

The impact of gender dynamics on the welfare of working equids in Nepalgunj

What was this study trying to find out and why is it important?

This study explored the role of women in equid welfare; how equids contribute to women's livelihoods; the current state of equid welfare in women's care; the barriers women face to improving their equids' welfare and to find ways of overcoming these. This is important because working equines in impoverished rural communities in Nepal provide women with a source of income, improve their status and support other livestock. In turn, women play an important but often overlooked role in the welfare of working equines while facing barriers to looking after them due to gender inequality. Further research on the relationships between women and equids is important to help design successful outreach programmes that are appropriate to local community needs.

What did we do?

We interviewed 16 women in different equine-owning communities around Nepalgunj to learn about their perspectives on the roles they play in looking after equids, how equids contribute to their lives and the challenges they face in looking after them. We also assessed the welfare of their horses by observing their body condition, signs of disease and injury and their environments.

What did we learn from this project?

We learnt that women in Nepalgunj play an essential role in looking after horses, performing day-to-day chores such as feeding them and cleaning their shelters, especially while men are at work. Women highly value the welfare of their equines as they're family members, an important source of income and essential for food security. Improving the housing and nutrition of their equines, was a key concern for many women. As many of the horses we saw were underweight or had problems related to shelter conditions, these are justified concerns. We also found lots of horses had injuries or scars from poorly fitting tack.

Although women would always call the vet out if their horse was sick, they sometimes struggle to do this independently as men oversee financial decisions or because women don't know how to use mobile phones so can't call the vets themselves. Some also struggle to pick up horses' feet or give medication due to safety concerns which means horses might not receive this care while men are away. Women want to attend training on horse care and alternative ways to make money from home but must ask permission from men to do this.

Animal Nepal are working to help women overcome these barriers already by providing training on equine health and alternative ways to make an income. Other ways we can help women care for their equids in future include having female-only community trainings local to women so they don't have to leave their homes for long, providing some training on equine behaviour so that women feel more comfortable handling them and providing support to help them improve the feeding and shelter of their animals. We could also teach women about saddlery to help improve the fit of the horses' tack while providing an alternative income for women.



A brick kiln in Nepalgunj, where working equids are employed for part of the year (Photo by author, 2025)



Shardha from the Animal Nepal Team chats with one of the participants during an interview, under the shade of the family's shelter (Photo by author, 2025)

"When its sick very important because when you call a vet early, it will get treated fast, but if you do it late, it will take a long time to heal" – Participant 4

"You can give training on any topic, it will be very helpful" – Participant 6

"When you [Animal Nepal] bring any kind of programme, I work there sometimes...making the pickle, making baskets, all these things" - Participant 2

Report:

Background:

Nepal is home to ~100,000 working equids, with an important but overlooked role in society [1]. In Nepalgunj (population 164,444), equid work includes transporting goods and people [2, 3]. Essential conditions for animal welfare, as outlined by the 5 domains model [4] are often unmet in these equids due to: trauma from equipment use and handling, inadequate nutrition/water access, poor hoof condition [5, 6], inadequate access to veterinary professionals [5], and a weak governmental animal health system - which isn't focused on equids [3].

Poor welfare has ramifications on animal and human health, wellbeing and livelihoods [7]. This concept is best encompassed by the term 'one welfare', describing the interconnectedness of animal welfare, human wellbeing and the environment [8]. 'One-welfare' applies to the relationship between women and working equines as women make significant contributions to equid husbandry and welfare [9, 10]. In turn, equids provide direct health and environmental benefits [11] and support daily livelihoods [10], thereby contributing to SDG 5 (gender equality) [2]. Accordingly, women from impoverished equine-owning communities rank equines as the most important livestock they own [9, 12].

Despite this, women have limited access to resources for increasing animal productivity and improving husbandry [13], resulting in sub-optimal welfare. In Nepalgunj, 75% of household heads are men, there's a high prevalence of female child marriage and lower levels of literacy in women than for men [14], indicating patriarchal societal structures. Therefore, women often have little input value for product sales, investments and local development activities, resulting in barriers to improving welfare of their livestock [15].

Most publications focused on the socioeconomic impacts of working equids' health problems and have limited consideration on female perspective's, resulting in research gaps on the links between equid health, women's wellbeing and livelihoods. Further research is necessary for policy improvement [16] and to design programmes aiming to improve one-welfare because successful outreach strategies must be considerate of cultural standing, socioeconomic conditions and local demand [6].

This project aims to expand understanding of how gender dynamics shape the welfare of working equids in Nepalgunj, by:

1. Identifying the role's women play in equid welfare
2. Examining how equids contribute to women's livelihoods
3. Assessing the welfare of equids under women's care
4. Exploring existing gender barriers to equid welfare and potential strategies to overcome these.

Methods:

Ethical review

The research was approved by the R(D)SVS Veterinary Ethical Review Committee, Human Ethical Review Committee, Nepal Health Research Council and Nepal Veterinary Council.

Study Design

A concurrent mixed method study design was adopted; qualitative interviews and a quantitative animal welfare assessment.

Participants

Convenience sampling was selected due to time and resource constraints. While this approach may introduce bias, random sampling typically requires a larger sample ($n > 30$) [17] reducing analytic depth, which is required to explore nuanced social issues [18]. A sample size of 16 interviews and 15 equine welfare assessments was achieved, aligning with recommended ranges of 3-16 participants [19, 20]. Each participant was assigned a unique identifier (UI) for anonymity.

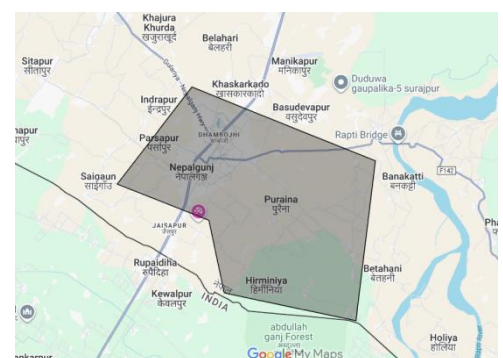


Fig 1. Map of approximate study area – 5 separate communities were visited within this area to give a breadth of perspectives on the subject, (created by author using Google MyMaps, 12/2025).

Qualitative & Quantitative Study (Interviews and Welfare assessment)

The semi-structured interview protocol was developed in collaboration with Animal Nepal (AN) using questions adapted from *Vasanthakumar 2021* for use in the context of Nepalgunj.

Face-to-face interviews took place in women's homes often with others present, including male family members. Participants were given interview information and consent was sought. Interviews were conducted with live interpretation to English and recordings for subsequent verbatim transcription and translation by AN veterinarians. Due to time constraints, a subset of interviews were transcribed and translated entirely (n=7) so only complete transcripts were used for analysis.

The welfare assessment was adapted from the protocol used by *Rowland, 2022 [21]*. Horses were held by their owners while being visually assessed for welfare parameters by the author, with input from AN veterinarians to ensure accuracy of results.

Analysis

Using reflexive thematic analysis (RTA), the participants' narratives were examined to identify themes and sub-themes using NVivo 15. This involved a six-phase analytic process with both an inductive and deductive approach [22]. Following refinement and coding of the dataset, a simple descriptive approach was used to analyse the welfare assessments [23].

Key Results and Takeaways:

This study demonstrates a strong one-welfare relationship in Nepalgunj, highlighting women's central role in the husbandry of working equids and the reciprocal benefits of improved food security and income.

Five key themes, with respective sub-themes were developed from RTA and are summarised in fig 2.

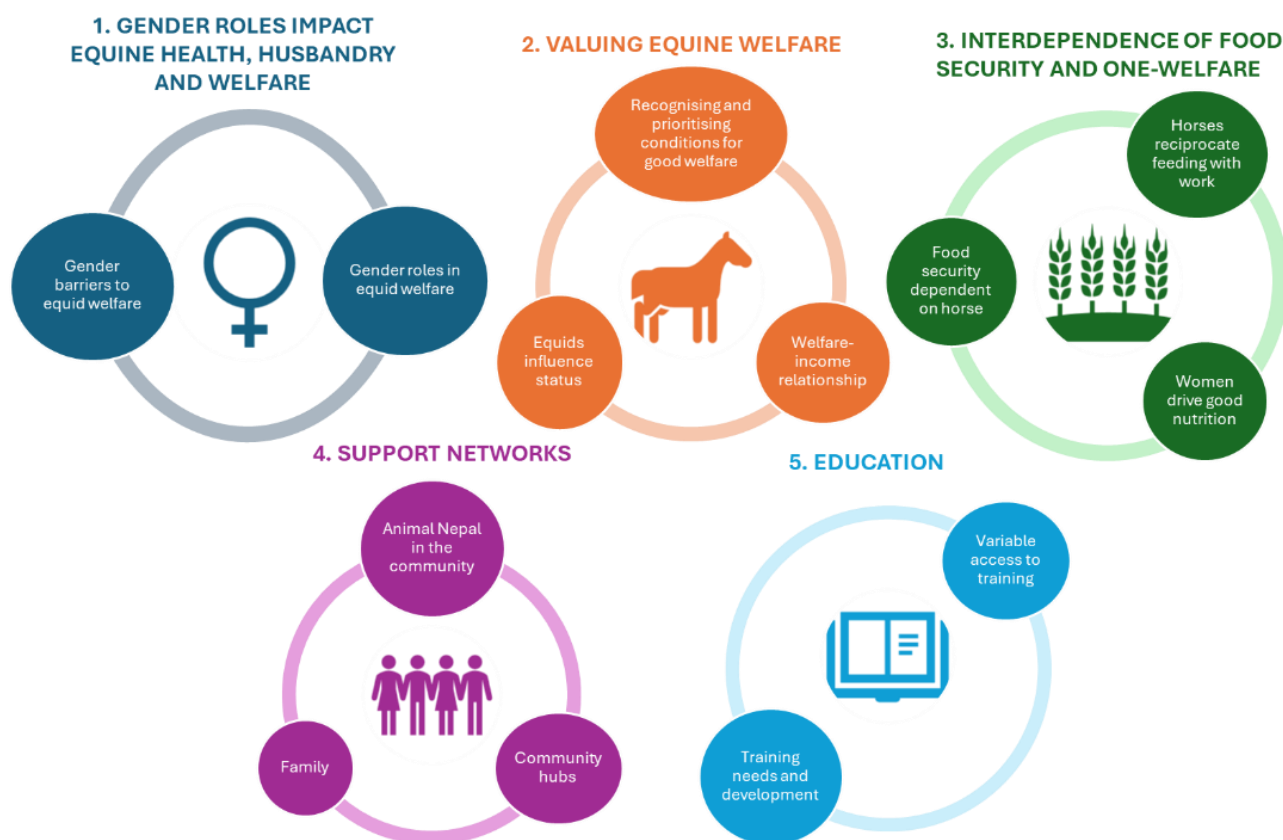


Fig 2. Five key themes and subthemes generated by reflexive thematic analysis from a subset of 7 interviews.

Summary of key findings:

- **Women in Nepalgunj have a multi-faceted role in equid care**, spending much of their time performing unpaid husbandry chores.
- **Women perceived nutrition to be integral to welfare and want to improve this** but face money and resource constraints.
- Low average BCS found in the welfare assessment suggest these concerns are well-founded.
- **Although there was evidence of water provision, this was unlikely to meet requirements** for horses working in hot environments (fig 3), considering a recommended requirement of 40-60l/d [25].
- Poor nutrition also reduces hoof quality [26], which was found to be an issue. Thus, **improving equid nutrition and hydration is a priority**.
- **Women wanted to improve shelters** by providing dry ground to prevent hoof conditions (fig 4). Finding a case of thrush/scratches and horses stood in water-logged fields, indicates this is another well-founded concern.
- **Economic contributions of working equids are essential for women's incomes** as 'property' and 'investments', doubling earning potential at markets and being essential to food security.
- **AN's work educating women to buy healthy horses is crucial for prudent investment**.
- **As the primary earners, men carried authority for investment** which exacerbated inequality in decision making. As demonstrated by women participating in pickle making workshops, **AN programmes are addressing income disparity**.
- Savings and credit groups, known to be successful elsewhere in rural Nepal [27], are also working in Nepalgunj to improve financial security, social networks and access to education for women. These projects **could be expanded by training women in saddlery, reducing the prevalence of lesions from poor tack fit**, while providing an alternative income.
- **Women expressed positive emotional connections to working equids**, reflected by positive human-animal interactions evidenced by the observer approach test. However, women expressed **safety concerns over picking up feet and providing medication**. As men are often away working, this could cause gaps in care while they're absent. Furthermore, **hoof conditions were the most common orthopaedic problems identified in the welfare assessment** so providing behavioural training (e.g. using guidelines issued by WHW) [28] to help women handle equids with confidence, could address this issue.
- **Gender inequity in technology access**, stemming from men being given priority to access scarce resources and illiteracy in women preventing their use, **hindered women's access to veterinary care**.
- **There was strong demand for further training among women**, yet as men have authority to refuse permissions for attending educational programmes, they should be engaged as "co-beneficiaries, advocates and allies" [29] of women's education.



Fig 3. Images showing a) a woman pumping water from the well to make tea for her family while the family horse is tied under the shade of tree. This is an example of the water source used for equids (UI13). b) horse tethered in waterlogged area of the field with puddles serving as natural water sources + provision of extra water 2x daily. The field was in direct sunlight with no access to shade in ~35°C (UI7). (Photo by author, 2025)



Fig 4. Images showing a) shelters often shared with other livestock/family living space when horses out during the day. Note the feed troughs, dirt flooring, brick building and corrugated roof structure (UI16). b) This family also had an electric fan to provide cooling for the horse during hot weather (UI14). (Photo by author, 2025).

To conclude, women showed clear awareness of equid welfare needs although improvements are constrained by gender and socio-economic barriers. These challenges are being addressed by AN and could be strengthened through expanded training, education and development programmes, for which there's strong demand. Although limited by sample size, potential influence of observers, and a fully hands-off welfare assessment approach, this research provides a foundation for future development strategies.

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