

Development and validation of animal welfare knowledge, attitude, and practice assessment tool among smallholder farmers in Ethiopia

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Introduction

Improved animal welfare is strongly linked to farm productivity, food security, and human health. However, the welfare of livestock managed under extensive farming systems is often poor as a result of several factors. Improving animal welfare is a human responsibility and influenced by a person's values and experiences. Thus, understanding animal welfare knowledge, attitude and practice among livestock keepers is an important step toward identifying the gaps in animal care and providing a proper recommendation. Here we present a novel tool to assess KAP around animal welfare amongst smallholder farming communities in Ethiopia.

Study area

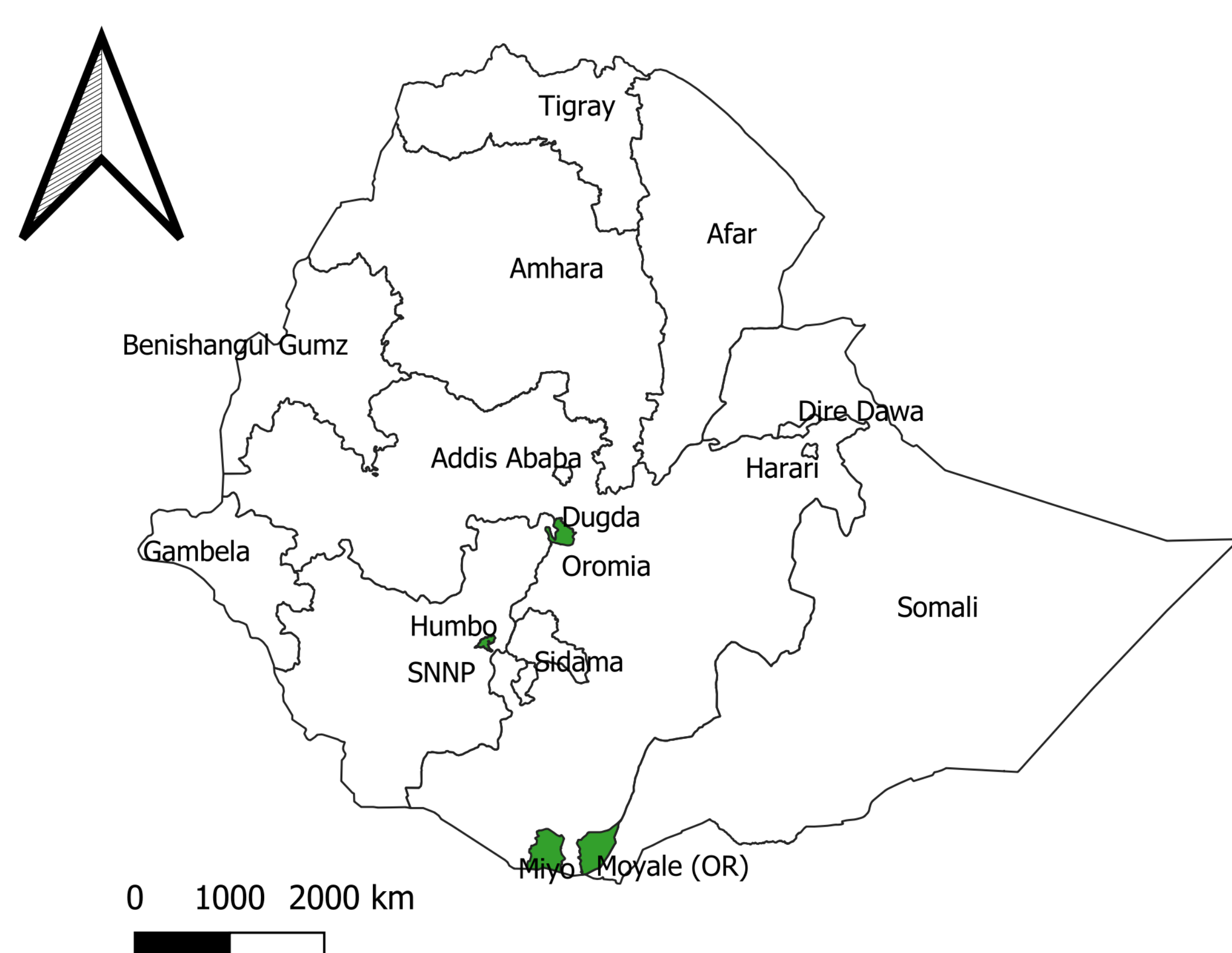


Fig.1 The location of the study area in Ethiopia

Data collection tool and process

The information was collected from a total of 197 (106 men and 91 women) using questionnaire consists of 34 items to determine knowledge (11 items), attitude (10 items), and practice (13 items).

Two-parameter logistic regression item response theory (2 PL) was fitted. Differential item functioning (DIF) analyses were performed to determine the likelihood of individual items responding differently with two groups

Results and discussions

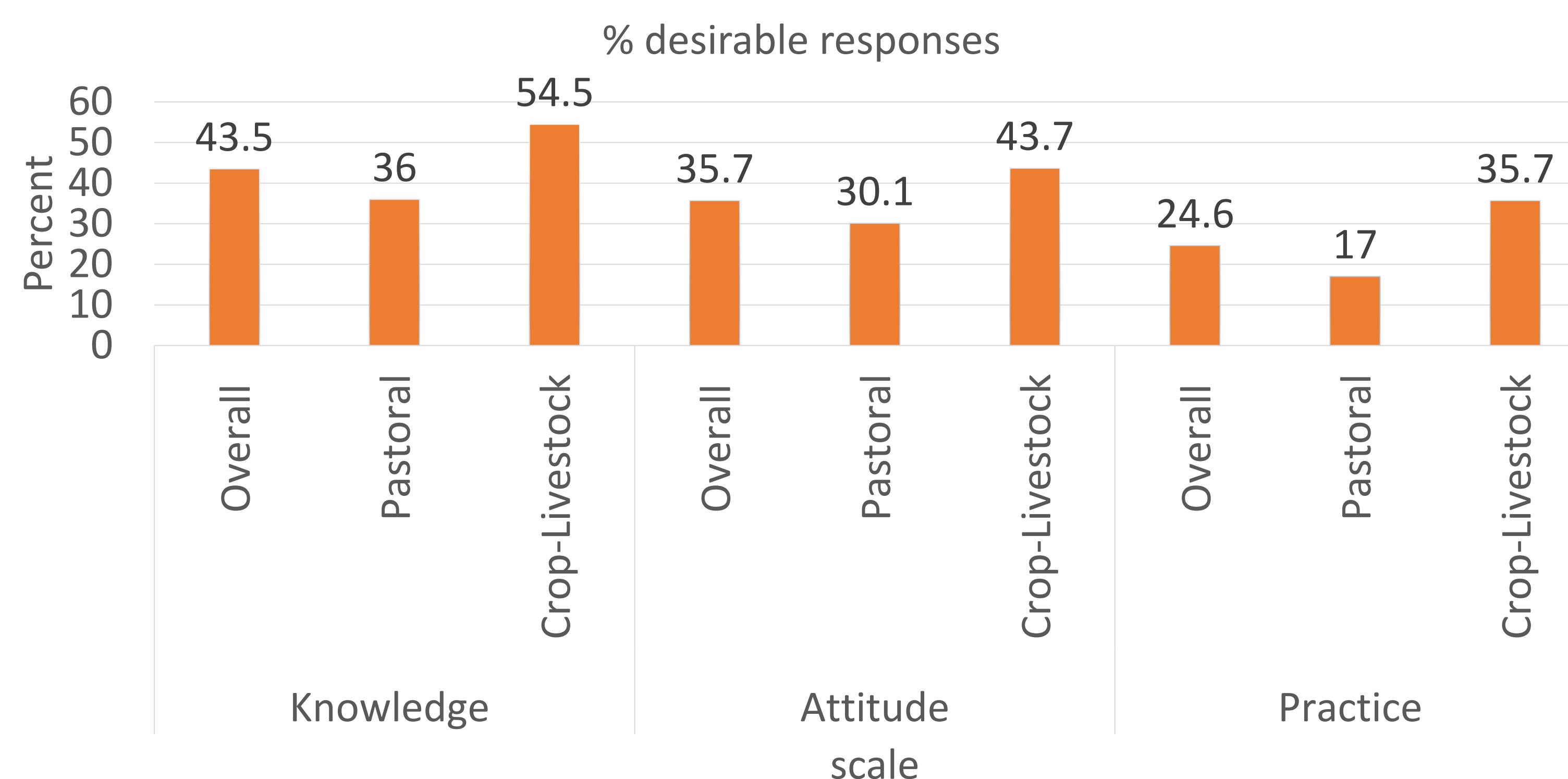


Fig. 1 Percent of desirable responses across farming system

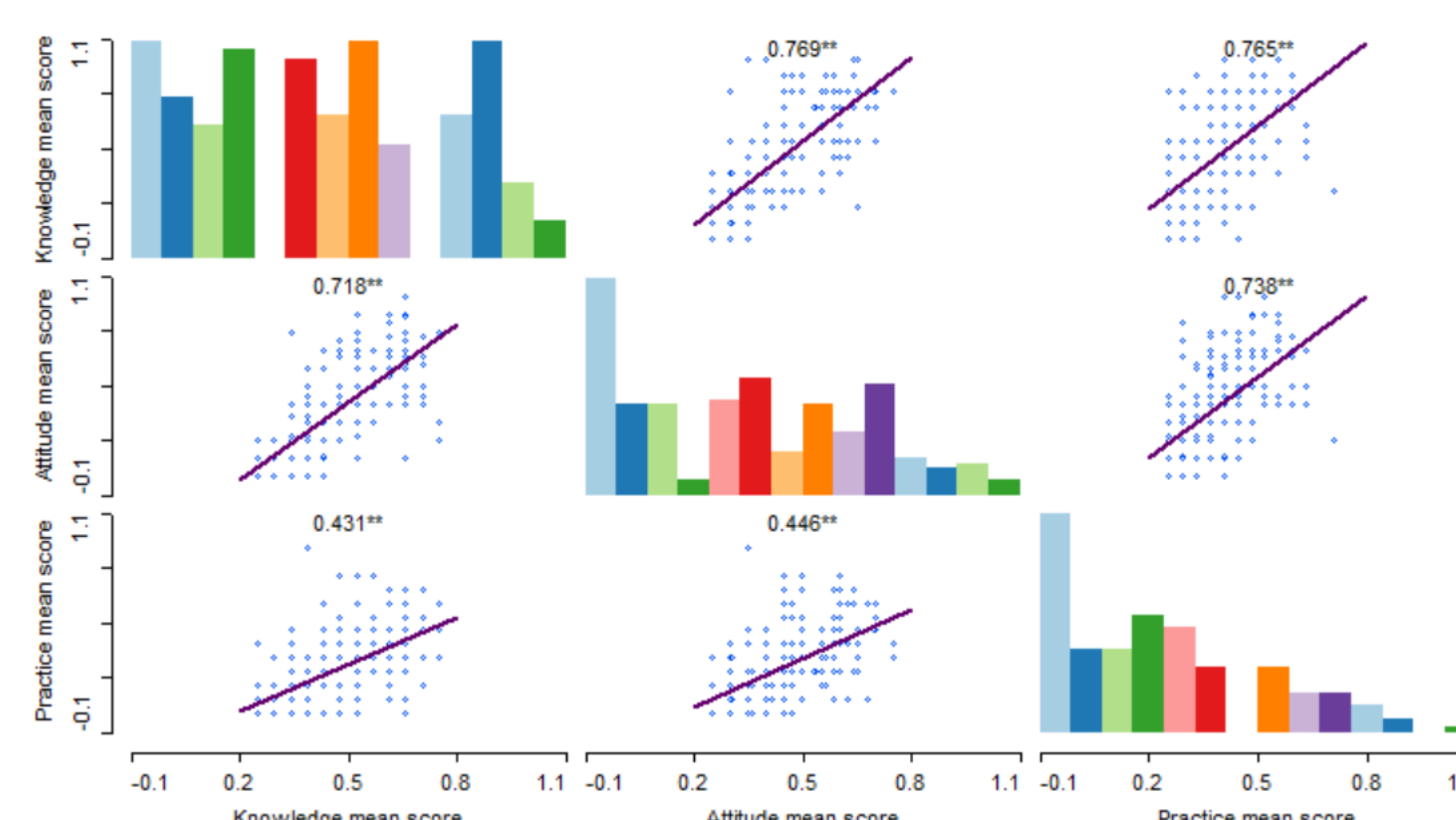


Fig. 3 Correlation between respondents' knowledge, attitude, and practice

All KAP scales were sufficiently unidimensional for the application of IRT analysis. Eight knowledge items, and only one items from attitude and practice showed DIF related to the farming systems. This might be attributed to information inequalities and resources used to improve animal welfare at the grass-root level.

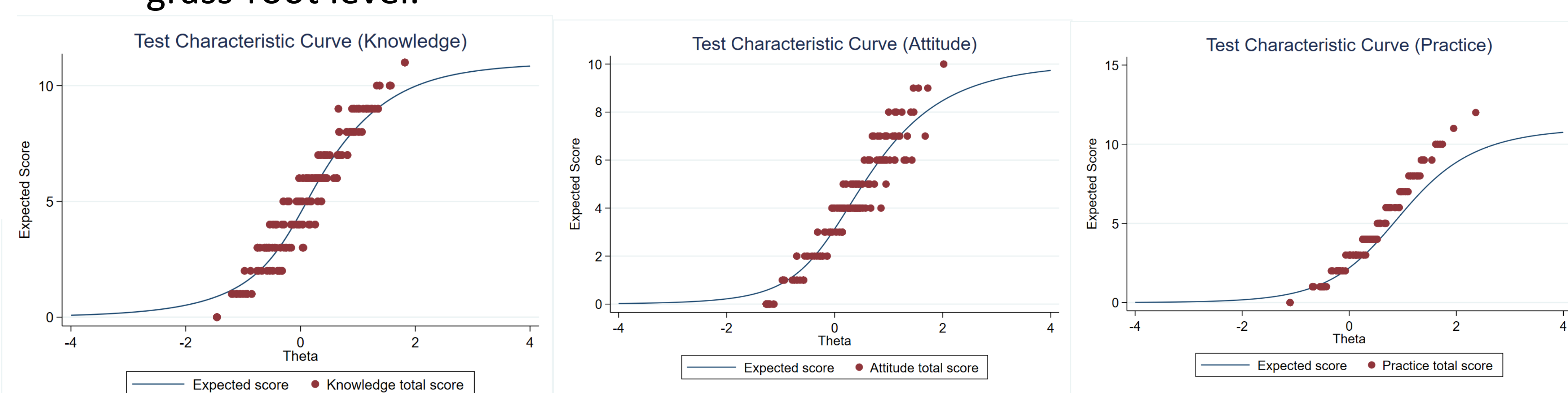


Fig. 4. Test characteristic curve for animal welfare KAP scale with an added plot (red spots) of the summated score versus ability (predicted score)

Conclusion

The developed questionnaire had satisfactory psychometric properties in terms of measuring animal welfare KAP in Ethiopian smallholder farmers, making it suitable for measurement of the impact of intervention on animal welfare such as targeted training.

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