

## Training of Rural Motorcycle and Three-Wheeler Taxi Riders in Sub-Saharan Africa

### Research Summary

- ▶ This research on Enhancing the understanding on safe motorcycle and three-wheeler use for rural transport, showed that few motorcycle or three-wheeler taxi riders operating in rural areas had been formally trained. Where training was provided it was often ad-hoc, with limited practical riding time and was not standardised or quality assured.
- ▶ The main barriers to training in rural areas were cited as a lack of available training, cost and riders not believing in a need for training. Some stakeholders had concerns over the quality of training where it is available.
- ▶ Riders in Kenya who were trained were more likely to wear helmets and were generally less likely to be involved in road crashes than untrained riders.
- ▶ This research led to the creation of an instructor's manual in Tanzania to accompany the training curriculum and help training institutions and other stakeholders to improve the quality of teaching.
- ▶ The instructor's manual will be available in French and Swahili, and a version of the manual that can be adapted for use across Africa is being prepared.
- ▶ Deliberate, concerted and aligned efforts are required by stakeholders, including government departments, the traffic police and training institutions, to ensure that quality training is available and affordable to rural motorcycle and three-wheeler taxi riders.

Image 1 – A motorcycle taxi rider in Ghana parked at a 'stage'



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### Research Aims

The overall aim of this research was to improve knowledge and understanding concerning effective ways of enabling people living in rural communities to benefit from the safe use of motorcycles and three-wheelers.

There was an emphasis on rural motorcycle taxis, rider training, appropriate regulatory frameworks and realistic enforcement methods, and the research was intended to guide policy makers.

The research took place in Ghana, Kenya, Tanzania and Uganda from October 2016 to December 2018. At the time of the research, commercial motorcycle taxis were banned in Ghana, but legal in Kenya, Tanzania and Uganda. The project was funded by the UK's Department for International Development (DFID) as part of the Research for Community Access Partnership (ReCAP), and was carried out by a consortium of Transaid, Amend and TRL.

### Methodology

As part of this study, a review of motorcycle and three-wheeler taxi training was carried out. This review included online desk research, drawing on existing knowledge from both Transaid and Amend, and stakeholder interviews (including regulators, traffic police, training providers and associations) in each of the four project countries.

A survey of benefits and disbenefits of motorcycle and motorised three-wheeler taxis was conducted among riders, motorcycle taxi owners and other users in rural areas. A total of 1,135 people were interviewed across the four countries.

Image 2 – A research assistant interviews a passenger in Ghana



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### Key Findings

The research shows that motorcycle taxis are very important to rural communities in that they are often either the only existing, or the only affordable, mode of transport, and are an important source of income for riders. In the survey locations, motorcycle taxis accounted for an average of 83% of all motorised trips, being used for business activities as well as personal transport. They are particularly important as a means of emergency transport.

#### Causes of road crashes are often linked to rider error and lack of experience

Figure 1 shows that riders gave different reasons as the main cause of crashes in which they were involved. However, rider error (self), the actions of other road users, the condition of the road, and vehicle failure, were common contributory factors across all four countries. The research team advises that training riders on vehicle handling, hazard perception, defensive riding, basic mechanical appreciation and familiarisation on road traffic laws could help reduce the likelihood of these crashes occurring.

Figure 1 Main causes of crashes, as identified by riders

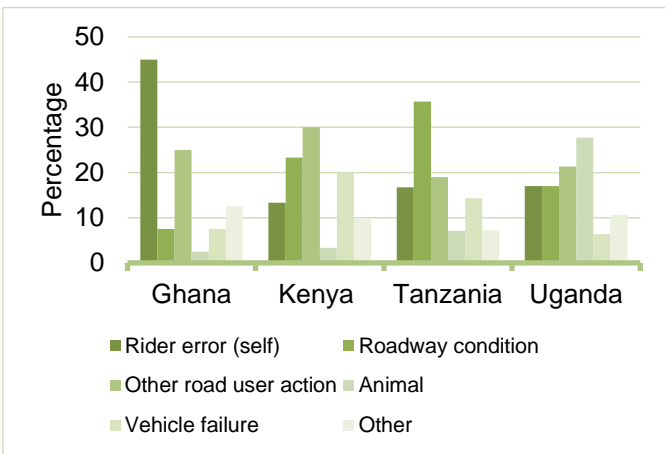


Figure 2 suggests that there is a link between how riders first learned to ride and the likelihood of riders and passengers being involved in a crash. In Ghana, Tanzania and Uganda very few riders learned to ride through formal training and reported very high rates of injuries. In Kenya, however, 19% of rural riders first learned to ride through formal training and riders self-report the lowest number of injuries. This reinforces the importance of rider training when riders start their riding career as a strategy to reduce injuries to passengers and riders.

#### There is a link between training and injuries to both passengers and riders

Figure 2 – How riders first learned to ride vs sustained injury in a crash

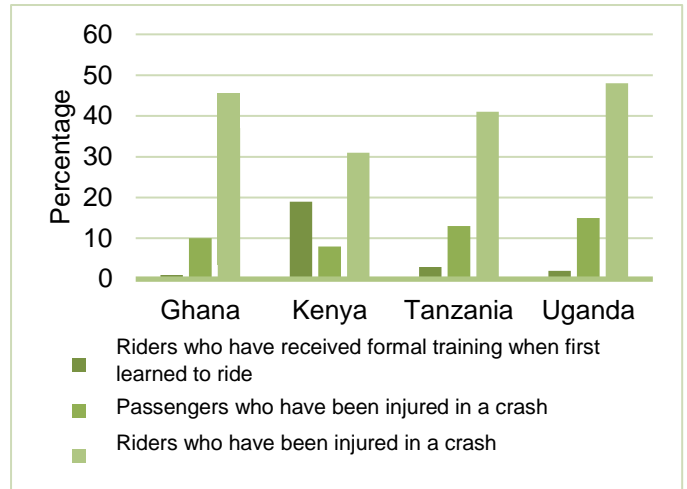
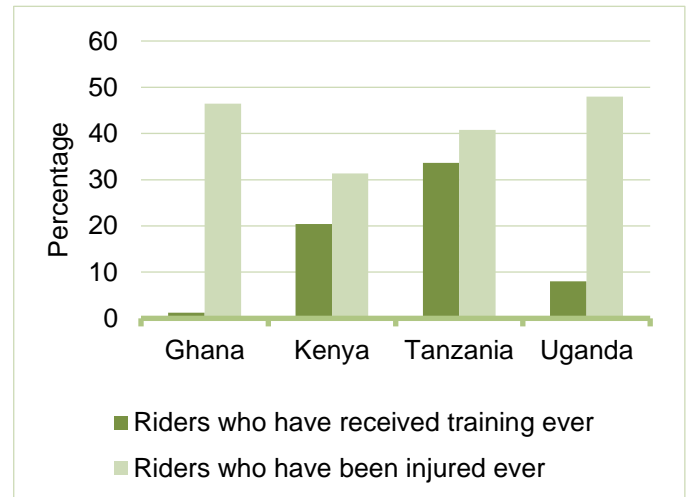


Figure 3 shows that Tanzania and Kenya have a higher proportion of riders who have ever, during their riding career, undertaken a training course (for which they were awarded a certificate), than do Ghana and Uganda, and the lowest number of riders who have been injured.

Figure 3 – Riders who have been trained (ever) and injured (ever) - by country



Combining all countries and aggregating the data, riders who have been trained have slightly lower levels of injury than those who have never been trained. However, disaggregating by country, it seems that in Kenya a higher percentage of riders who have been trained have been injured compared to the percentage of untrained riders. This may be because the trained riders in Kenya are more likely to report their crashes, or there could be an issue with the quality of 'on-the-job' training provided in Kenya.



The research shows that Kenya has the lowest proportion of severe injuries sustained, and Ghana has the highest. This is as self-reported by the riders, rather than a clinical assessment, but suggests a link between the level of training received and the severity of injuries sustained. Ghana, where motorcycle taxis are banned, has very low training levels (just 1%). Ghana also has the highest proportion of riders who have suffered a severe injury, have been injured more than once and who are still suffering from some physical, economic or psychological impact of an injury, suggesting a correlation.

Image 3 – A Traffic Officer briefing motorcycle riders in Tanzania



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**Riders who have been trained are more likely to wear a helmet**

The research showed that helmets are often only worn because the police require it. Once a rider is past the check point the helmet is regularly removed. On average, across the four countries, only 43% of rural riders said they ‘always’ wore a helmet. The figure was even less for their passengers (15%).

Figure 4 shows that riders in Kenya and Tanzania who have been trained are more likely to always wear a helmet. In Kenya, there is a statistically significant relationship between riders who have been trained and who always wear a helmet versus those who have not been trained (probability value of 0.013), thereby demonstrating the safety benefits that can be achieved through training. In Uganda there is no difference and in Ghana too few riders have been trained to conduct meaningful statistical analysis.

Figure 4 – Riders who have been trained/not trained that always wear a helmet

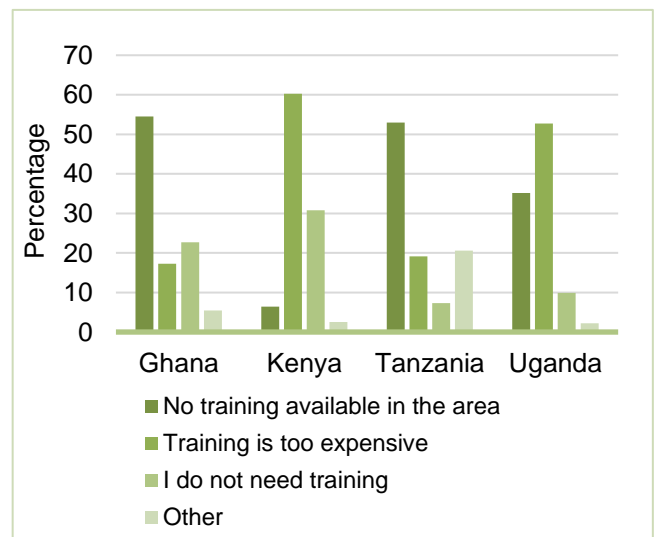


With better education and training, riders would gain a better understanding of the benefits of such things as helmets, driving licences, insurance, road traffic laws and passenger safety. With a greater understanding, riders can be safer on the roads and reduce the risk of crashes resulting in injury and death.

**Training is less accessible for riders of two- and three-wheelers in rural areas**

Figure 5 shows that in Ghana and Tanzania, riders cited a lack of locally available training as the main barrier to undertaking formal training. In both Kenya and Uganda, the main barrier is the cost of training.

Figure 5 - Reported reasons for motorcycle riders not undergoing formal training



In Kenya and Ghana, the second most commonly cited reason for not undertaking formal training was 'I do not need training'. This suggests that the riders who gave this response believe their riding ability to be sufficient for their needs, and that they do not experience any negative consequences from not having undertaken formal training, such as the lack of ability to obtain a driving licence or being subjected to fines or other payments to authorities.

Stakeholders such as training schools and the regulators consulted throughout this research commented that driving schools find it difficult to make a profit in rural areas where the population density is low. Some government stakeholders also cited a lack of skilled trainers and lack of a standardised training approach as a barrier to quality training.

### Production of Manuals to Improve Motorcycle Taxi Operations and Training

Based on the findings from Tanzania, two manuals have been produced, the majority of the contents of which are also applicable to other countries, and available in Swahili and French.

The first manual offers guidance for the set-up and operation of motorcycle taxi and three-wheeler associations, covering topics such as management structure, rider training and mentoring, licence acquisition, vehicle maintenance, rider and passenger safety and security, personal protective equipment and customer care.

The second is an instructors' manual which complements an existing motorcycle and three-wheeler rider training curriculum which was developed in 2015 in Tanzania. The instructor's manual covers modules such as road signs, signals and markings, being ready to ride, basics of motorcycle riding, manoeuvring exercises, negotiating the road safely, defensive riding, customer care, HIV & AIDS awareness, crash management and first aid.



### Policy Implications and Recommendations

The data suggest that riders who have been trained are generally less likely to be involved in road crashes, and are more likely to display responsible rider behaviour such as helmet wearing.

Legislation that requires riders to have undergone training often exists but is not widely enforced, especially in rural areas. Efforts are required to enforce this legislation and to prevent corruption in obtaining certificates and licences.

In Ghana training rates are very low and the severity of injuries reported is worryingly high. It is recommended that the government consider reviewing the ban specifically in rural areas as part of an effort to improve regulation, enforcement and access to training.

Motorcycle taxi associations have an important role to play in encouraging and facilitating quality training and legislative compliance. The association registration process should be strengthened and the new manual for associations can support efforts towards self-regulation.

Formal training as well as sensitisation at the local level by the authorities is required. Training of trainers (and training of master trainers) is recommended in all four countries to ensure that sustainable capacity exists. Practical training on hazard perception, controlling a motorcycle, braking, overtaking (not undertaking), use of mirrors, cornering, judging appropriate speed, and use of personal protective equipment needs to be included in training, and also as part of the testing criteria. Efforts should be made to standardise training at the national level.

Training needs to be available in rural areas and affordable for the riders without compromising on quality. Local government could provide bursaries (as currently happens in Kenya) and driving schools should be encouraged to apply for this available funding in order to deliver quality training outside urban areas. Such funding could be provided through an allocation directly from a petroleum levy or other taxation.

This research could be extended to deliver practical training and to conduct a Benefit Cost Ratio/Business case to further quantify the economic impact of training.

#### For more information:

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