number of groups	Total members in groups	Estimated no. of equines benefited	Total savings in Rs.
1	Aligarh	9	111	139	86,950
2	Baghpat	16	241	301	487,600
3	Bijnor	37	540	675	339,225
4	Bulandshahr	18	210	262	191,840
5	Ghaziabad	37	441	551	678,460
6	Meerut	20	242	303	215,636
7	Muzaffarnagar	28	357	446	502,410
8	Noida	13	148	185	116,420
9	Saharanpur	37	463	579	613,550
	Total	215	2,753	3,441	3,232,091

Figure 3: Purpose of equine related credit



Type of collective actions by community-based institutions	Benefits/impact on equines and equine-owning communities
Bulk purchase of feed by group members	<ul style="list-style-type: none"> Better quality of feed free from adulteration in sufficient quantity during off season Collective bargaining to bring down price
Balanced feeding and development of local entrepreneurs to sell and promote balanced feed	<ul style="list-style-type: none"> Improved body condition and working efficiency Expenditure on feeding of animals reduced Additional source of income
Levelling of uneven road in brick kilns through negotiation with and support of brick-kiln contractors	<ul style="list-style-type: none"> Hoof injury and lameness reduced Drudgery of animal owners while pulling the cart reduced Reduction in cart-related wounds in animals
Owner themselves monitor the welfare status of their working animals together on a regular basis	<ul style="list-style-type: none"> Consistent improvement in health and welfare Peer pressure leads to positive and immediate welfare-related actions Improved husbandry practices and optimum work load means animals are in better condition Sense of pride and competition among equine owners
Collective action planning with time line and responsibilities to address specific equine welfare issues	<ul style="list-style-type: none"> Addresses issues related to animals, owners as well as stakeholders such as farriers, hair clippers, harness makers, medicine sellers, etc. Enhanced problem-solving capacity
Negotiation with brick-kiln owners for increasing wages and improving working conditions and facilities	<ul style="list-style-type: none"> Wage rate increased through collective negotiation with the brick-kiln contractor Improved working conditions such as construction of water troughs and levelling uneven tracks
Negotiation, conflict resolution, and mutual agreement with service providers such as farriers, hair clippers, and local health providers	<ul style="list-style-type: none"> Reduced service fee with assured high volume of service uptake Improved quality of services leading to better welfare condition of animals Waiting time and travel time for seeking and providing services reduced
Community-led vaccination against tetanus	<ul style="list-style-type: none"> Incidences of tetanus reduced and awareness about signs and symptoms improved among equine owners and local service providers Capacity of local service providers in administering injections and handling animals improved through technical support of Brooke (under supervision of veterinary doctors)

Lessons learnt

The establishment of community-based institutions since 2007 has generated the following learning points and interesting challenges for the organisation as well as members of the SHGs:

There is a close link between equine welfare and cohesive community groups

Initially there was lack of clarity and conviction among Brooke India staff on how SHGs can play a role in equine welfare. During the initial period, around 20–25 groups became defunct for various reasons such as a lack of adequate inputs from staff, conflict between group members, lack of clarity on the purpose of group, migration, and also because of the influence of local money lenders. The participation level was very low in those villages where the group did not function well. On the other hand, where a group worked well collectively, evidence of welfare improvement was visible both in the equine-owning community and working equines.

Group processes lead to community empowerment

Traditional equine-rearing communities have a limited capacity to raise their voices against exploitation and to negotiate with local service providers. Collective engagement and availability of credit has expanded equine owners' actions, which were earlier restricted to mere existence. This has provided them with the ability to gain control over their environment. The group process has also promoted mutual learning and strengthened the capacity of equine owners to solve their common problems, an essential prerequisite for implementing good animal welfare practices [8].

A long-term strategic engagement required

Brooke India monitors the performance of each group and the best groups are advertised at cluster, district, and country level. Visits of group representatives and field staff to observe the functioning of other self-reliant community-based institutions within and outside areas of operation were a source of inspiration and motivation. It is recognised that a long-term and dedicated effort is required to strengthen the leadership, financial management, and record-keeping of these groups [9].

Conclusions

Equine health and welfare problems cannot be prevented or cured without good husbandry and management practices by the owners [7]. As the number of SHGs grows, they can be effectively networked and evolve into self-reliant and self-sustainable community-owned institutions. Such community-based institutions can bring perceptible improvements in the health and welfare conditions of equines as well communities on a larger and visible scale by collaborating with and seeking cooperation from stakeholders such as the District Administration, Animal Husbandry Department, Brick Owners' Federation, Equine Fair Organisers, and Animal Transporters.

Acknowledgement

Contributions of all the staff of Brooke India District Equine Welfare Units are gratefully acknowledged.

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CHANGING ATTITUDES TOWARDS DONKEYS IN SOUTHERN AFRICA

P. A. Jones

Donkey Power Facilitation and Consultancy, PO Box 414, Tshitandani/Makhado 0920, South Africa
asstute@lantic.net

Introduction

Behaviour change can take place only in the context of attitude change – and towards donkeys, especially in southern Africa, negative attitudes have developed especially in the last century (see Table 1). Addressing these attitudes has become urgent because, even where donkeys are popular and in demand, there is prejudice against them. Donkey handlers and owners (henceforth referred to as DHOs, handlers being more important than owners and, often, different people) themselves often subscribe to some of the erroneous beliefs. These must be held in contradiction of their own experience, yet they also have to justify the presence of donkeys not only to their neighbours, but to the authorities who are supposed to be helping them improve their lives. This justification is difficult if their attitude is shaky. In turn, this impacts on their treatment of their animals. Changing and strengthening attitudes is thus the first urgent step.

Table 1. Erroneous beliefs held about donkeys in southern Africa

Donkeys and people	Farmers want cattle not donkeys; donkeys are only for the lowest orders of society Donkeys <ul style="list-style-type: none"> • kick and bite, they are dangerous; they tend to kick people to death • are disease-ridden; they can infect the people who handle them • are inedible, except by lions; they attract lions, which then eat people • smell bad • have no owners or names • are non-productive; they are expendable • cause road accidents • are stupid and stubborn • won't work in the rain • need shoes on their feet
Donkeys and the environment	Donkeys <ul style="list-style-type: none"> • destroy trees and the environment generally, causing erosion • tear grass out of the ground • graze 24 hours out of 24 and thus consume more than cattle Donkey <ul style="list-style-type: none"> • manure is poisonous to plants • urine burns the soil
Donkeys and other animals	Donkeys <ul style="list-style-type: none"> • poison the ground and kill pastures • eat more than cattle • eat more than goats do • waste fodder • have a higher impact on the remaining vegetation Feral donkeys, in particular, impair subsistence goat keeping There are too many donkeys

But also	Donkeys never get sick Donkeys never die
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Sources: [1] [2] [3] [4]

Almost all of these attitudes can be refuted by simple observation, but it is only DHOs who undertake such observations, so published research is important. Some things are half-true, such as the tearing-up of grass roots (donkeys will also dig for them with their front hoofs), but have specific contexts which need to be known. Southern African societies are not yet fully democratized, and are better characterized as hierarchical and authoritarian. The people at the bottom, who include most DHOs, are not listened to; they are told. The attitudes and opinions that must change first, therefore, are those held by people in authority, including animal welfare agencies [5]. The behaviour that can be expected to result will not directly affect the animals, but will have an effect on DHOs, who may change *their* behaviour. It is not, therefore, a very participatory process.

Economic arguments for donkey ownership are powerful and should be convincing, but they are not enough. The whole image of the donkey needs to change before policy-makers, bureaucrats, and even welfare agencies can deal with the animal realistically. While a donkey is still seen as

- an inferior kind of horse,
 - owned only by those unable to improve themselves, and
 - a threat to the environment,
- no intervention will be very helpful either to DHOs or to donkeys [5].

But the donkey is not without its supporters in southern Africa, and some go quite far in putting their positive prejudices on record [6, 7]. However, these are self-published, so it can be assumed that such messages are not spreading very far. It needs much more active involvement across the class boundaries, and I use the word 'class' advisedly as being a much stronger barrier than race, to address the prejudices directly affecting owners and their donkeys.

I see the exercise as one of 'raising the profile' of donkeys, but the strategies I have employed and describe here are really aimed at bringing about attitude change. Only a few have also been aimed at bringing about behaviour change, and they are categorized separately.

Strategies adopted

Ideally, one wants to employ the 'SPICE' principles of 'extreme persuasion' [8]:

S = simplicity, keeping the message straightforward and uncomplicated

P = peer pressure, encouraging conformity with others, do what they do

I = inconsistency, i.e. embodying a slight surprise, to gain attention

C = confidence, giving no hint of doubt

E = empathy, an understanding of the underlying situation and feelings

Although none of these is really inconsistent with participatory learning, the idea of 'extreme persuasion' is. However, when dealing with bureaucrats and the like, extreme persuasion may be more appropriate. Participatory learning can come later, when the bureaucrats acknowledge the need. In southern Africa, so far, it is mainly the NGOs that see the need; bureaucrats are a long way from that.

The strategies summarized in Table 2, therefore, are *not* those in which DHOs are expected to participate and from which they may benefit. They are directly aimed at those in authority over them. All of them have been used by me and others, and sometimes the effect is surprising. What is beyond doubt, however, is that they should be used more.

Table 2. Strategies to bring about attitude change in those in authority

Strategy	Target group	Effect	Change of behaviour towards donkeys?
Presentations at conferences and workshops	Academic researchers, NGOs, especially those unfamiliar with donkeys	Enlightenment	If they ever see them
Distribution of T-shirts	General public	Engagement in debate; enlightenment	Possibly
Radio and TV programmes	Depending on timing and language	Enlightenment	Possibly
Publication of journal articles	Depending on language and market	Enlightenment	Possibly, if they ever see them
Book publication	NGOs and extension officers	Enlightenment	Possibly and by passing on information to DHOs

It will be observed that not much mention is made of electronic media. This is because southern Africa is not yet well enough equipped with the technology, so that even those in authority can seldom gain good or reliable access to the internet, on which many media now increasingly rely.

Influencing DHOs

All this is not to say that direct approaches to DHOs are not made; they are, and they are much more participatory. However, without the funding that can only come from those in authority, these approaches are necessarily few and far between, and their effect is consequently limited. With some of the strategies, the approach to DHOs may not be describable as direct, but it is still participatory in that it involves the transmission of information between those occupying very similar social positions. Sometimes it may be a question of the literate sharing information with the illiterate, where children may be literate and adults illiterate. Such strategies are listed in Table 3.

Table 3. Strategies to bring about attitude change in donkey handlers and owners

Strategy	Target group	Effect	Change of behaviour towards donkeys?
Training workshops	DHOs	Encouragement	Sometimes
Leaflets, handouts, and posters	DHOs and extension officers	Enlightenment and encouragement	Sometimes and by passing on information to DHOs

Education packages, mainly aimed at schools	Youth who may ultimately be DHOs	Enlightenment and encouragement	Sometimes and by passing on information to DHOs
Formation of farmer groups	DHOs	Empowerment, improved access to training and equipment	Sometimes
Interaction with extension officers	Extension officers but also DHOs	Enlightenment and encouragement	Sometimes and by passing on information to DHOs
Curriculum development	Youth who may ultimately be DHOs	Enlightenment and encouragement	Sometimes and by passing on information to DHOs

Conclusions

It can be seen that the main anticipated effect of these strategies is to bring about enlightenment. This is not quite the same as a change in attitude, but since many of the prejudices against donkeys which are listed in Table 1 arise either from ignorance or deliberate misinformation – for instance, on the part of cattle owners [3] – enlightenment has a very positive role to play in attitude change about donkeys.

It would be nice to think that 25 years of this kind of effort is seeing some result, specifically in changes of behaviour towards donkeys. The demand for donkeys is certainly increasing, as is the media attention concerning them. However, the economic pressures of climate change are probably more powerful, in making the need for donkeys more keenly felt [9] [10].

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A STUDY ABOUT THE KNOWLEDGE, ATTITUDES AND THE PRACTICE OF HOBBLING EQUIDS IN MEERUT DISTRICT, INDIA

A. Ahmad, S. F. Zaman, M. Aravindan and S. R. Thanammal

The Brooke India, F-86 Preet Vihar, Delhi 110092, India
azeem@thebrookeindia.org

Abstract

A Knowledge, Attitude, and Practice (KAP) study about hobbling equines was conducted by Brooke India in Meerut, India because the prevalence of this welfare issue was found to be high (81%) in welfare assessment data from 2007. Although no mortality was recorded, workdays were lost due to ensuing complications and animal welfare was also compromised. Hobble injuries are very painful ailments where equines suffer mentally as well as physically. To understand the motivational side about hobbling in terms of owners' Knowledge, Attitudes and Practices and to find out ways to minimize the challenges to animals welfare, KAP was conducted in 7 villages: 6 where hobbling was practised and 1 where it was not. One focus group discussion (FGD) was held in each of the 7 villages. For each FGD, 3 participatory rural appraisal (PRA) tools – trend analysis, system analysis, and force field analysis – were employed using pre-decided variables.

It was found that the community realized that the 5 freedoms of equines were affected by hobbling. Of the 40% of owners who used hobbling, 3 methods were practised: fore legs tied together, hind legs tied together, and fore legs tied to hind legs. The owner (46%) and his family and children are involved in the process. 70% of owners hobble their equines in the courtyard and stable and 30% hobble their animal under a tree for 15 hours a day. 90% of owners used synthetic hobble material such as nylon and plastic, but cotton and jute are identified as the best material. 46% of animal owners use a neck rope compared to 54% who hobble their animals' limbs; 36% below the fetlock joints and 20% above fetlock joints. Owners expressed that hobbling above fetlock is harmful for equines.

Introduction

India is home to more than 1.77 million equines, most of them supporting the livelihood of their poor owners [1]. Hobbling is a restraining method for equines carried out by tethering the legs during resting times. Most of the equine owners' practices in hobbling result in welfare problems such as wounds and swelling and may even lead to lameness.

Hobbling has a very strong community component, unlike other welfare issues which are dependent on work load, work type, and genetic make-up. Development of hobbling lesions depends upon the hobbled body part, type of material, and tightness of the hobble that is chosen by the owner. The study aimed to find out community perceptions about hobbling in terms of KAP and to discover ways to minimize the challenges to animal welfare.

Knowledge, attitude, and practice constitute a triad of factors that are interlinked. Knowledge is the capacity to acquire, retain, and use information; a mixture of comprehension, experience, discernment, and skill. Attitude refers to inclinations to react in a certain way to certain situations; to see and interpret events according to certain predispositions; or to organize opinions into coherent and interrelated structures. By practice we mean the application of rules and knowledge that leads to action [2].

Methodology

Three PRA tools – trend analysis, system analysis, and force field analysis – were selected for the study. In the main, focus group discussions (FGDs) were used to collect relevant information from owners. Variables were as follows: for trend analysis, hobble material, equine species, place of hobbling, type of hobble, lesion prevalence and parts of the body where hobbles are applied; for system analysis, purpose of hobbling, hobble material, equine species, place of hobbling, who does the hobbling, type and time of hobbling; for force field analysis, purpose of

hobbling, parts of the body where hobbles are applied and advantages and disadvantages of hobbling.

One FGD was held in each of 7 villages, 6 where hobbling was practised and 1 in a village where hobbling was not practised. Villages with a self-help group, a good rapport with the Brooke and a record of high levels of community participation were selected. Information was recorded on a paper chart along with the date, name of owners and village, and was accompanied by a photo. Each FGD was conducted by a facilitator with a recorder and an observer. The same methodology was followed for each of the 7 FGDs. On average 10–11 owners participated in each discussion. Finally, data were entered into a spreadsheet and analysed using descriptive statistics, graphs, and charts.

Results and discussion

Disadvantages of hobbling

Analysis indicates that the owners understood that hobbling affects the 5 freedoms (freedom from hunger and thirst; pain, injury and disease; discomfort; fear and stress; and freedom to express normal behaviour). They also knew that hobbling affects equines physically (eating behaviour) as well as mentally (restricts movement). Various side-effects identified by the owners were fractures, swellings, wounds, infection of tendons and, in extreme cases, strangulation. The first disadvantage identified by the community was 'the animals cannot express their normal behaviour and symptoms of diseases like pain'.

Even after recognizing the harmful effects of hobbling, owners still practised hobbling because they said it was the only control method to prevent animals from kicking, fighting, and biting; to accommodate animals in a smaller area; to offer food to a group of animals; to enable easy handling; and to prevent soiling of the stable and during transportation.

Method of hobbling

More than 40% of animal owners were using hobbling in 3 forms, i.e. hobbling fore legs (*agadi*), hobbling hind legs (*pichadi*) and hobbling fore and hind legs together (*dawan*). The owners' perceptions behind using these 3 methods were solely utility-based. For example, *pichadi* was used to facilitate proper eating and to prevent kicking; *agadi* was used to prevent the animal from running and to occupy less stable area; and *dawan* was used during grazing to control the pace so that the animal did not go far. A neck rope was the only alternative method available to the community and was used by 60% of owners. It has fewer complications and is generally suitable for docile equines, but it does not work for aggressive animals believed to need hobbling.

Who hobbles the animal?

Besides the owner, his wife and children were also involved in the hobbling practice. It was found that owner's involvement in hobbling is only 46% but his family members have more involvement. According to the owners, their wives and especially their children did not know the harmful effects of hobbling. Faulty hobbling practices could lead to the development of wounds and lameness in the long run.

Location of hobbling

The study indicates that more than 70% of owners hobbled equines in the courtyard and stables; 30% hobbled in other places, such as under a tree, in an open place, at market and at tonga stands. Most of the animals were hobbled for 15 hours per day (average). This included 4 hours (approx.) during daytime and 11 hours at night. From the analysis it can be said that the courtyard was the first choice of the owner, followed by stable, and then under a tree. Owners felt that location of hobbling and hobbling duration were related.

Hobble material

It was found that more than 90% of owners used synthetic hobble material, and most of the hobbles were made by the owner. Cotton and jute were identified as the best hobbling material by the owners. They understood that the

material had a role in developing hobbling lesion. However, due to non-availability of animal-friendly material such as cotton and jute, nylon and plastic were used.

Preferred hobbling method and part of the body where hobble is applied

A neck rope was used by 46% of animal owners and limb hobbling was used by 54%. Out of the 54% practising hobbling, 36% of hobbling was below the fetlock joints and 20% above the fetlock joints. The owners considered that hobbling above fetlock is harmful for animals as it can lead to tendonitis, fractures, swellings, and wounds. Below the fetlock joint was seen to be a safer part for hobbling.

Conclusions

From the analysis it was found that the community realized that hobbling affects eating behavior, restricts rolling and can induce symptoms of diseases such as pain. Forty percent of animal owners used hobbling in 3 forms: fore legs (*agadi*), hind legs (*pichadi*), and fore and hind legs together (*dawan*) during grazing. Besides the animal owner (46%), his family and children are involved in the process. Regarding the location, 70% of owners hobbled equines in the courtyard and stable and 30% under a tree. In a day equines were hobbled for 15 hours. For material, 90% of owners used synthetic hobbles. 46% of animal owners used neck rope against 54% using limb hobbling.

The issue was found to have a strong community motivational side and therefore KAP seemed to be an effective technique in identifying the perceptions of equine owners, which are mostly subjective. In general KAP is mostly used in social sectors when it is linked to behaviour change of the community. It is a big challenge for Brooke staff to facilitate behaviour change of the equine-owning community pertaining to hobble injuries.

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KNOWLEDGE NETWORKS AMONGST DONKEY OWNERS IN ETHIOPIA

A. P. Stringer¹, G. L. Pinchbeck¹, C. E. Bell², F. Gebreab³, G. Tefera³, K. Reed⁴, A. Trawford⁵, and R. M. Christley¹

¹ School of Veterinary Science, University of Liverpool, Leahurst Campus, Neston, Cheshire, UK

² Royal (Dick) School of Veterinary Studies, University of Edinburgh, Roslin, Midlothian, UK

³ Faculty of Veterinary Medicine, Addis Ababa University, Debre Zeyit, PO Box 34, Ethiopia

⁴ SPANA, 14 John Street, London, UK

⁵ The Donkey Sanctuary, Sidmouth, Devon, UK
stringer@liverpool.ac.uk.

This study aimed to identify the networks through which working-donkey owners and users in Ethiopia acquire and disseminate existing knowledge about donkey health. Information about these networks can be used in generating hypotheses regarding knowledge diffusion and subsequent adoption of new ideas and innovations.

Ethiopia has the largest population of donkeys in Africa and the second largest donkey population in the world after China [1]. Their role in the socio-economics of the country is substantial, with the majority of the Ethiopian population dependent on traditional subsistence agricultural production [2]. Identification of the sources of information regarding donkey care currently used by Ethiopian working equid users will be beneficial to non-governmental organisations, charities, and government departments when deciding how best to disseminate information. It has been noted that some individuals become aware of mass media programmes through discussions with other individuals, however their influence on behaviour is unclear [3]. Understanding how information is acquired and what reliability owners place on it is an important consideration when designing an educational or extension programme.

This study was conducted using questionnaires with open questions, which were administered to individuals (n=40) and groups (n=16). The questionnaires were administered in either of the local dialects (Amharic and Oromo) spoken in the regions as dictated by the participants, with the assistance of an Ethiopian national as translator and facilitator. The facilitator had previous experience in the field of animal health and had received training in questionnaire administration. The study was carried out in 8 sites representing a range of agro-ecological zones (Table 1). A total of 80 participants took part in focus groups, 10 participants (2 groups of 5) taking part from each site, whilst a further 40 participants also took part in individual interviews. Sites were designated as either 'exposed' if they had previous known exposure to an equine non-governmental organisation or equine education programme, or 'unexposed' if they were a population without previous known exposure to an equine non-governmental organisation or equine education programme. The sites were selected from two regions of Ethiopia: Oromia and Amaharaland.

Donkey owners identified a number of sources which they contacted for information regarding donkey health with varying frequencies (Table 2). The focus groups also identified that this information was predominantly transferred verbally (with the exception of 1 group having received a leaflet handout from an equine charity).

Table 1. Site location and details

Village name	Region	Zone	Woreda	Long./lat. position
Debre Zeyit	Oromia	East Shewa	Ada	N8 45.6 E39 00.1
Shashemene	Oromia	West Arsi	Shashemene	N7 14.5 E38 31.2

Gamo	Oromia	East Shewa	Dugda	N8 09.5 E38 53.3
Sheno	Oromia	North Shewa	Kimbibit	N9 24.3 E39 21.2
Ziway	Oromia	East Shewa	Batu	N7 57.9 E38 43.2
Gemeda (Akaki)	Oromia	Addis Ababa Area	Akaki	N8 49.2 E38 47.6
Merino (Akaki)	Oromia	Addis Ababa Area	Akaki	N8 48.2 E38 46.7
Debre Brehan	Amhara	North Shewa	Basuna Warano	N9 37.3 E39 39.3

For individuals in unexposed villages one of the most common sources for information on donkey health or advice was Bureau of Agriculture extension agents, who are based in each village. One of the major duties of the extension agents is to provide advice and disseminate information about agricultural technologies [4]. This finding is consistent with previous work that found that extension agents were the most important dissemination pathway for information about agricultural technologies [4]. Neighbours, many of them family and farmers, were also an important source for information, again consistent with a previous study [4]. In those villages exposed to an external equine veterinary clinic (The Donkey Sanctuary) fewer individuals reported using extension agents as a source of information, suggesting either that individuals placed a greater level of reliability on the information provided by this source or that the provision of free veterinary care may have led to increased use of this source.

The majority of donkey owners reported they were sought for advice by others regarding donkey health and that they were willing to offer up advice to others if asked (Table 3).

Table 2. The responses volunteered by individuals regarding information sources for donkey health advice in both exposed and unexposed sites

	Responses for individuals in areas exposed to donkey sanctuary clinics (n=20)	Responses for individuals in areas NOT exposed to donkey sanctuary clinics (n=20)
Donkey sanctuary	7	0
Family	16	18
Extension agents	6	13
Kebele representative	3	3
Neighbours	8	8
Friends	3	2
Elders	3	4
Villagers	1	2
Traditional medicine person	0	2

Private veterinarian	0	1
Other	1	0

Table 3. Owners' responses to whether they were sought for advice or offered advice concerning donkey health

		Owners sought for advice	Owners offering advice
Total	Yes	29	34
	No	11	6

Information from this study has been used subsequently in another large-scale study to investigate knowledge networks amongst Ethiopian donkey owners and to explore the association between the features of these networks and owners' levels of knowledge regarding donkey health and welfare.

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THE POTENTIAL OF THE WHOLE-COMMUNITY APPROACH TO ACHIEVE THE WELFARE OF DONKEYS AND MULES

A. R. Moreno

The Donkey Sanctuary, México. Av. Universidad 3000 Facultad de Medicina Veterinaria y Zootecnia. Col. Gran Usuario UNAM CP 04510 México, DF México
donkeysanctuary_avril@yahoo.com

The Donkey Sanctuary in Mexico has worked for 25 years for the welfare of donkeys and mules. The evolution of this project is very interesting and allows us to reflect on the most efficient way to make improving the welfare of donkeys and mules a reality. The Donkey Sanctuary in Mexico was founded in 1985 with the task of procuring health for equids using a protectionist approach. It was seen as important to use veterinary medicine to improve the animals' health immediately; to reach as many animals as possible; to give some recommendations to the owners to prevent animal disease; and even, in extreme cases where the negligence or improper management of the owner put the animal's welfare at risk, to seek ways to remove the animal from the owner [1].

Very soon it was considered important to build awareness with the owners of the donkeys and mules, as well as with the children whose families own these animals and would be the future owners. Thus the Donkey Sanctuary began to develop educational activities using informative materials, meetings, informal conversations, and activities for children using puppets in scenarios characterized both by austerity and by the enthusiasm of delivering a message for the sake of animals. The veterinary work was still seen as a key means to improve the conditions of the animals, so that the greatest percentage of time and resources was directed at medical work and animal husbandry.

Some years later, simultaneously with the evolution of international positions on animal welfare, the Donkey Sanctuary programme in Mexico began to move from a protectionist approach to one based on the animal welfare concept which, in relation to working equids, inevitably involves an in-depth look at the impact human beings (owners) have on the provision, or not, of optimal living conditions for animals [2]. It was realized that this approach had to be applied because the resources that an organization such as the Donkey Sanctuary has are not unlimited: we cannot provide free services and free medicines forever, but we still want donkeys to enjoy long, high-quality lives.

The Donkey Sanctuary began to contemplate the importance of information and training activities that veterinarians and farriers were carrying out with people, which would gradually lead to sustainability in animal welfare and to remove the dependence on our services. This meant that people should begin to take responsibility for themselves, and take care and provision of the quality of life of their donkeys, mules, and horses, which necessarily implied they should be taking an active role in decision making regarding the care of their animals [3].

And so we began to adopt a community-development perspective in our educational programme. Such a perspective needs to develop a whole-community approach [4]. This means involving as many people as possible linked with the donkeys and mules (owners, children, authorities, teachers, and local veterinarians), as well as analysing all the factors impacting on the animals' welfare for better or worse (soil type, climate type, access to water and other utilities, veterinary services providers, cultural practices, beliefs that shape attitudes and hence behaviour towards animals, to name a few) [4].

Some of the tools and techniques we have used are:

- *A playful technique with children*, using the 'Vote with our feet' tool, which enables children to express their opinions and perceptions about donkeys and about their needs. The advantage of this tool is that we can give

immediate feedback to the children to modify their ideas or to give correct information that would help change their perceptions about their animals, and even sometimes surprise them. This can be great fun for the children.

- *A participatory technique with adults*, using the 'Ranking welfare problems and traditional methods' tool, which is useful when working with illiterate people because, in groups and using different colour cards, they just have to represent the welfare problems and the methods that the community uses to face them. One advantage of this tool is that people can hear the solutions their neighbours are using regarding the animal welfare problems they are facing; and thus information is shared which was not shared in the past.
- *A drawing technique with owners*, using the 'Drawing a donkey and marking its body' tool, which is used in groups. Group members are asked to draw a donkey and make marks on the parts of its body that are commonly affected according to what they have seen in the community or with their own animals. This tool is easy to use with illiterate people and allows them to discuss in groups their doubts, concerns, and perceptions.

Adopting all these kinds of participatory sessions at the sites, has had obvious effects on the way that people are starting to get involved with their animals' problems. We have heard many times in these meetings people saying things such as 'I never thought that a donkey needed to be bathed' or 'dewormed'. Almost all these meetings have enabled us to assess education and training needs, but the most important thing is that people are asking us for that education or training once they realize that there are many problems that can be prevented by having proper knowledge. People are also able to identify the resources they have in their community or nearby, and even in some cases to detect what community situations are affecting their animals' welfare. That is when the whole community approach becomes valuable.

A more concrete example of how this approach has helped to involve people in taking care of their animals is the one that emerged in the community of El Zapote in the Municipality of Azoyú in the State of Guerrero, Mexico. People joined with us; they drew the donkeys in teams; they discussed in teams what they saw as the main diseases and the traditional solutions; then discussion took place with the whole group. The participants asked the vet many questions. They began to admit that there were many things they did just by intuition, and that, since the animals were so important for their work, they needed to have some training about how to detect the signs linked to some health problems and the best solutions. They also manifested their need to get help from their local authorities to get a local vet, maybe an advanced student. The partnership approach was demonstrated when they considered the problems and the solutions, and we made the commitment to try to get a vet student from the university if the community took the responsibility of providing food and housing. An agreement was made. Then they fulfilled their tasks and we fulfilled ours: a vet social service student was designated for a couple of months in the community, and more vet assistance supplied and further educational sessions took place.

Such outcomes never happened when just providing the clinic service, because neither the owners nor the vets had enough time to talk, ask questions, or explain. Even when there was conversation it was less efficient than holding a session involving a group of many people who could share experiences and solutions.

We could see that, resulting from the experience, people started to change some feed practices that were causing colic, sometimes even causing the death of donkeys. The clinic records show the impact of the project on general body condition and we will be able to assess more accurately the impact of the educational sessions after one and a half months. We will be able to record people's behaviour and knowledge before the sessions, immediately after the sessions, and after a while to see if they are incorporating the new knowledge in the relationship with their animals.

So, our next step is to take priority communities (those committed to animal welfare) and use the tools in a zone or community, taking advantage of our experience and strengthening the whole-community approach work.

Table 1. Examples of participatory tools used with different target groups at different sites

Population	Tools used	Sites		
		Community	Municipality	State
Children	Participatory games to assess their perceptions about donkeys' features and needs, and to link the importance that customs have on the lack of welfare	Mazatepec	Acajete	Veracruz
	Based on the results of the games, puppet shows; sessions about characteristics linking them with donkey needs, proper management of harnesses to prevent injuries, importance of hoof cutting; activities to strengthen life skills such as recognize and name their emotions, coping strategies (because children beat each other when they're angry, they pursue and harass the animals, sometimes causing them harm)	San Agustín Citlali	Almoloya de Juárez	Estado de México
Young people	Participatory tool to assess their perceptions about animal welfare and the problems that donkeys, mules, and horses face in their community as well as the animals' needs	Mazatepec	Acajete	Veracruz
Parents (of the children we had worked with)	'Ethical values workshop' where they let us know their community's main ethical values, and the strengths and weaknesses of those values in the community and at home; links with ethical aspects in the actions related to providing animal welfare	Mayorazgo de León	Almoloya de Juárez	Estado de México
Owners: women and men	Participatory tools to understand what they think about animal welfare and animal needs; community strengths and weaknesses to respond to those needs; community resources in terms of vet services, pharmacy, water access, work journeys of the animals, etc.	La Loma San Mateo	Temascalcingo	Estado de México
	Participatory tools to assess how they perceive their animals' body condition, and if it has changed since the clinic has been giving the service (and how and why)	Azoyú Arcelia El Zapote	Azoyú	Guerrero
	Participatory tools to hear their proposals and their thoughts on how the Donkey Sanctuary can support their own initiatives to achieve welfare	Lomalapa Vistahermosa Tecorrales Altamirano Zacualpan	Olinalá	Guerrero
		Chiquispac	Coatepec	Estado de México

Key informants	Contact with community leaders or key informants, such as the local cattle society, local vets, local development programme managers, or others	Azoyú	Azoyú	Guerrero
	They have joined us in the workshops and, in the case of Olinalá, our programme complements the rural development programme they are carrying out (specifically one related to water capture)	Olinalá	Olinalá	Guerrero
Vet social service students	Participatory induction course to enable them to develop their practices with a whole-community approach	Chiquispac	Coatepec	Estado de México
	Long-term visits to the communities to provide vet service and the rural development approach; use of games with children to transmit information about animal diseases, needs, and care; informal talks and interviews with owners	La Esperanza	Juchique de Ferrer	Veracruz

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MINIMIZING PREVALANCE AND SEVERITY OF LIP LESIONS IN WORKING DONKEYS OF RUSTAM COMMUNITY THROUGH AWARENESS RAISING: A PILOT PROJECT BASED ON LIP LESION RISK ASSESSMENT, 2006 FINDINGS

S. Z. A. Shah¹, R. Eager², S. Nawaz¹, M. Khan¹, and G. Khan¹

¹The Brooke, Opposite Telephone Exchange, Charsadda Road Peshawar, Pakistan

²The Brooke, 30 Farringdon Street, London EC4A 4HH, UK
zahirshah75@yahoo.com

Introduction

Horses, mules, and donkeys play an important role in rural and peri-urban areas throughout Pakistan. According to the 2006 Government of Pakistan livestock census [1], equine animals numbered 4.8 million (90% donkeys, 6% horses, and 4% mules). Besides transportation of people, they are used for transporting goods to local markets. These animals suffer from work-related injuries (WRI) on a day-to-day basis. WRIs like lip lesions (see Figure 1) can be painful and may impede an animal from eating and drinking, leading to emaciation.

Figure 1. Lip lesion



A pilot project was launched in the Rustam community of Mardan District of Pakistan to reduce the prevalence and severity of lip lesion in donkeys used for transportation of goods by cart (TGC) by creating awareness about the welfare issue. A group of 20 donkeys and their owners was taken as the target of the pilot project. The aims and objectives of the project were explained to all group members.

Methods

Selection of community

Using a survey 512 equines were assessed for lip lesion prevalence (Table 1). Out of 32 locations, Rustam community had the highest prevalence and severity of lip lesions and was therefore selected to launch the pilot project.

Table 1: Lip lesion survey in 32 different locations of Brooke Mardan

Work type	Species assessed	Number animals assessed	With lip lesion	% according to work type
TGC	Donkeys	381	291	76
	Horses	65	42	65
TPC	Horses	66	24	36
Total animals assessed		512	357	70 overall

TGC=transportation of goods by cart; TPC=transportation of people by cart

Community group organization

Plans were discussed with animal owners individually and a meeting of animal owners was called in their working area. The aims and objectives of the project were discussed in detail with the participants: 20 animal owners showed a willingness to be part of the pilot project, and they jointly decided place, day, and time of a weekly meeting.

Collection of project baseline

A welfare assessment was carried out to provide a baseline of the animals' welfare status at the start of the project. Prevalence and severity of lip lesion, owner's behaviour, working conditions, and available resources were recorded.

Owners' awareness regarding lip lesion

Owners identified and marked various parts of one of their donkeys which were more likely to sustain WRIs. They prioritized lip lesion as the most important issue based on the criteria of 'pain and suffering', 'predisposing factor for other body injuries', and 'stopping animals from normal eating and drinking'. Owners realized that lip lesion is painful for donkeys and paying attention to prevent lip lesion meant addressing a number of welfare issues.

- A local clergyman briefed participants about animals' rights in Islam. He explained the commandments of God and his Prophet PBUH about animal welfare. He explained that we have a right to get work from our animals but animals have rights for better feeding, watering, proper rest, and kind treatment. Participants pledged to treat their animals more kindly.
- A local bit-maker advised on proper bit selection, fitting, and maintenance. He explained that different donkeys need different sizes. He demonstrated proper bit fitting, the advantages of good bit fitting, and the disadvantages of bad fitting. He advised participants to clean bits regularly and to remove a bit from the animal's mouth when feeding, watering or when the animal is not working.
- Advantages of proper grooming were explained and demonstrated. Grooming kits were given to the participants at subsidized rates, and the participants started grooming their animals.
- A participant who had a well maintained harness was asked to explain to his colleagues how he did this. Cleaning his harness regularly, oiling it, keeping it away from sun, rain, and dust, and repairing in a timely fashion were explained.

- Another participant who had a healthy donkey explained about feeds and feeding practices, managed from his own local resources. Feeding a mixture of feeds such as green grasses, wheat bran, grain, or oats with salt and butter ghee kept his donkey healthy and strong. However, he stressed the owner–animal bond which directly affected the health of both concerned.
- The advantages of cart maintenance, equally and properly inflated tyres, greased wheels, ball bearings, and a balanced load were discussed. A local lubricating expert explained the importance of greasing weekly.
- Participants discussed good and bad driving skills and effects on their donkeys. They pledged not to jerk the reins while driving because it causes tension in the lip. They also pointed out that beating and driving fast adds to the animals' suffering, including lip lesions.

Results

A welfare assessment was carried out following intervention to identify changes in welfare status. A 7% decrease in lip lesion prevalence was identified. Severity of lip lesions also decreased (Figure 2, Table 2).

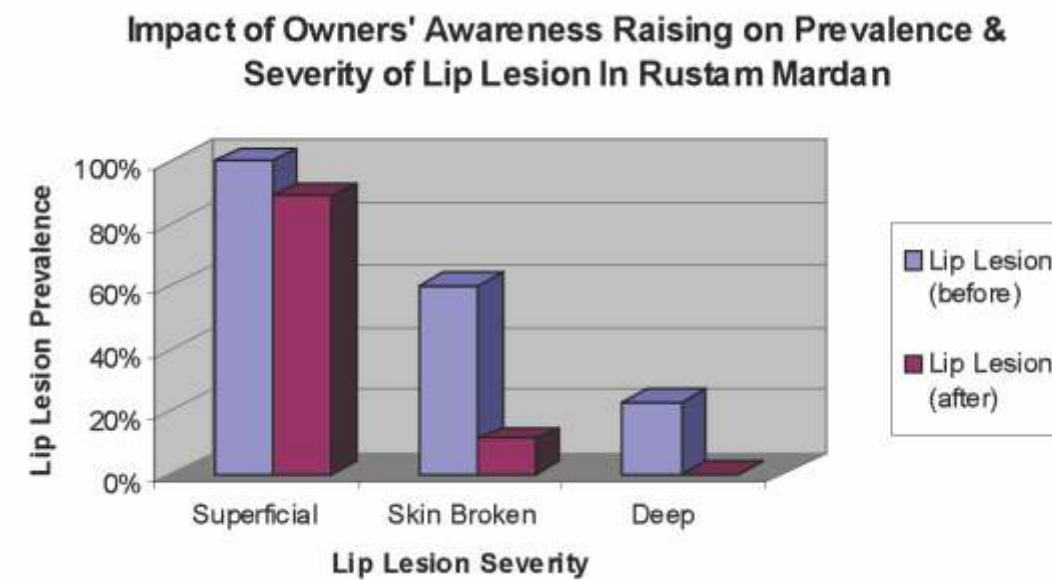
A positive change in response to observer approach (84% to 77%) was observed; animal coat health in 15 out of 20 animals improved; while signs of faecal soiling were reduced (41% to 16%). Hobbling/tethering incidence was reduced (100% to 64%) and breast and shoulder wounds reduced from 27% to 7%. A decrease (32% to 23%) in the number of animals with girth/belly wounds was recorded. Ribs/flank wounds decreased by 9%. Hind leg wounds decreased by 5% while wounds in the knee/hock region were reduced from 82% to 50%.

Improvement was observed in the animals' body condition score from 1 or 2 to 2.5, and from 3 to 4 respectively.

Table 2: Change in lip lesion severity before and after pilot project

Category	Superficial	Skin broken	Deep
Lip lesion (before project)	100%	60%	23%
Lip lesion (after project)	89%	11%	0%

Figure 2. Impact of awareness raising among owners on prevalence and severity of lip lesion in donkeys of Rustam community, Mardan



Confining the group to only 20 donkey owners (essentially willing) did not stop other owners and animals benefiting from the pilot project. After the pilot project, another study was planned to test a desirable bit in the same community. Interestingly, only 9 out of 65 donkeys were found with positive skin-broken lip lesion indicating the dissemination of the message to non-group members of the Rustam community. They were found to have benefited equally from the message given by the project when interviewed.

Discussion

The study demonstrated a reduction in both prevalence and severity of lip lesions following intervention.

The improved response to the approach of an observer may indicate reduced fearfulness and enhanced owner–animal bond, potentially due to regular grooming of animals, which promotes understanding between an owner and his animal. Improvement in indicators for coat health and evidence of faecal soiling were further evidence of proper and regular grooming and improved feeds and feeding practices.

The increase in animal body condition score seen during the study suggests that revised feeds and feeding practices were improving nutritional status. Malnutrition not only reduces the body condition score of a donkey but also slows down the wound-healing process [3]. This finding is in line with the reduction in body lesions seen.

The reduction in body lesions may result from improvement in harness maintenance (for rib, girth, and wither lesions) and from improved stable management practices (shoulder and breast lesions). The reduction in limb lesions may indicate a positive change in animal driving skills.

Conclusion

Animal welfare issues are generally interrelated and improvement in one issue may subsequently improve others. The majority of animal welfare issues, especially those due to human behaviour and knowledge, can be improved through consistent awareness-raising programmes for animal owneres as described here. Improvement in welfare parameters by raising awareness shows that we can monitor the effects of our mass awareness-raising projects for sustainable animal welfare.

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ENGAGING COMMUNITIES IN PARTICIPATORY METHODS TO IDENTIFY AND PRIORITISE ISSUES OF CONCERN TO OWNERS OF WORKING HORSES IN LESOTHO

M. M. Upjohn¹, K. L. P. Verheyen¹, and G. Attwood²

¹ Department of Veterinary Clinical Sciences, Royal Veterinary College, London, UK

² Malealea Development Trust, Motsekuoa, Lesotho
mupjohn@rvc.ac.uk

Introduction

A UK-based equine charity established a training programme covering farriery and saddlery skills and an equine nutrition programme in Lesotho in 2007. The aim of this study was to use a participatory approach to identify and prioritise equine issues of concern to owners of working horses in Lesotho. Specific objectives were to (1) create local horse owner discussion groups; (2) create community maps of the areas covered by owner discussion groups; (3) facilitate discussion by owners of issues relating to horses; and (4) enable owners to rank these issues in order of priority so that future educational interventions could be targeted at those topics deemed most important by owners.

Methods

Drawing on Participatory Rural Appraisal techniques [1, 2, 3], 3 one-day participatory workshops for horse owners were organised in individual geographic locations (in Mafeteng, Matsieng, and Malealea). Owners worked together to create a map of their local area, by sketching on the ground, using locally available materials such as bottle tops, small stones, and maize cobs. Features incorporated in the map included roads/tracks, rivers and water sources, location of villages, number of horses in each village, and availability of horse-related services, such as a farrier, saddler, and equine health advice/drugs. Each participant also identified the location of their own home on the constructed map.

As the map was created, owners were encouraged to identify and discuss issues associated with owning horses. They ranked these issues in order of relative importance, using a matrix drawn on the ground. Each selected issue was written on a card and represented as a column and a row in the matrix. Each issue was discussed and compared against each other issue to identify which was the more important. Discussions included owner agreement of criteria based on which issues could be compared and prioritised, thereby enabling owners to determine those which they perceived as having the greatest impact on horse health and welfare. At the end of the ranking exercise, the number of times each issue had been selected as the priority issue was summed to calculate an overall score for each issue and thereby create a summary ranking scheme.

Results

In the Mafeteng area 26 owners attended, creating a local map which incorporated 3 villages (containing 62 horses); 5 issues were ranked. Their most important issue was perceived to be mouth problems, with nutrition issues and infectious diseases ranked equal second, and foot problems and parasites (both endo- and ectoparasites) ranked equal fourth. In the Matsieng area, 14 owners attended, creating a local map which covered 10 villages, containing 60 horses; again, 5 issues were identified for ranking. This group ranked mouth problems as most important, followed by all forms of infectious/parasitic disease (a combined category); nutrition issues were third, husbandry-related topics (including wound management) were fourth, and foot problems were fifth. In the Malealea area, where 16 owners attended, a local map incorporating 15 villages covering 163 horses was drawn. Of the 5 issues ranked, mouth problems were deemed the most important, followed by nutrition issues ranked second, a combined disease category (including colic) third, feet problems fourth, and husbandry-related matters (including wound management) fifth. All 3 discussion groups expressed an interest in convening follow-up meetings to further explore the issues identified and, in particular, to learn more about how to address the priority problems through learning materials to be developed to support such discussions.

Conclusions

Whilst there was considerable overlap between the groups in the issues identified by owners, priorities did vary somewhat between locations. There is a clear need for owner education on a broad range of topics. Further owner group discussions could refine the scope of owner-identified high priority topics to be incorporated in learning materials to be developed to support future horse owner learning and discussion groups. Owner learning and discussion groups may also precipitate the establishment of open invitation community workshops and subsequent smaller 'learning circle' programmes whereby community groups discuss issues to identify and enact potential locally generated solutions to priority problems.

Acknowledgements

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THE IMPACT OF FARMERS AGENTS IN IMPROVING DONKEY WELFARE IN TWO DISTRICTS OF WORKING SITES OF THE DONKEY SANCTUARY ETHIOPIA - TIGRAY PROGRAMME

H. Yhidego

Abstract

Impact assessment on welfare improvement of donkeys by Farmers' Agents and target farmers were undertaken in two districts of intervention areas of the Donkey Sanctuary Ethiopia - Tigray programme. The first impression showed that working to improve the welfare conditions of donkeys belonging to selected owners and expanding to others using closer mates is a promising approach and needs to be expanded.

Introduction

Tigray region has one of the densest populations in Ethiopia, with about 350,000 donkeys. The people have a high demand for donkey use and hence a number of donkeys are moved into the region continuously from neighboring regions. Donkeys are full time working equids involved in a multitude of activities, but poor image and attitudes towards them lead them to be in a low welfare status. Of all activities that donkeys are expected to work in, tasks like transporting salt bar, firewood and charcoal, construction materials, straw and cactus fruit and leaves are the major ones affecting the lives and welfare of donkeys.

Mekelle is the capital city of the region and seat of the Donkey Sanctuary regional programme. From a number of poor welfare areas in the region, the Donkey Sanctuary Ethiopia Tigray programme is currently working in seven districts within a 100km radius, carrying out integrated veterinary intervention, adult education, school children's education/ target classes, mini media, clubs, herding children, working with the local radio station, saddlery training and production as well as distribution of improved saddles, continuing professional development for animal health professionals and Development Agents, and working with different communities to reduce the suffering of donkeys and mules.

As part of community development in welfare of donkeys, for the last year the project started to select farmers/ owners/ Agents to help improve the welfare of their donkeys and also help others in doing so. Agents were selected based on their relative care of their working animals, hence most of the Agents' donkeys have relatively the worst welfare status compared to other owners in their respective village, for example having donkeys with skin problems, wounds, emaciated, unhappy and generally less wellbeing, and are renowned in their locality to represent such households. A few of the owners with better handling of donkeys and with donkeys representing better or best welfare were included with the intention of sharing their experiences. Other criteria were that the selected ones needed to be those who can read and write and were willing to teach about donkey welfare after training. To start with two districts were selected, Enderta and Hintalo Wajirat, where the welfare status of donkeys is relatively low. From each district two peasant associations were selected and from each peasant association two villages, hence a total of eight villages and 39 Agents were selected and have been working for the last one year.

An entry point training on health and welfare problems of donkeys and mules was given to the Agents and the agreed working system was designed in such a way that after the training each Agent was expected to improve the condition of his donkey(s) in a short period, i.e. to manage them at least the same way as other domestic animals in a household, principally in feeding, water provision, shelter, veterinary services and always to think that animals should be rewarded based on the benefit they provide, not on some other cultural and religious grounds. Once the Agents had brought the improvements they were expected to select 5 other target farmers from their neighbors, relatives and people that they can easily influence and able to persuade, and bring the same improvement, enlightening owners in their respective locality of all opportunities. With this system the target farmers were also expected to work with as many other owners as was possible to influence. The intention is that the Agents and

target farmers will graduate in improved welfare of donkeys in the coming years and that this success will diffuse to other owners.

The objectives of this paper are to review the impact of the farmers Agents in improving donkey welfare and to make recommendations on important points.

Methodology

The project team evaluated the impacts of Agents' intervention using:

1. Discussion with the Agents to realize their activities.
2. Visits to their houses to look for animal shelters and feed and feeding practices.
3. Looking the condition of the donkeys for comparison with others and to see the difference in conditions from a year before.
4. Discussion with some target farmers to know their interest in the work of the Agents and to find out what they did so far.

Results and discussion

Evaluations of impact were done by the team at the beginning of the intervention, after 6 months and at the end of the year. Table 1 summarises the intervention sites, agents and targets.

Districts	Peasant Associations	Villages	No of Agents	No of Target Farmers	Agents improved welfare of donkeys		Targets improved welfare of donkeys	
					No	%	No	%
Enderta	Mytsedo	Embafikadu	5	25	3	60	11	44
		Egrihariba	5	25	4	80	10	40
	Arato	Endaba-shelama	4	20	4	80	9	45
		Milate	5	25	4	80	10	40
Hintalo Wajirat	Araasegeda	Ara	6	30	5	83	23	76
		Myhydi	6	30	6	100	22	73
	Fikralem	Aderak	4	20	4	100	12	60
		Belat	4	13	3	75	9	54
		Total	39	188	33	85	108	57

Table 1. Intervention sites, number of farmers' Agents and target farmers and their achievements in improving donkey welfare.

Impacts:

1. The different approaches used to evaluate the impact of farmers' Agents on welfare improvements in donkeys showed progress in the fundamental indicators of welfare conditions i.e. improvement in body condition and reduced prevalence of wounds.
2. It was possible to prove that Agents could tell others and talk explicitly about donkeys and their wellbeing, which is difficult for many owners due to the poor image of donkeys and inherited behaviors. They were able to convince and change others and use all possible opportunities to transmit messages.
3. Some of them built new shelters or improved existing shelters, while others separated donkeys from the stable of other livestock and upgraded the frequency of watering, feeding and treatment services.
4. Comparing the condition of the Agents donkeys to other donkeys in their vicinity and to their own donkeys a year ago, there is clear improvement.
5. As each Agent had to select five target farmers to pass on knowledge, some of them managed to pursue five others, some four and few of them three out of five.
6. Some target farmers were convinced that the welfare of their donkeys was in a lower state than other livestock in the household, despite donkeys working the most. They agreed to work with the Agents and will discuss the wellbeing of this most neglected household livestock species with other owners.

Donkey owners are trapped by traditional, cultural and religious beliefs, although they know very well that donkeys are the most useful animal for individual households, and once they break the silence it seems trouble-free to continue working for the wellbeing of donkeys. This is working for the Agents.



Figure 1. An Agent with his relatively better condition donkey visiting one of the mobile clinics of the project for a veterinary check-up

Conclusions

The owner-to-owner approach uses donkey owners to bring change for themselves and others they know and can influence, such as relatives, neighbors and diffusing to others. Taking the pillar of giving at least the same treatment to donkeys as to other animals in a household is one of the approaches that can lead to sustainable intervention. The reason for sustainability is that the welfare of these animals is directly related to the welfare of the people who rely on this part of their livestock.

Recommendations

- The approach of using people who know each other very well, speak the same language, have common interests, similar living standards and uses of donkeys, spend long periods together and can influence each other most, proved to be the right tool to lead to sustainable improvement in welfare condition of donkeys. It deserves to expand to all the villages of these districts and to other districts where welfare problems are serious.
- Planned regular monitoring and evaluation of the activities of Agents and target farmers is essential.
- Agents and target farmers need to have planned refresher workshops and trainings which lead them to improve their capacities to address welfare issues and internalize their responsibilities.
- Reporting of activities makes the Agents responsible.
- Ranking of Agents based on their achievements can create a competitive environment.

**COMMUNITY DEVELOPMENT AS A MODE OF IMPROVING THE WELFARE OF WORKING EQUINES:
SHARING EXPERIENCES FROM KENYA**

W. O. Okello, J. Ojwang, and S. Onyango

Kenya Society for the Protection and Care of Animals (KSPCA), PO Box 24203-00502, Nairobi, Kenya
waitokello@yahoo.com

Abstract

Globally, working equines play a central role in the development of communities where they are used as the main source of draught power. Using a Community Development (CD) approach we are working with donkey users' associations, women and youth groups, schools, and community-based organizations (CBOs). Donkey welfare is integrated into activities promoting sustainable livelihoods and improved environments. Community participation and use of life skills for children form the basis of our CD approach.

This paper attempts to describe the use of a CD approach involving the formation of donkey users' groups, which is helping to bring about positive improvements in donkey welfare, owners' socio-economic conditions, and the general environment in some areas. We believe a well structured CD approach can improve donkey welfare as well as people's livelihoods and environment.

Introduction

Over the years the Kenya Society for the Protection and Care of Animals (KSPCA), through funding from the Donkey Sanctuary, has been holding mobile donkey clinics and running community and children education programmes in order to improve the welfare of donkeys in Kenya. In the areas with the greatest welfare problems, approaches had to be integrated within and relative to the livelihood of the donkey users and the environment where both people and animals live.

Brief situational analysis of donkey users in the peri-urban areas of Kenya

In Kenya most of the welfare problems of donkeys are seen in the urban and peri-urban areas. The majority of donkey users are the youth who seek employment by using donkeys for transportation of merchandise within these areas. The society sees these youth as non-achievers who use low-status animals as their mode of employment. Because of these factors, among others, the donkey users have low self esteem, making them develop indifference to the rest of society, and a low empathy towards their donkeys. This is compounded by alcohol and drug abuse used to help cope with the socio-economic pressures they face. Misuse of the money they have earned pushes them further below the poverty line and this makes them unable and unwilling to pay for any health care or repair of their harnesses and donkey carts.

Having looked at how much some of the donkey users earn per day across some of the donkey users' groups, we found out that some of them make as much as US\$20 a day, while some the lowest paid personnel in Kenya earn only US\$4 a day [1].

If we compare the donkey users in the rural areas and those in urban and peri-urban areas, we see that the former group has high empathy and understands animal welfare better since they have domesticated donkeys for longer periods and use them for subsistence purposes. Because of this, and somewhat reduced economic pressure in these areas, their donkeys' welfare is better, although they do suffer from drought in the semi-arid and arid areas. In the urban and peri-urban areas most donkey users acquire donkeys only for commercial purposes. The donkeys provide the only means for generating an income, and are therefore driven hard each day, resulting in poor welfare. In the urban peri-urban areas the bond between the donkey and donkey user is broken due to socio-economic pressures. CD can be used to address this gap so that both the welfare of the donkey and the user is improved. It also increases the capacity and the willingness of the donkey users to pay for veterinary services, farriery, and

harness. For this to occur, CD values such as self-determination and participation are essential. Most communities act according to their self-interest, and experience shows most people are willing to actively participate only if their situation will be improved. Even though CD does not solve all the problems facing donkeys and the community, it does give the communities the ability and confidence to solve some of their problems.

The CD approach to improving donkey welfare

We are involved in various types of CD activities, for example skilling donkey owners and other stakeholders in collective decision making, capacity building on donkey health and welfare issues, community engagement, education of children using life skills and environment, supporting community initiatives in terms of donkey welfare, and strengthening CBOs that are involved in animal welfare or education. Some of these activities are outlined below.

In order to have proper decision-making processes we work with existing donkey users' groups or help form them in areas with poor donkey welfare, usually peri-urban. We use participatory approaches and practical sessions with donkey owners' groups and other stakeholders, such as cart makers, opinion leaders, and local animal health providers, to carry out capacity building on donkey health, including harnessing and animal welfare issues. Other issues discussed are simple body condition scoring, basic accounting, business etiquette, basic traffic rules, and animal welfare legislation. This is to impart knowledge on basic donkey care (including preventive medicine) and animal welfare, and change behaviour through helping the donkey owners understand the direct link between good welfare and improved livelihoods. Thus donkey owners are empowered to treat simple ailments affecting their donkeys or to utilize local animal health providers.

We work with CBOs and support community initiatives such as community animal welfare days to sensitize the rest of the community about animal welfare, including animal welfare legislation. This is done to prevent cruelty to animals and also to encourage the existing best practices within the community.

Changes in the welfare of donkeys are assessed by animal-based indicators, such as body condition score, demeanour, wounds, lameness, and hooves. These indicators are triangulated with our veterinary records and those of local animal health providers and the views of the community. Changes in the behaviour of donkey owners are assessed qualitatively through focus group workshops, semi-structured interviews, and community opinion among others. Monitoring of the strength of the group is done through assessing leadership and teamwork. This is triangulated through looking at the accounts and investments made without our input.

These CD activities provide a local forum that empowers the community to tackle animal welfare problems through provision of skill and knowledge on such issues and to change behaviour and attitude, thus improving the welfare of donkeys.

Brief case study: Kagoto donkey users' self-help group

Kagoto is in Nakuru North district of Kenya. In 2003 we received various complaints from members of the public about mistreatment of donkeys in Kagoto. We visited the area in 2004 and encountered whipping of donkeys, overriding, and harness sores. Most of the donkey users were using drugs and alcohol. We provided palliative treatment and talked to the donkey users at local gatherings. The welfare of donkeys did not improve much. In 2008, using a CD approach, we encouraged the donkey users to establish a formal group with a patron, chairman, secretary, and treasurer [2]. They would collect money on a weekly basis and save it in the bank for future investment. So far the group has invested in planting kale and tree seedlings which they sell to the community. They have also received a car-washing machine from a well wisher. The group has partnered the animal welfare club in the Kagoto primary school: they provide tree seedlings to the school and the children plant them as a way of improving the environment. We established the animal welfare club so as to teach children about animal welfare using life skills. Having networked with the Ministry of Youth Affairs, the group won a tender to carry out reforestation of Kirima Top Forest in Nakuru. They have also planted trees around the water tanks where they draw

the water as a way of improving their immediate environment. We are in the process of partnering with the local radio station so that the group can inform the community and neighbouring communities about animal welfare, and about how taking good care of their donkeys has helped them socially and economically, and to advertise themselves as a group to the community.

In 2006 of the 132 donkeys seen 99 had wounds [3]; by 2010 only 4 donkeys of the 103 donkeys seen had wounds [3]. Cases of whipping and overriding are minimal because the group itself disciplines errant members by not allowing them to draw water from the water tanks – a form of self-policing/peer pressure (the group runs the water tanks). On average the body condition score of these donkeys is 3 and the general welfare of these donkeys has greatly improved.

One of the main problems is internal squabbles among the group members. We are trying to tackle this by advising them to have a chairman on an annual rotational basis. This is also aimed at developing leadership skills.

Conclusion

If well articulated, CD can be used to improve animal welfare, community livelihood, and the environment through integration of these principles.

Acknowledgement

We would like to thank the Donkey Sanctuary Kenya team for the useful information they provided for this paper.

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MEDIA IN PROMOTING EQUINE WELFARE: A CASE STUDY OF HESHIMU PUNDA RADIO PROGRAMME IN KENYA

R. W. Kikwatha and F. Ochieng

Kenya Network for Dissemination of Agricultural Technologies (KENDAT)
fochieng@kendat.org

Introduction

The word 'media' refers to any kind of format used to convey information. Media technologies have undergone an incredible transformation over the last few decades. Growth and development of the new media have led to their wide diffusion and application, thus increasing their economic and social impact. There is now a wide choice of media but mass media are most commonly used. Mass media refers to those types of media designed to reach large numbers of people. There are different types of media, including television (cable, network, satellite, etc.), radio, film and video, print (newspapers, magazines, direct mail, etc.), photography, and electronic (e-mail, the web, etc.). All media produce a variety of genre, which refers to a particular type of style or content. Mass media genres can be divided into four basic types:

- Informative media, such as news shows, newspapers, informative websites
- Educational media, such as books, educational video, educational software programs
- Persuasive media, such as all types of advertising, television infomercials, newspaper editorials, websites that attempt to persuade
- Entertainment media, such as magazines, movies, novels, entertainment-related websites

For the purposes of this paper, we focus on the role of radio in promoting animal welfare.

Why radio in animal welfare

Radio messaging provides an effective way to specifically target your prime audience. Every radio station appeals to its own unique demographic. This natural division of interests into specific listener groups makes radio the prime medium for animal welfare messaging. Radio listenership is also divided by station and listening time. It has been shown that the majority of adults listen to the radio on their way to and from work, while younger listeners are more often tuned in during the afternoon, after school. This means that it is possible to make programmes to suit specific age groups with a high degree of precision. With this division, it becomes possible to define media literacy, meaning the ability to listen, understand, analyse, and critically evaluate information presented on radio. As such, the right language, style, format, and content can be designed to suit that specific group.

People usually tend to develop a personal relationship with their favourite radio stations, programmes, and presenters. They know the station's personalities and they tune in for entertainment and information. This loyalty allows you to develop a relationship with these listeners and, as a result, listeners (in Kenya) have been found to be more accepting/believing of radio information than of any other type of media.

Radio is actually an extremely cost-effective medium through which to advertise or create awareness. It reaches a wide range of listeners and covers expansive geographical areas at the same time with the same cost.

Challenges of using radio programmes for attitude, behaviour, and practice change

- How to associate change in attitude, behaviour, and practices to radio messaging
- How to monitor and evaluate changes as a result of radio messages
- Choice of the right channel, language for the right audience

KENDAT Heshimu Punda case study

Introduction

Heshimu Punda is a donkey welfare improvement project being implemented by KENDAT in partnership with Brooke UK. As part of the broad intervention strategies, HP has been promoting a radio programme known as Mtunze Punda Akutunze for the last 6 years. Mtunze Punda Akutunze has been instrumental in reaching out to large communities, including in areas where the project has no direct operations and even beyond the country borders. The aim of the programme is to create awareness and lobby for implementation of good donkey welfare practices amongst young donkey owners and users, thus positively changing their attitudes and behaviour towards donkeys. The project recognizes that youth form the majority of donkey owners, have high radio listenership, are likely to be influenced by their peers, and believe in radio messaging.

HP radio implementation strategy

- *Choice of radio station.* A survey is carried out first to establish the most effective radio station. The survey gives information regarding the most preferred station, time slots, preferred language, and preferred presenters.
- *Target audience.* The radio strategy is designed to create awareness on donkey welfare which will lead to changes in attitude and practices among the youth who are highly opinionated, interact very closely with donkeys, are prone to drug abuse, are energetic and likely to overwork donkeys, and have a high demand for more money and are therefore likely to mistreat and abuse donkeys.
- *Target issues.* Radio programmes are designed to address specific donkey welfare issues guided by baseline information collected using scientific methods such as welfare assessment, donkey user/owner behaviour and practice surveys, analysis of clinical data, and routine scouting. Some of the target issues addressed include injurious donkey whipping and control and management of parasites.
- *Publicity for programme.* Intensive publicity, especially to make the community and the youth aware of the radio station and time of airing the programme, is given through fun clubs, school clubs, village opinion leaders, announcements in community group meetings, public meetings, churches, mosques, and posters on public notice boards.

Generating information for radio programmes

Information for radio messaging is generated through different ways. Scientific welfare assessment is conducted to provide animal-based and other relevant information related to the target issue. This information gives valid and reliable information which is triangulated with information from other sources.

Focus group discussion is organized with youth groups to discuss in detail donkey welfare, historical perspectives of donkey use, reasons behind donkey misuse and abuse, possible solutions, and how to sustain good practices.

The most significant method of generating views and radio messages from the youth is the use of outside broadcasts (OBs). These take the form of public debates where donkey owners and users, selected stakeholders, and HP staff come together to discuss issues related to target issues. The OBs are planned in a sequence as follows:

- The first OB is conducted to review practices, and youths set commitments
- The second OB looks at the progress made and challenges faced, and also revises actions
- The third OB looks at the results with regards to the commitments made and also looks at the objectives of the programme being aired.

Monitoring and evaluation (M&E)

One of the key outputs for the radio project being implemented is the development of a toolkit defining media approach and methodology for reaching out to the youth. This will be assessed to check appropriateness in

promoting donkey welfare. Another monitoring strategy is to assess changes in donkey prioritization by youth, adoption of welfare-friendly practices, and improvement in donkey welfare. To achieve this several tools are used, including:

- Force-field analysis and Venn diagrams to determine factors promoting or hindering donkey image and welfare
- Metric analysis to gauge practices amongst youthful listeners and users
- A participatory community welfare-based assessment to assess changes in the welfare of donkeys owned or used by youthful radio listeners

Other tools and methods for M&E include welfare assessment, where specific donkeys are selected and assessed to capture their welfare status in related to the target issues. The assessment is done before the radio intervention starts and after (at the end of the year) to determine the changes that have taken place. Donkeys are selected from the youth who attend the OBs. OBs are also used for M&E. The OBs are repeated with the same people to assess changes in attitudes, knowledge, perception, and behaviour. Comparative analysis is done for subsequent OBs in order to identify any changes.

Listener feedback is another way whereby listeners are given an opportunity to give their feedback about the programmes through writing letters, sending text messages, phoning, and emailing. This information is continuously analysed to identify changes in attitudes, knowledge, perceptions and behaviour. Field visits are also carried out to confirm some of the information given through listener feedback, and finally home visits and scouting are carried out to assess changes in the practices of the young listeners.

Reporting

Comprehensive reports are made to capture the welfare status of the donkeys before and after the programme on the basis of the M&E process. The proceedings of the OBs clearly outline the participants' attitudes, knowledge, perceptions, and behaviour in relation to the target donkey welfare issue. Details of any surveys/studies conducted to give baseline and other information are documented and a summary of the radio programme scripts for the programmes aired provided.

Conclusion

Radio is a good tool for promoting animal welfare if it is done systematically so that assessment of changes resulting from radio messages can be monitored and measured. This is possible if it is implemented locally with specific targets so that its wide coverage does not curtail monitoring efforts.

SLITTING NOSTRILS IN DONKEYS – A MYTHICAL BUT PAINFUL QUACK PRACTICE IN THE SOUTHERN REGION OF BROOKE (PAKISTAN) – COPING THROUGH AWARENESS

S. Nawaz¹, Z. Shah², N. Soomro¹, H. Laghari¹, M. Kashif¹, and S. A. Brohi¹

¹The Brooke (Pakistan) South Region, RCVH, M. A. Jinnah Road, Karachi, Pakistan

²North Region, Charsadda Road, Larama, Peshawar, Pakistan
karachi@thebrooke.org.pk

Abstract

Slitting the nostrils of donkeys is a painful/unlawful act commonly carried out by traditional practitioners. Communities covered by the Southern Region of the Brooke (Pakistan) routinely adopted such a cruel practice. It was believed to be helpful in thermoregulation and breathing, especially during work in hot and humid climates. During the year 2008, a total of 398 donkeys were examined in 3 densely populated districts of Sindh and Baluchistan provinces of Pakistan. Results showed 51% prevalence in Karachi, 82% in Jacobabad (Sindh), and 86% in Jaffarabad (Baluchistan). Based on these findings, strategies were made and implemented by the Southern Region of the Brooke (Pakistan). Owners' awareness programmes were launched and found to be highly useful in the prevention of slit nostrils. The majority of the traditional practitioners attended Community Based Animal Health Worker (CBAHWs) training and now work as motivated health workers. A second study was conducted for impact analysis and internal monitoring of the interventions. Statistical procedures were applied and showed a significant difference between the data of the surveys. The study showed a 7–8% decline in the prevalence of slit nostrils in all 3 districts. This follow-up survey observed 422 donkeys, and indicates a decreasing trend in the slitting of nostrils of new animals and shows owners prefer donkeys without slit nostrils. Analysis of the data shows that the strategies were found useful in educating owners/users and helped to improve animal welfare in these districts of Pakistan.

Introduction

Many poor communities in the different regions of Pakistan are being supported in multiple ways by about 5 million equines [1]. More than 1 million donkeys in Sindh and about 0.47 million in Baluchistan are used mainly for transportation of goods as well as of people [2]. The majority of the owners believe in myths and traditional types of healing. The practice of frequent use of nose string in working male donkeys was observed in the Sialkot district of Punjab (Pakistan). It is a tradition practised by the owners which is not only a persistent source of undue suffering for the donkeys but also affects their health status resulting in their poor efficiency [3].

Slitting nostrils in donkeys is a traditional but painful practice in southern parts of the country. The climate of the area means it is hot in summer with maximum temperatures of 45–50°C. The working animals become so exhausted that they show signs of severe panting. Owners assume that the nostrils obstruct the passage of air while the animal breathes. Traditionally, owners believe slit nostrils facilitate easy breathing, increased work capacity, and reduced internal heat in hot season.

Nostrils are incised, usually with a sharp knife or blade, by the so-called slit nostril experts – the traditional practitioners. Nostril slitting is practised without giving sedatives or tranquillizers to the animals. Wounded animals are left without proper dressings or treatment (Figure 1). However, the donkeys' reactions to the severe pain are associated with different injuries and conditions [4].

Figure 1. Donkey with freshly slit nostrils



The deformed nostrils are unable to indicate severity of heat stress and exhaustion as these parts are not dilated properly while animals show panting during work. This makes owners unaware of the severity of the issue and thus gets more work from their animals that lead to collapse for the animals. The study enabled us to see the prevalence of nose slitting in the region and to design interventions for creating awareness amongst owner/users and relevant stakeholders to give up this traditional practice. It also enabled us to monitor interventions and inspired confidence for future planning to expand the activities in and around the Brooke communities. We believe this will gradually help improve animal welfare and will protect animals from such a brutal practice.

Materials and method

The primary survey was conducted in 2008 to investigate the prevalence of slitting nostrils among 398 donkeys from 14 donkey-owning communities in the Southern Region of the Brooke, including Karachi, Jacobabad, and Jaffarabad. Based on these findings, the welfare issues were recognized and a long-term awareness campaign planned to focus the attention of potential stakeholders in equine communities of the districts concerned. Brooke staff conducted awareness sessions amongst organized peer groups of donkey owners/users in communities. Awareness-raising activities such as camps and campaigns were designed for the purpose. Owners/users and relevant stakeholders were educated through pictorial banners, intensive and extensive awareness-raising meetings, and materials at animal fairs and working places to discourage the practice. Messages were also delivered through extension materials and demonstrations to tackle the issue of exhausted animals affected either by climatic conditions or by overwork during hot days. The slit nostril experts were motivated and trained as CBAHWs by the Brooke to operate as animal health workers instead of traditional practitioners or quacks.

To monitor these activities, the Brooke conducted another study through its welfare assessment team in 2009. Observations of 422 donkeys from 21 communities of the same area were studied for slit nostrils, and results were compiled to monitor the effectiveness of the Brooke awareness campaign.

Results

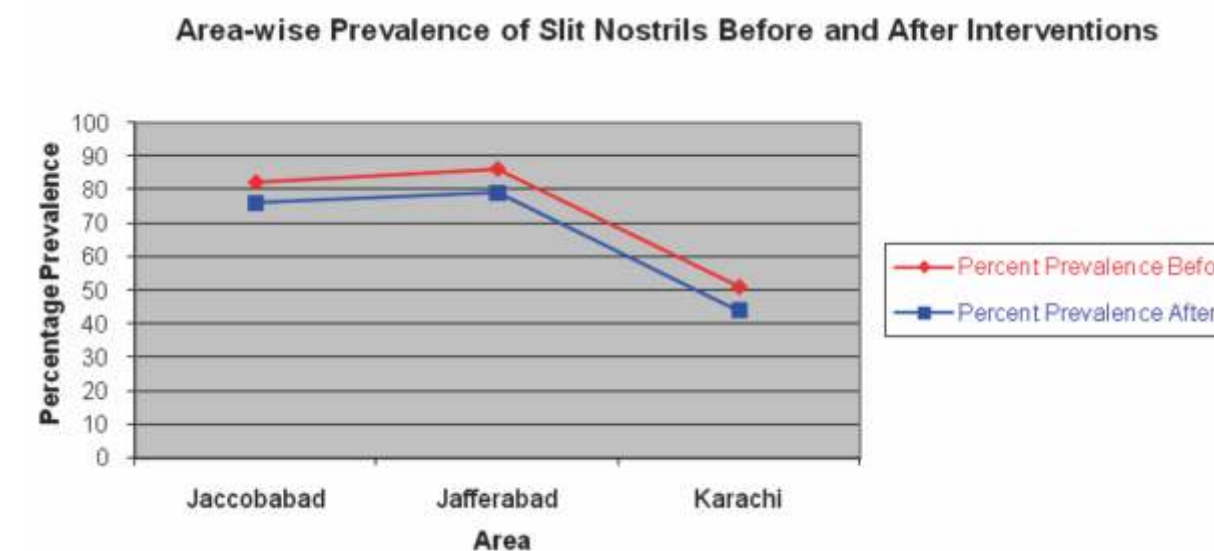
Findings of both studies are given in Table 1. Figures before awareness-raising interventions revealed the prevalence of slit nostrils as highest (86%) in Jaffarabad followed by 82% in Jacobabad, and 51% in Karachi. After the intervention the figures were 79% in Jaffarabad, 76% in Jacobabad, and 44% in Karachi. The overall percentages of animals having slit nostrils in operational areas before and after interventions were 73% and 65% respectively. The percentage of animals without slit nostrils was observed before and after the activities as 27% and 35% respectively. A 7–8% reduction in the occurrence of nostril slitting was observed. Comparative analysis of the study is shown in Figure 2. A statistical test was applied and showed a significant difference ($p < 0.05$) in the

change between data of 2008 and 2009 (see Figure 3).

Table 1. Prevalence of slit nostrils before and after interventions in Brooke operational districts, South Region

Year	District	Slit nostril Yes	%	Slit nostril No	%	Prevalence %
2008 (before interventions)	Karachi	71	51	68	49	51
	Jacobabad	31	82	7	18	82
	Jaffarabad	189	86	32	14	86
	Total	291	73%	107	27%	
2009 (after interventions)	Karachi	68	44	88	56	44
	Jacobabad	45	76	14	24	76
	Jaffarabad	163	79	44	21	79
	Total	276	65%	146	35%	

Figure 2.



Discussion

The prevalence rate cannot be reduced in animals already having slit nostrils. However, the incidence of fresh cases can be minimized with a series of focused awareness-raising interventions. Thus, the issue can be tackled in the long run by creating awareness in equine-owning communities of the cruelty of the practice. For this purpose, equine owners/users in communities, work places, and animal fairs were taken into account in order to design interventions to change their perceptions about the issue. Through pictorial banners, leaflets, demonstrations, and owners/users meetings, awareness on issue was aroused. The issue was treated with other welfare issues during walks and events arranged from time to time, for example World Animal Day – celebrated during the last 2 years in all 3 districts. Equine owners were educated on the importance of regularly giving fresh water, including normal saline, to their animals especially in summer. Owners/users awareness was raised on the prevention and management of heat stress in their animals. Thirteen water troughs and 14 shed/shelters were constructed in communities of the region through participatory action. More than 400 canvas water buckets were distributed amongst the communities at subsidized rates.

For short-term and immediate results, the source of the nostril-slitting practice was thought to be eliminated. The quacks of the area were educated about the facts of the issue and were motivated to stop this traditional practice and to join Brooke efforts of animal welfare through participation in CBAHW training arranged by Brooke South. Four practising quacks joined the training and became trained animal health workers. Initially they were given first aid kits and basic medicines used in veterinary practice. They were linked with equine owners/users and relevant stakeholders. Furthermore, 7 seven other slit nostril experts from the communities were identified and motivated enough to quit practising nostril slitting. They also actively supported Brooke teams in delivering and arranging awareness-raising camps and campaigns.

Welfare assessment data are being used for internal monitoring of the interventions. The results showed a reduction in the prevalence of the practice pointing to the right direction towards the goal. In future the same activities will be continued to cope with the issue in and around Brooke operational areas.

Acknowledgments

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DISASTER RISK REDUCTION: THE BANGLADESH STORY

D. Haider

Bangladesh Disaster Preparedness Centre (BDPC), Dhaka, Bangladesh

Background

A country born out of a bloody freedom struggle in 1971 and currently home to 16.2 million people within a 145,570 sq km land area, Bangladesh is identified as a developing country. It is an agrarian economy; 41% of the population are literate, of which 31% are female. With a per capita income of \$520 (2008), the country has managed to continue an annual average growth of 5% since 1990 despite political unrest and repeated devastating disasters.

Bangladesh is distinctly identified as a high-risk country on the world map. Its vulnerability to natural disasters is rooted in its geographic location in the world's largest delta compounded with a series of hydro-meteorological and geo-physical factors, including huge inflow of monsoon water from upper riparian countries, a low floodplain, and storm surges across the long funnel-shaped coastline with tropical climate.

Topography

Bangladesh, in the low-lying Ganges–Brahmaputra River Delta or Ganges Delta, practically provides the drainage for the mighty rivers of the South Asian region (see Figure 1). This delta is formed by the confluence of the Ganges (local name Padma or Pôdda), Brahmaputra (Jamuna or Jomuna), and Meghna rivers and their respective tributaries. The Ganges unites with the Jamuna (main channel of the Brahmaputra) and later joins the Meghna to eventually gush into the Bay of Bengal. There are 232 rivers and rivulets. The alluvial soil deposited by these rivers has created some of the most fertile plains in the world. Bangladesh has 58 trans-boundary rivers, making water issues politically complicated to resolve. The country has 700 km of coastline. Most parts of Bangladesh are less than 12 m above sea level.

Figure 1. Regional view: Bangladesh, the drainage system of the mighty rivers

