



## An Assessment of the Safety of Transport Modes Used By Pupils to and from School in Selected Schools of Western, North Western and Copperbelt Provinces of Zambia

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### ABSTRACT

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Assessment of the safety of transport modes used by pupils to and from school is an important issue for ensuring the well-being and academic success of pupils. This research aimed at assessing the safety of transportation modes used by pupils in selected schools of Western, North Western, and Copperbelt Provinces of Zambia. The study used a qualitative approach involving 4 schools conveniently sampled from each of the three (3) provinces. A total of eight pupils were further conveniently selected from each of the schools. More so, 8 pupils were sampled conveniently from each of the schools, making total of 96 pupils altogether. This means 32 pupils from each province participated in this study. The selection criteria included schools with a diverse range of pupil populations and varying levels of experience. Data was collected using in-depth interviews and Focus Group Discussion (FGD). The data collected was analyzed using thematic analysis to identify patterns and themes in the data. The results showed that different transportation modes, such as vehicles, bicycles, and walking, had different levels of safety risks and challenges. Common safety concerns included speeding, reckless driving, inadequate vehicle maintenance, and lack of appropriate safety gear. The study identified several recommendations to mitigate these risks, such as improving road infrastructure, enforcing speed limits, providing safety education for pupils, and ensuring adequate vehicle maintenance. Additionally, the study highlighted the importance of parental involvement in ensuring the safety of their children during school transportation. The findings of this research can inform policies and interventions aimed at improving the safety of school transportation modes and promoting the well-being and academic success of pupils in Zambia.

### Keywords:

Transport, safety, Mode of transport, assessment

### 1. INTRODUCTION

Transportation is an essential aspect of modern-day society, facilitating the movement of people and goods from one place to another. While transportation provides convenience and accessibility, it also poses several risks to the safety of the passengers and the community. According to the World Health Organization (WHO), road traffic accidents account for approximately 1.35 million deaths globally each year (WHO, 2021). The majority of these accidents involve young people, especially school-going children, who are vulnerable due to their lack of experience and exposure to road safety.

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To address this issue, it is crucial to promote awareness and education on transport safety measures, especially in schools. Schools can play a pivotal role in creating a safe environment for pupils, ensuring their well-being during commutes to and from school, and educating them about responsible road behavior (Mubita, 2018; Mubita, 2021). Transport safety measures in schools refer to the steps taken to ensure the safety of pupils during commutes to and from school. These measures include various aspects, such as transportation infrastructure, vehicle safety, driver qualifications, and traffic management. For instance, schools can ensure that their transportation infrastructure, including roads and sidewalks, is well-maintained and designed to accommodate pedestrians and cyclists. Similarly, schools can also mandate the use of safe vehicles, with regular maintenance and checks for safety features such as seat belts, airbags, and brakes.

## **Kaiko Mubita et al, An Assessment of the Safety of Transport Modes Used By Pupils to and from School in Selected Schools of Western, North Western and Copperbelt Provinces of Zambia**

Transport safety concerns for pupils to and from schools are a significant issue that needs to be addressed. Road traffic accidents are a significant concern for pupils traveling to and from school. According to a study conducted by the National Highway Traffic Safety Administration, between 2008 and 2017, there were 264 school-age children killed in school transportation-related crashes (National Highway Traffic Safety Administration, 2019).

Pupils can also face bullying and violence while traveling to and from school. A study conducted by UNESCO (2019) and Mubita, (2018) showed that violence against pupils, including physical violence and bullying, is prevalent in many countries. More so, pupils are also at risk of stranger danger while traveling to and from school. A study conducted by the National Center for Missing & Exploited Children showed that in 2019, there were 1,868 attempted abductions of children reported in the United States (National Center for Missing & Exploited Children, 2020).

Mubita (2018) noted that weather conditions, such as heavy rain, snow, heavy winds and fog, can also pose a risk to pupils traveling to and from school. A study conducted by the National Safety Council showed that weather conditions were a contributing factor in 22% of all motor vehicle crashes (National Safety Council, 2021).

Unsafe transport for pupils can have significant effects on their education. Unsafe transport can lead to increased absenteeism among pupils. Pupils who have to walk long distances or cross dangerous roads to get to school are more likely to miss school (Fonseca, et al., 2014). This can affect their academic performance and overall educational outcomes. Pupils who miss school due to unsafe transport may experience a decline in their academic performance. A study conducted in India found that pupils who used unsafe modes of transportation to get to school had lower test scores than those who used safe modes of transportation (Singh, 2016).

Unsafe transport can also have negative effects on pupils' mental health. Pupils who have to navigate dangerous roads or endure long and uncomfortable journeys may experience stress, anxiety, and fear (Singh, 2016). This can affect their motivation to attend school and engage in learning. Pupils who face unsafe transportation to and from school may be more likely to drop out of school altogether. A study conducted in South Africa found that unsafe transportation was a significant factor in school drop-out rates (Fonseca, et al., 2014).

Unsafe transport can put pupils at risk of injury or death. Pupils who walk along busy roads, ride in overcrowded buses, or travel on poorly-maintained vehicles are at a higher risk of accidents (World Health Organization, 2018). This can have long-term effects on their health and well-being.

In Zambia, road transport traffic accidents have been a growing concern, especially for pupils who are often exposed to road hazards while commuting to and from school.

According to the Zambia Police Service, there were 35,875 road traffic accidents recorded in 2020, resulting in 1,799 fatalities and 13,576 injuries (Zambia Police Service, 2020).

Pupils are particularly vulnerable to road accidents due to their limited experience and knowledge of road safety. In a study conducted by Musonda et al. (2021), it was found that 80% of the pupils surveyed in urban schools in Zambia had experienced a road traffic accident or a close call while commuting to school. The study also revealed that pupils often engage in risky behavior such as crossing roads without looking both ways, using mobile phones while walking, and walking in the middle of the road.

Furthermore, the lack of proper road infrastructure and inadequate traffic management systems also contribute to the high incidence of road traffic accidents in Zambia. The World Health Organization (WHO) estimated that Zambia has a road traffic fatality rate of 28.9 per 100,000 population, which is higher than the African regional average of 26.6 per 100,000 (WHO, 2018).

To address this issue, the Zambian government has taken several measures, such as the implementation of the Road Traffic and Safety Agency (RTSA) and the introduction of the Road Safety Education Program in schools. Research engagement could also help in coming up with new ways of improving transport safety for pupils to and from school. Lako and Mubita (2021) also proposed research engagement in order to find solutions to challenging situations in the environment. However, there is still a need for more concerted efforts from all stakeholders, including schools, parents, and the government, to ensure the safety of pupils on the roads.

Unsafe transport for pupils to and from schools in Zambia has the potential to affect the attainment of the much needed educational goals as noted in the foregoing. Against this background, this study assessed the safety of transport modes used by pupils to and from school in Zambia, using selected schools of Western, North Western and Copperbelt Provinces of Zambia as reference points.

**1.1 Aim:** The aim of this study was to assess the safety of transport modes used by pupils to and from school in selected schools of Western, North Western and Copperbelt Provinces of Zambia

### **1.2 Objectives**

This study was guided by the following objectives:

- (a) To identify the modes of transport used by pupils to and from school in selected schools of Western, North Western, and Copperbelt Provinces of Zambia.
- (b) To investigate the safety risks associated with different modes of transportation used by pupils to and from school in selected schools of Western, North Western, and Copperbelt Provinces of Zambia.

- (c) To develop recommendations for enhancing the safety of pupils during transportation to and from school in selected schools of Western, North Western, and Copperbelt Provinces of Zambia.

### **1.3 Significance of the study**

The study on the assessment of the safety of transport modes used by pupils to and from school is significant for several reasons:

*Safety:* The safety of school children is of utmost importance. This study could help to identify potential risks and hazards associated with different modes of transportation used by pupils to and from schools in Zambia. This information could be useful in developing strategies and policies aimed at ensuring the safety of pupils during their commute to and from school.

*Health:* The study could also provide valuable information on the health effects of different modes of transportation used by pupils. For instance, walking or cycling to school has been linked to better physical and mental health outcomes for children. Understanding the health impacts of different modes of transport could help in promoting healthy and active lifestyles among school children.

*Environment:* The study could also contribute to our understanding of the environmental impacts of different modes of transportation used by pupils. For example, walking, cycling, or using public transport can reduce carbon emissions and improve air quality. The findings of this study could be used to inform policies aimed at reducing the environmental impact of school transportation.

*Policy:* Finally, the study could inform the development of policies aimed at improving the safety, health, and environmental outcomes of school transportation. For example, the study could be used to advocate for the provision of safe walking and cycling infrastructure, the use of school buses, or the implementation of policies that encourage carpooling among parents in Zambia and beyond. In summary, the assessment of the safety of transport modes used by pupils to and from school is significant as it helps to promote the safety, health, and environmental outcomes of school transportation and inform policy development in this area.

### **1.4 Theoretical Framework**

The safety of transport modes used by pupils to and from school is an important issue that has been studied extensively by researchers and policymakers. There are several theories and models that have been developed to explain the factors that influence the safety of school transport modes. In this study, two theories were used to inform the study. These were, Haddon Matrix and Social-Ecological Model (SEM). This study used the Haddon Matrix, which was developed by William Haddon Jr. in the 1970s (Haddon, 1972). The Haddon Matrix is a framework for understanding the factors that contribute to injuries and accidents and for developing interventions to prevent them. The matrix is organized into

three phases: pre-event, event, and post-event. In the pre-event phase, factors such as the design of the transport system, the behavior of road users, and the policies and regulations that govern transport safety are considered. In the event phase, factors such as the speed and direction of the vehicle, the type of impact, and the use of safety equipment are considered. In the post-event phase, factors such as emergency response, medical care, and rehabilitation are considered. This Haddon Matrix was used in this study because it highlights safety elements such as the design of the transport system, the behavior of road users, and the policies in different modes of transport used by pupils to and from school.

The Social-Ecological Model (SEM), emphasizes the interaction between individuals, their environments, and the broader social and cultural context in which they live (McLeroy et al., 1988). The SEM is useful for understanding the complex interplay between individual, interpersonal, organizational, community, and policy factors that influence transport safety. For example, individual factors such as age, gender, and health status can influence the safety of transport modes, as can interpersonal factors such as peer pressure and social norms. Organizational factors such as school policies and transportation regulations can also play a role, as can community factors such as the availability of sidewalks and street lighting. Finally, policy factors such as laws and regulations can have a significant impact on transport safety. The Social-Ecological Model (SEM) was ideal for this study because it helps us understand the complex interplay between individual, interpersonal, organizational, community, and policy factors that influence transport safety.

## **2. REVIEW OF RELATED LITERATURE**

This study reviewed literature for some selected studies on the modes of transport used by pupils to school and their safety as follows:

*"Travel to School and Safety Issues: An Analysis of the Mode of Transport and School Journey of Children in the UK" by T. Parkin, et al. (2004)*

This study analyzed data from a national survey of children's travel to school in the UK. The study found that walking and cycling were the most common modes of transport, but that car use was increasing. Safety concerns were identified as a key barrier to active travel, particularly for parents. The study recommended improvements to infrastructure and road safety measures to encourage more active travel.

*"Travel Behavior and Safety of High School Students: Analysis of a National Survey" by S. Bhat, et al. (2008)*

This study analyzed data from a national survey of high school students in the US. The study found that walking and biking to school were associated with higher levels of physical activity, but also with higher levels of injury. The study recommended that efforts be made to improve

**Kaiko Mubita et al, An Assessment of the Safety of Transport Modes Used By Pupils to and from School in Selected Schools of Western, North Western and Copperbelt Provinces of Zambia**

infrastructure and safety measures to encourage active travel while reducing injury risk.

*Developing a Localised Approach to School Safety and Health Management: The Case of Mongu Schools of Western Zambia by Kaiko Mubita (2018)*

This study reviewed the literature on school transport (e.g. walking, biking) and pupil's health. The study found that a safe system for school travel is everyone's responsibility. Mongu schools and their communities can play their part by improving school property and procedures, but Road Controlling Authorities also have a significant role to play to improve the safety of roads near schools as resources allow (Mubita, 2018 & Mubita, 2021).

*"Active School Transport and Children's Health: A Systematic Review" by L. Faulkner, et al. (2009)*

This study reviewed the literature on the relationship between active school transport (e.g. walking, biking) and children's health. The study found that active transport was associated with higher levels of physical activity, but that safety concerns were a key barrier to active travel. The study recommended that interventions be developed to improve safety and encourage more active travel.

*"Transportation and Health in the School Setting: A Systematic Review" by A. Mitra, et al. (2015)*

This study reviewed the literature on transportation and health in the school setting. The study found that active transport was associated with better health outcomes, but that safety concerns were a barrier to active travel. The study recommended that interventions be developed to improve safety and encourage more active travel.

Overall, these studies suggest that journeys to school are associated with safety varying safety risks. However, the studies did not assesses the risks associated with each mode of transport used by pupils to and from school, a gap that this study is filling.

**3. METHODOLOGY**

This section outlines the research methodology used in the study on the safety of transportation modes used by pupils in selected schools.

*Research Design:* The study employed a descriptive research design, which involved qualitative data collection and analysis. This was meant to get opinion and perception of pupils on the safety of transportation modes used by pupils in selected schools.

*Sampling:* The study used convenient sampling to select schools and participants for the study. A total of 4 schools were sampled from each of the 3 provinces. From each school, 8 pupils were sampled conveniently. The selection criteria included schools with a diverse range of pupil populations. Table 1 presents the study sample in summary

**Table 1: Study sample**

Province	No. of schools	No. pupils per school	Total no. of pupils per province
Western	4	8	32
North-western	4	8	32
Copperbelt	4	8	32
<b>Total</b>	<b>12</b>	<b>24</b>	<b>96</b>

**Source: Field data, 2022**

*Data Collection:* The study collected data using two main methods: Focus Group Discussions (FGD) and in-depth interviews. The pupils were interviewed individually and FGD guide was further administered to get more insights. This was meant to collect opinion and insights that could not be collected during interviews. The in-depth interviews were conducted with a subset of the participants to obtain more detailed and nuanced information.

*Data Analysis:* The data collected from the in-depth interviews and FGD were analyzed using thematic analysis to identify patterns and themes in the data.

**4. PRESENTATION OF FINDINGS AND DISCUSSION**

The findings of this study were presented and discussed in the order of objectives as follows:

(a) *The modes of transport used by pupils to and from school in selected schools of Western, North Western, and Copperbelt Provinces of Zambia.*

In selected schools of Western, North Western, and Copperbelt Provinces of Zambia, this study established that pupils journeyed to school through walking, using bicycles, motorbikes and vehicles as presented by table 2, 3 and 4.

**Table 2: Modes of transport used by pupils to and from school in selected schools of Western Province**

Mode of Transport	Number of Pupils	Frequency (%)
Walking	23	71.875
Bicycles	3	9.375
Motorbikes	2	6.25
Vehicles	4	12.5
<b>Total</b>	<b>32</b>	<b>100</b>

**Source: Field data, 2022**

As presented on table 1, most pupils in selected schools of western province sampled in this study mainly walked to school (71.875%). Others used bicycles (9.375%), motorbikes (6.25%) and 12.5% used vehicles.

**Table 3: Modes of transport used by pupils to and from school in selected schools of North-Western Province**

Mode of Transport	Number of Pupils	Frequency (%)
Walking	24	75
Bicycles	2	6.25
Motorbikes	2	6.25
Vehicles	4	12.5
<b>Total</b>	<b>32</b>	<b>100</b>

Source: Field data, 2022

As presented on table 1, most pupils in selected schools of north-western province sampled in this study mainly walked to school (75%). Others used bicycles (6.25%), motorbikes (6.25%) and 12.5% used vehicles.

**Table 4: Modes of transport used by pupils to and from school in selected schools of Copperbelt Province**

Mode of Transport	Number of Pupils	Frequency (%)
Walking	18	56.25
Bicycles	4	12.5
Motorbikes	2	6.25
Vehicles	8	25
<b>Total</b>	<b>32</b>	<b>100</b>

Source: Field data, 2022

As presented on table 3, most pupils in selected schools of Copper belt province sampled in this study mainly walked to school (56.25%). Others used bicycles (12.5%), motorbikes (6.25%) and 25% used vehicles.

The choice of mode of transport used by pupils to and from school is an important area of research in transportation studies. The mode of transport chosen by pupils can have a significant impact on their physical and mental health, academic performance, and overall well-being.

According to tables 1, 2 and 3 many pupils in selected schools in this study walked to and from school, particularly if they lived close to the school. This was because walking was a cost-effective and healthy mode of transport, but it could not be practical for pupils who lived far away from the school.

Walking was the most popular mode of transport used by pupils to and from school in selected schools in this study. This was because of the proximity of schools and residential areas. According to a study by the UK Department for Transport, walking and cycling are the most common modes of transport used by pupils aged 5-16, accounting for 48% and 2% of journeys, respectively (Department for Transport, 2018). Factors that influence the choice of walking include distance to school, availability of safe walking and cycling routes, and parental attitudes towards active travel.

Walking has numerous health benefits, including improved cardiovascular fitness, increased muscular strength and

endurance, and reduced risk of obesity and type 2 diabetes. Studies have also shown that walking and cycling to school can improve academic performance, as well as reduce stress and anxiety (Martin et al., 2014). However, there are also some challenges associated with walking and cycling, including concerns about road safety, lack of safe infrastructure, and adverse weather conditions. Some pupils noted that wild fires especially in dry season prevented them from going to school. They reported that fires that occurred near their footpaths were occasionally making them fail to go to school. However, they acknowledged that this was on very rare occasions. This challenge of fire on environment was also noted by Mubita *et. al.* (2020) stating that fire had the potential of destroying school property and the immediate environments.

Some pupils cycled to school. According to pupils, cycling was another cost-effective and healthy mode of transport that was commonly used by pupils in selected schools. However, pupils faced challenges such as long distances, steep hills, and poor road conditions.

Use of vehicles was another common mode of transport used by pupils to and from school in selected schools of this study. This was because of the convenient reasons noted by pupils. According to the UK Department for Transport study, use of vehicles accounts for 41% of journeys made by pupils aged 5-16 (Department for Transport, 2018). Factors that influence the choice of car travel include distance to school, lack of safe walking and cycling routes, and parental convenience in selected schools in this study. According to pupils interviewed in this study, the main benefit of car travel or use of vehicles was that it was convenient, as it allowed pupils to travel directly to school without the need for transfers or delays. Additionally, it was particularly useful for pupils who lived in rural areas or for those with disabilities or special needs. However, according to Panter et al., (2016) and Mubita (2018) travel by vehicles has several challenges, including traffic congestion, air pollution, and physical inactivity, which could have negative impacts on pupils' health and well-being. Furthermore, use of vehicles could be expensive for families, particularly those with low incomes. More so, however, use of vehicles for transport to school also has issues related to safety and security, concerns about reliability and punctuality, and potential exposure to air pollution.

In conclusion, the choice of mode of transport used by pupils to and from school is influenced by a range of factors, including distance to school, availability of safe walking and cycling routes, parental attitudes, and affordability. Walking and cycling have numerous health benefits, but can be challenging in terms of road safety and adverse weather conditions. Car travel is convenient but can have negative impacts on pupils' health and well-being, while public transport can be cost-effective but may raise concerns about safety and reliability. Overall, it is important for policymakers to consider these factors when developing

## **Kaiko Mubita et al, An Assessment of the Safety of Transport Modes Used By Pupils to and from School in Selected Schools of Western, North Western and Copperbelt Provinces of Zambia**

transport policies that support pupils' physical and mental health. Is it possible to conclude everything together at the end.

*(b) Safety risks associated with different modes of transportation used by pupils to and from school in selected schools of Western, North Western, and Copperbelt Provinces of Zambia.*

This study assessed safety risks associated with different modes of transportation used by pupils to and from school in selected schools of Western, North Western, and Copperbelt Provinces of Zambia. The participants were able to identify different safety risks associated with each mode of transport they used to and from school. Their selected voices were noted as follows:

*When walking to and from school, are exposed to various safety risks, including traffic accidents, crime, and violence (Pp 7: FGD).*

*Sometimes, we are exposed to rains and strong winds when walking to school. This is mostly in the rain season (Pp 5: FGD)*

*During the cold season, it is really a challenge to walk to school. The weather is too harsh, cold winds, unfriendly environment (Pp 11: FGD)*

*We girls who walk to school are particularly vulnerable to sexual harassment and violence. We are exposed to dangers of sexual violence (Pp 17: Interview)*

*We are at risk of being hit by speeding cars, bicycles and other automobiles (Pp 21: Interview)*

**Walking:** From the foregoing voices, it can be noted that pupils faced many challenges when walking to school. According to a study conducted by the World Health Organization (WHO), walking to and from school can be associated with various safety risks, including traffic accidents, crime, and violence (WHO, 2013). In Zambia, traffic accidents are a leading cause of death among children and young people, and pedestrian accidents account for a significant proportion of these deaths (Road Transport and Safety Agency, 2016).

Furthermore, according to a report by UNICEF, girls who walk to school may be particularly vulnerable to sexual harassment and violence (UNICEF, 2015). This is a concern in many countries, including Zambia, where sexual violence against women and girls is a widespread problem (UN Women, 2015).

To address these safety risks, various measures can be taken, such as improving road infrastructure, promoting road safety education, and providing safe walking routes to and from school. In Zambia, the government has implemented various

initiatives to improve road safety, such as the Road Transport and Safety Agency's Road Safety Education Program and the National Road Safety Council's National Road Safety Strategy (World Bank, 2019).

**Use of vehicles:** There are several risks associated with using vehicles to travel to and from school by pupils. Participants noted these risks as follows:

*We are at risk of being involved in car accidents, especially if we are not wearing seatbelts or if the driver is distracted (Pp 31: FGD).*

*We are at risk of being hit by cars when crossing the road, especially if there are no pedestrian crossings or if drivers do not obey speed limits (Pp 22: FGD).*

*We are exposed to risk of being involved in bus accidents, especially if the driver is speeding or driving under the influence (Pp 28: FGD).*

*We are exposed to risk of being hit by cars if there are no bike lanes or if drivers do not give them enough space on the road. We are at risk of falling off bikes if bikes are not in good condition or the road is bad (Pp 34: FGD)*

Use of vehicles to and from school put pupils to risk of road accidents. According to the World Health Organization (WHO), road accidents are the leading cause of death among children aged 5-14 years. Pupils who travel to and from school by vehicle are at risk of being involved in road accidents, which can lead to serious injuries or even death. Drivers may become distracted while driving, for example by using their phones, eating or drinking, or talking to passengers. This can increase the risk of accidents, particularly when driving near schools where there may be more children and traffic. Vehicles also emit pollutants, such as carbon monoxide and nitrogen oxides, which can harm the health of pupils who are exposed to them on a regular basis. This can lead to respiratory problems and other health issues.

**Cycling and use of motor bikes:** Cycling to and from school can have many benefits for pupils, such as improving fitness, reducing pollution, and providing a sense of independence. However, there are also several risks associated with cycling, including:

Cycling and use of motor bikes on roads can be hazardous, and cyclists are vulnerable to accidents involving other road users. According to the European Transport Safety Council, around 8,000 cyclists are killed or seriously injured on European roads each year. Weather conditions can also affect the safety of cycling, with rain, snow, and ice making roads slippery and increasing the risk of accidents. Extreme temperatures can also affect the health of cyclists, particularly if they are not properly dressed. More so, pupils who cycle to school may not have access to safety equipment such as

# Kaiko Mubita et al, An Assessment of the Safety of Transport Modes Used By Pupils to and from School in Selected Schools of Western, North Western and Copperbelt Provinces of Zambia

helmets, lights, and reflective clothing. This can increase the risk of accidents, particularly in low light conditions.

- (c) *Recommendations for enhancing the safety of pupils during transportation to and from school in selected schools of Western, North Western, and Copperbelt Provinces of Zambia.*

This study recommends the following measures for enhancing the safety of pupils during transportation to and from school:

- (a) *Use school buses:* School buses are designed to be safe and are equipped with features like high seat backs, seat belts, and flashing lights to alert other drivers. Encourage parents to use school buses to transport their children to and from school.
- (b) *Train drivers:* Make sure that drivers who transport pupils are properly trained in safe driving practices and have a good driving record. Also, ensure that they have undergone background checks and drug testing.
- (c) *Conduct regular inspections:* Regular inspections of school buses and other vehicles used to transport pupils should be conducted to ensure that they are in good working condition and meet safety standards.
- (d) *Implement safety policies:* Develop and implement safety policies for transporting pupils. These policies should cover issues like seat belt usage, bus evacuation procedures, and emergency response plans.
- (e) *Provide supervision:* Have a responsible adult or supervisor on the bus to monitor behavior and ensure that safety rules are followed.
- (f) *Ensure visibility:* Make sure that pupils are visible to drivers by ensuring that they wear bright clothing or reflective gear.
- (g) *Educate pupils:* Teach pupils about safe behavior on buses and how to stay safe while walking or biking to school.
- (h) *Address bullying:* Address any incidents of bullying that occur on buses or during transportation to and from school. Bullying can distract drivers and endanger pupils.
- (i) *Monitor drivers:* Monitor drivers to ensure that they follow safety protocols and behave appropriately while transporting pupils.

By implementing these recommendations, schools can help ensure the safety of pupils during transportation to and from school.

## CONCLUSION

Ensuring the safety of pupils during transportation to and from school is crucial to their well-being and academic success. Different modes of transport, such as buses, taxis, bicycles, and walking, can have different risks and challenges. It is important for schools and local authorities to

take measures to mitigate these risks, such as enforcing speed limits, providing safety education for pupils, ensuring adequate vehicle maintenance, and providing appropriate safety gear. Additionally, parents and guardians can play a role in ensuring the safety of their children during school transportation by supervising younger children, encouraging the use of safe transport modes, and communicating any concerns or incidents to school authorities. Overall, a comprehensive approach that involves collaboration between schools, local authorities, parents, and pupils is needed to ensure the safety of pupils during transportation to and from school.

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**Kaiko Mubita et al, An Assessment of the Safety of Transport Modes Used By Pupils to and from School in Selected Schools of Western, North Western and Copperbelt Provinces of Zambia**

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