

# CHILD PEDESTRIAN SAFETY:

What children at Sivile Primary School  
say about road safety



Abigail Simons, Karin Koekemoer & Ashley van Niekerk  
September 2018

# CONTENTS

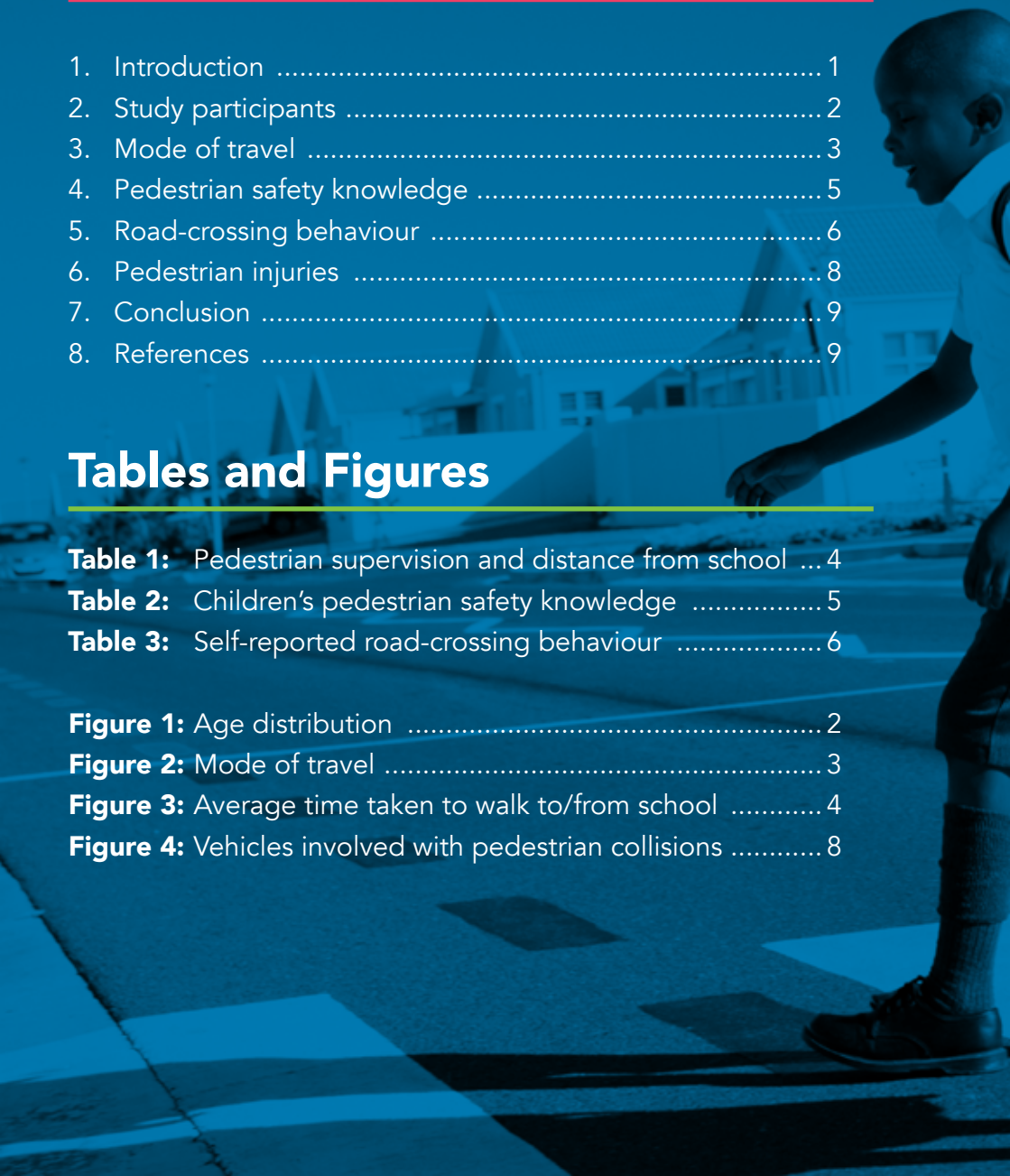
---

1. Introduction .....	1
2. Study participants .....	2
3. Mode of travel .....	3
4. Pedestrian safety knowledge .....	5
5. Road-crossing behaviour .....	6
6. Pedestrian injuries .....	8
7. Conclusion .....	9
8. References .....	9

## Tables and Figures

---

<b>Table 1:</b> Pedestrian supervision and distance from school ...	4
<b>Table 2:</b> Children's pedestrian safety knowledge .....	5
<b>Table 3:</b> Self-reported road-crossing behaviour .....	6
<b>Figure 1:</b> Age distribution .....	2
<b>Figure 2:</b> Mode of travel .....	3
<b>Figure 3:</b> Average time taken to walk to/from school .....	4
<b>Figure 4:</b> Vehicles involved with pedestrian collisions .....	8





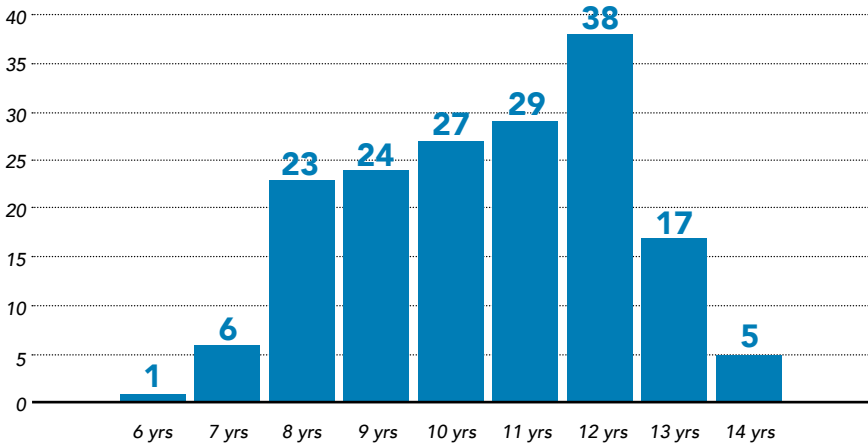
# 1. INTRODUCTION

In South Africa pedestrian injury is a leading cause of death among children and adolescents (Road Traffic Management Corporation [RTMC], 2011). Children in low-income communities are more at risk as they often depend on walking to and from school as their primary means of transport (Statistics South Africa, 2014). Children are especially vulnerable to pedestrian injury due to their small physique which limits their ability to see or be seen by oncoming cars, and their limited skills to assess complex road situations (Koekemoer, Van Gesselteen, Van Niekerk, Govender, & Van As, 2017). There is therefore a need for information on children's knowledge of road safety, and their behaviour when using the road, to improve local child safety interventions. The SAMRC-UNISA VIPRU, in conjunction with Childsafe, International Road Assessment Programme (iRAP) and Takalane Sesame, conducted a study in 2014, to assess children's pedestrian safety knowledge and behaviour. A survey was administered to children at Sivile Primary School by trained research assistants. The survey was adapted from the Safe Kids Worldwide Model School Zone Project Guide (Version II) and translated into isiXhosa.

This report provides an overview of the results from the survey. This report describes the study participants and important road-traffic safety factors including the degree of supervision and child pedestrian safety knowledge, attitudes and behaviour.

## 2. STUDY PARTICIPANTS

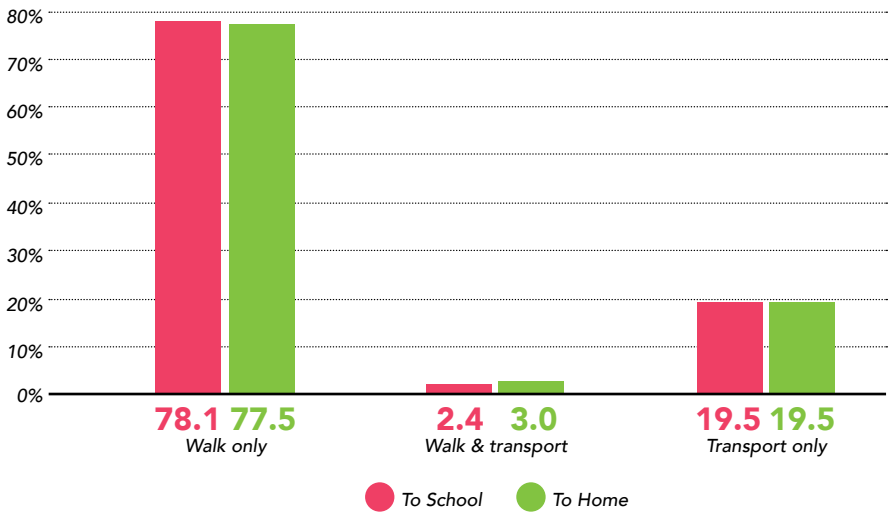
Sivile Primary School, located in Khayelitsha in the Western Cape, was one of three schools selected for the study. This report will only describe the information reported for children at Sivile Primary School. There were approximately 830 pupils attending the school in 2014. The Sivile study participants (children with full consent to participate) consisted of 170 children (58% girls and 42% boys). Children were recruited from grades 2 to 7, and ages ranged from 6 years to 14 years as displayed in **Figure 1**.



### 3. MODE OF TRAVEL

Children’s mode of travel to and from school is displayed in Figure 2. Most children walk to and from school without other means of transport.

**Figure 2. Mode of travel**



Of the children that walk to and from school, the majority always or sometimes walk by themselves. Those children who do not always walk alone are mostly accompanied by friends or siblings (75.9% to school; 79.5% to home) as seen in Table 1.

**Table 1. Pedestrian supervision and distance from school**

	To school	To home
<b>Walk alone<sup>1</sup></b>		
Never	15.4%	19.7%
Sometimes	44.1%	43.8%
Always	39.7%	35.8%
<b>Accompanied by<sup>2</sup></b>		
Adult	13.3%	12.5%
Friend/Sibling	75.9%	79.5%
Other	2.4%	1.1%

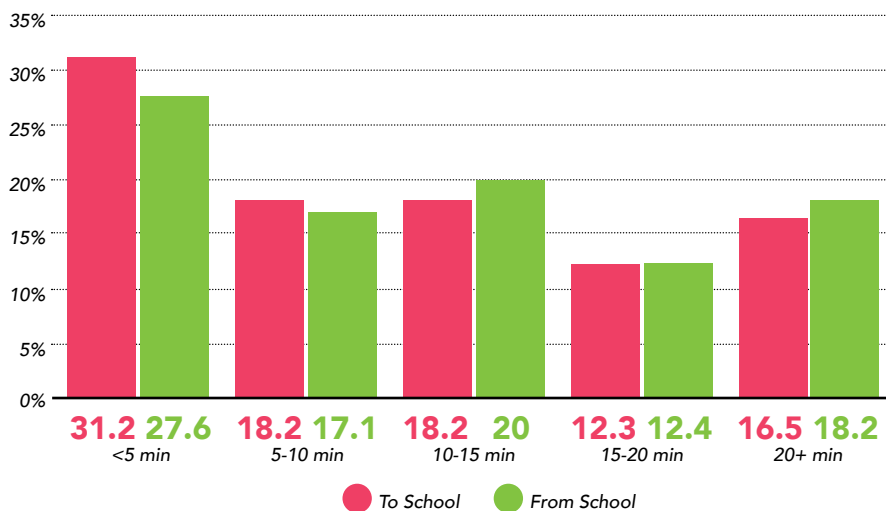
1 Percentages reflect total number of children who walk to/from school

2 Percentages reflect total number of children who do not always walk alone

Note: Percentages may not add up to 100% due to missing values

Most children live relatively close to Sivile Primary School, within a 15-minute walk as seen in Figure 3 below.

**Figure 3. Average time taken to walk to/from school**



## 4. PEDESTRIAN SAFETY KNOWLEDGE

This study reports on children's pedestrian safety knowledge related to their visibility when walking to and from school, and their road-crossing abilities and behaviour (Table 2). Most children answered the second (78.2%), third (46.7%), fourth (88.2%) and the fifth (56.8%) traffic safety questions correctly. However, for the first question, "if you can see the driver, the driver can see you", most of the children (78%) selected the incorrect answer. Children and parents need to be informed about the safe places for children to cross the road and the dangers of playing in or near the road. Educational road safety programmes can teach children and drivers about the obstacles that may prevent the driver from seeing child pedestrians (Venter, 2017). As children often walk along and cross the roads alone, they could also be equipped with reflective school-going material and be taught safe road-crossing skills (Childsafe, 2017).

**Table 2. Children's pedestrian safety knowledge**

		<b>RESULTS</b>
<i>Visibility</i>		
<b>1. If you can see the driver, the driver can see you</b>		
True		78.0%
False*		22.0%
<b>2. Drivers will see you more easily if you are wearing:</b>		
Black or brown clothes		13.5%
Light-coloured and reflective clothes*		78.2%
Shiny but dark clothes		8.2%
<i>Road-crossing</i>		
<b>3. If there is no zebra crossing, you should cross the street:</b>		
Anywhere		12.7%
At the corner*		46.7%
In the middle		40.6%

**RESULTS****4. When you would like to cross a street and you are on the pavement, you should:**

Stop and check for traffic both ways*	88.2%
Run across to avoid the vehicles	5.3%
Just cross and let the vehicles avoid you	1.8%
All of the above	3.0%
None of the above	1.8%

**5. When the robot starts flashing the red man while you are still crossing, you should**

Keep walking quickly until you have crossed the street*	56.8%
Turn around and run back to the other side	23.7%
Stop in the middle of the road	19.5%

\*Correct response

## 5. ROAD-CROSSING BEHAVIOUR

Children's self-reported road-crossing behaviour is displayed in Table 3. Most children indicated safe road-crossing behaviours for each question. Nevertheless, road-crossing educational programmes which include a practical component should be implemented so that children can continue to practice good road-crossing behaviour (McMahon, Gopalakrishna, & Stevenson, 2008).

**Table 3. Self-reported road-crossing behaviour**

		<b>RESULTS</b>
<b>1. Forget to look properly because you are talking to your friends</b>		
Never*		56.0%
Sometimes		32.7%
Always		11.3%
<b>2. Think you have enough time to cross safely, but a car is coming quicker than you thought</b>		



---

**RESULTS**

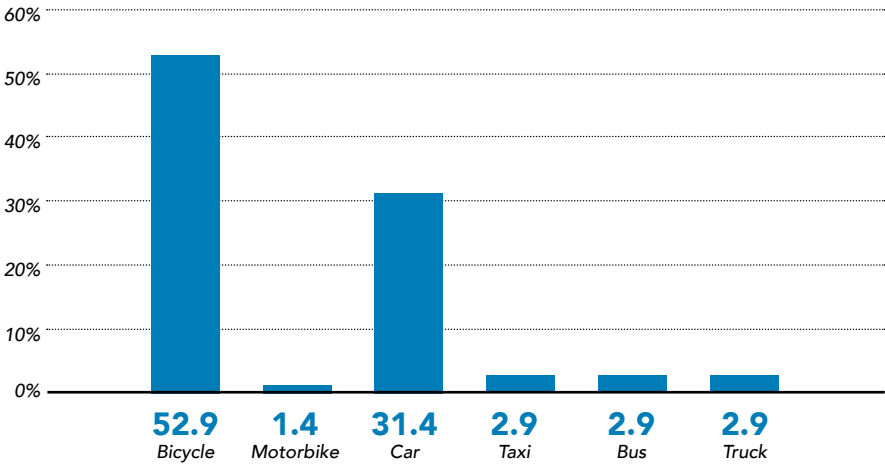
Never*	54.2%
Sometimes	30.7%
Always	15.1%
<b>3. Look both ways before crossing</b>	
Never	7.8%
Sometimes	16.2%
Always*	76.0%
<b>4. Keep looking/listening for cars until you get all the way across the road</b>	
Never	18.0%
Sometimes	27.5%
Always*	54.5%
<b>5. Have to run to avoid cars</b>	
Never*	57.2%
Sometimes	27.7%
Always	15.1%
<b>6. Run across without looking because you are in a hurry</b>	
Never*	68.7%
Sometimes	27.7%
Always	7.2%

**\*Correct response**

# 6. PEDESTRIAN INJURIES

Despite good reported road-crossing behaviour and safety knowledge, 70 children indicated that they experienced a pedestrian collision at some point in their life. Of the 70 children that indicated a pedestrian collision, 52.9% reported a collision which involved a bicycle and 31.4% involved a car as shown in Figure 4.

**Figure 4. Vehicles involved with pedestrian collisions**



## 7. CONCLUSION

In summary, this study of Sivile Primary School reported that most children walk to and from school without adult supervision. Most children live within a 15-minute walk from the school. With regards to children's pedestrian safety knowledge, educational programmes are needed to inform children about the obstacles that can prevent drivers from seeing child pedestrians. Furthermore, children had good knowledge regarding road-crossing abilities and behaviours, however, most children reported a pedestrian injury involving a bicycle. It is recommended that educational interventions should be considered for Sivile Primary School. These interventions can involve a practical component whereby children, from a young age, are taught safe road-crossing behaviours.

## 8. REFERENCES

Childsafe (2017). Annual report: 1 April 2016 - 31 March 2017. Retrieved from <https://www.childsafe.org.za/downloads/Annual-Report-2016-2017.pdf>

Koekemoer, K., Van Gesselleen, M., Van Niekerk, A., Govender, R., Van As, A. (2017). Child pedestrian safety knowledge, behaviour and road injury in Cape Town, South Africa. *Accident Analysis and Prevention*, 99, 202-209.

McMahon, K., Gopalakrishna, G., & Stevenson, M. (2008) Road traffic injuries. In M. Peden, K. Oyegbite, J. Ozanne-Smith, A. Hyder, C. Branche, A. Rahman, F. Rivara, & K. Bartolomeos (Eds.), *World report on child injury prevention*. Geneva, Switzerland: World Health Organization. Retrieved from <https://books.google.co.za/books?isbn=9241563575>

Road Traffic Management Corporation (RTMC). (2011). Road Traffic Report-Year 2011. Retrieved from <https://www.arrivealive.co.za/documents/March%202011%20Road%20Traffic%20Report.pdf>

Statistics South Africa. (2014). National Households travel survey, 2013. Statistics South Africa, Pretoria.

Venter, K. (2017). Driver perception on non-motorised transport users: A risk in traffic? Pretoria: Council for Scientific Research (CSIR). Retrieved from [http://www.satc.org.za/assets/3a\\_venter.pdf](http://www.satc.org.za/assets/3a_venter.pdf)

**Abigail Simons**  
**Project Coordinator**  
SAMRC-UNISA Violence, Injury &  
Peace Research Unit (VIPRU)

Tel.: 021 938 0909

Email: [abigail.simons@mrc.ac.za](mailto:abigail.simons@mrc.ac.za)

**THE SOUTH AFRICAN MEDICAL RESEARCH COUNCIL**

Francie Van Zijl Drive, Parow Valley, Cape Town | Po Box 19070, Tygerberg, 7505,  
South Africa

Tel: +27 21 938 0441 /0216

Fax: +27 21 938 0381

Web: [www.samrc.ac.za/crime/crime.htm](http://www.samrc.ac.za/crime/crime.htm)

