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Children's Independent Mobility and Perceptions of Outdoor Environments in Dar Es Salaam City, Tanzania

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ABSTRACT This article discusses children's independent mobility (CIM) in Dar es Salaam City. Children's independent mobility refers to the freedom of those under 18 years old to move around in public outdoor environments without adult accompaniment. A number of studies have shown that the neighbourhood environment can be extremely important in enabling children to attain recommended levels of physical activity; the more time children are able to spend in a public outdoor environment the more they are likely to be physically active. Such studies have influenced how researchers measure children mobility, safety, development and well-being. Studies of CIM and related subjects are very important in Africa. Local conditions in support of walking and cycling are poor, which impacts on children's access to education. The study reported here involved the collection of quantitative and qualitative data through the administration of questionnaires completed by both school children aged 7-15 years old, and their parents or guardians. The main focus of this article is on the difference age and gender have on children's independent mobility, children's independent mobility after school hours and during the weekend, and on parents' perception of public outdoor environments. The article concludes with a summary of study findings and policies aimed at improving children's independent mobility and safety and security in public outdoor environments.

1. Introduction

The freedom of those under 18 years old to move around in public outdoor environments without adult accompaniment is known as children's independent mobility (CIM). Three types of definitions and operationalisations have been applied in CIM studies. The earliest studies analysed mobility by measuring the geographical distance from children's homes to places where children were allowed to wander when playing and socialising. Later on, CIM was operationalised as 'a licence' to move around independently in the public outdoor environment. In this case, independent mobility refers to a set of rules defined by parents concerning, for instance, permission to cross roads or to ride a bicycle independently. Implementation of this approach was complemented by studies on the degree of licences, or prohibitions, to go to certain places like the homes of friends or shops. The third type of studies involved measurement of the level of children's actual mobility within a certain period of time using, for example, mobility diaries (Kyttä, 2004).

A number of studies have shown that the neighbourhood environment can be extremely important in enabling children to attain necessary levels of physical activity; the more time children are able to spend in a public outdoor environment the more they are likely to be physically active. Such studies have influenced how researchers measure children's mobility, safety, development and well-being. As a result, programmes to promote safe walking and cycling to school have been gaining popularity as a way to incorporate physical activity into children's lives and also to reduce traffic congestion in school zones and improve air quality in communities by minimising private

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car trips (Weigand, 2008). Europe and New Zealand have long recognised the importance of pedestrian and cyclist safety. In the USA, safe routes to school (SRTS) programmes are a further extension of the Danish SRTS programmes, and aim to reduce the dominance of car travel in American communities and the level of obesity among school children. These countries have implemented a wide range of measures to improve safety, and as a result they have developed the necessary technology and methods for implementation of cycling and walking programmes (Pucher & Dijkstra, 2000; Manthe, 2009). Likewise, it is from these developed countries that extensive research and hence literature on CIM can be found.

Studies conducted in cities in the United Kingdom and other developed countries have shown that children's degrees of licences to move around independently have diminished during the last three decades. Such mobility restrictions stem from a number of reasons, including concerns about road safety (Hillman et al, 1990; Carver et al, 2008), parents' perception of social dangers (Carver et al, 2008), and practical reasons such as convenience or weather conditions, and school-imposed restrictions. Kyttä (2004) pointed out that children's levels of independent mobility influence their physical health, social, cognitive and emotional development. Mobility restrictions can also affect emotional bonds between children and the natural environment, and consequently the development of children's sense of responsibility for the environment.

Studies of CIM and related subjects are very important in Africa. Local conditions in support of walking and cycling are poor, which impact on children's access to education. To date, however, public policies in most African countries and elsewhere have done little to promote CIM. Such research is yet to be seriously explored in many African cities, including Dar es Salaam City where little is known about how children get around in public outdoor environments, and consequently very little is empirically known about how children's daily travel is taking place. How do children travel to and from school, and visit friends and reach outdoor public facilities, after school and during the weekend? What difference does age and gender of a child make? How do features of local neighbourhoods, road traffic conditions, attitudes of parents and society in general, socio-economic status and other factors influence the independent mobility of children in rural, suburban and urban areas? These and other questions have yet to be explored thoroughly for the case of Dar es Salaam City, and other Tanzanian cities and towns in general (Bwire & Chacha, 2011).

This article is based on the survey data collected by Bwire & Chacha (2011), who provided some insights into how children travel to and from school, children's perceptions of public outdoor environments, and the levels of and factors influencing children's mobility restrictions on their public outdoor movements. The article extends Bwire & Chacha's work by exploring further the difference age and gender have on CIM, CIM after school hours and during the weekend, and parents' perception of public outdoor environments. The following section elaborates briefly on the case-study city of Dar es Salaam, in particular on administrative, population and land use structures as well as on trends in mode use and school children's mobility and challenges. Section three outlines the methodological aspects of this study. Section four presents survey findings which address the issues and section five concludes with suggestions for improved CIM and safety in public outdoor environments.

2. Background: Dar Es Salaam City

Dar es Salaam Administrative, Population and Land Use Structures

Dar es Salaam city is located in Tanzania between latitudes 6.36 and 7.0 degrees south of the Equator and longitudes 39.0 and 33.33 degrees east of Greenwich. It is bounded by the Indian Ocean on the east and by the Coast Region on the other side. The city was established by Sultan Seyyid Majid of Zanzibar in 1862 as a port and trading centre. Dar es Salaam is popularly believed to mean the Harbour (Haven) of Peace, the name having come from the Persian-Arabic Bandar-ul-Salaam (Swahili: Bandari ya Salama). Dar es Salaam City is the major economic centre and the most populated city in the United Republic of Tanzania. The City has four authorities that were established in the year 2000. At the apex is the Dar es Salaam City Council and three municipalities of Temeke, Ilala, and Kinondoni. Each of the municipalities is subdivided into mixed, rural and urban wards, which in turn are also subdivided into sub-wards for administrative purposes (Figure 1).

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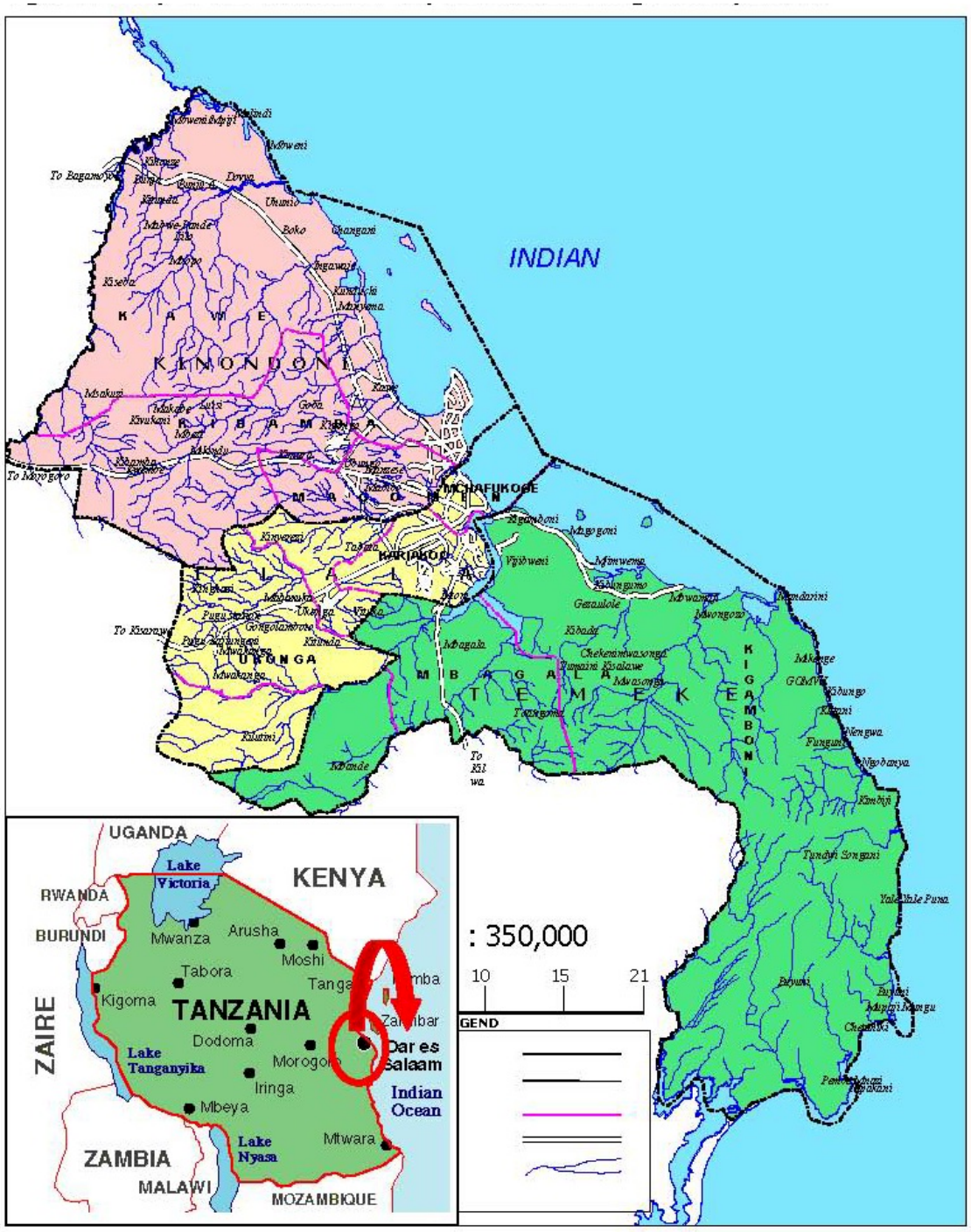


Figure 1. Study area geography (source: Bureau for Industrial Cooperation [BICO] 2008).

The total surface area of the city is 1800 square kilometres, comprising 1393 square kilometres of land mass with eight offshore islands, which is about 0.19% of the entire Tanzanian mainland area. Temeke Municipality has the largest land surface area (652 sq. km), followed by Kinondoni (531 sq. km), while Ilala (210 sq. km) has the smallest area. The total population in the study area was estimated at 3,030,000 habitants as of 2008 (Dar es Salaam City Council [DCC] & Japanese International Cooperation Agency [JICA], 2008), while there were 1,297,000 habitants in Kinondoni district, 818,000 habitants in Ilala district, and 915,000 habitants in Temeke district respectively.

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District	Population (000)	Population 7 years old and above		No. of households (000)	Average no. of household members
		Male (000)	Female (000)		
Kinondoni	1,296.8	530.3	524.3	303.3	4.3
Illala	817.8	312.4	316.1	186.4	4.4
Temeki	915.4	368.3	358.3	218.4	4.2
Study area total	3,030.0	1,211.1	1,198.8	708.2	4.5
Ratio (%)		50.3	49.7		4.3

Table I. Population and households estimates (DCC & JICA, 2008).

Urban sprawl characterises the spatial growth of Dar es Salaam in the form of low-rise structures and a low-density built environment, which is creating increasing financial costs for the public sector in providing infrastructure services in the newly-built areas and maintenance of services in the old inner-city areas. The land use pattern consists of one central area adjacent to the seashore, which serves as the focal point where most commercial areas and public and government institutions are located. It is estimated that about 70% of the city's population lives in over 40 unplanned settlements which are grossly deficient in most of the basic services and infrastructure.

Trends in Mode Use and School Children Mobility

Available documentation in recent years on trips per person indicates there is an increase in daily travel in Dar es Salaam City. For example, in the mid 1980s Maunder & Fouracre (1987) estimated, on the basis of a survey of 126 households in six zones of the city, that the average number of trips per person of all age groups was 1.5 trips per day. In 1993, a small survey carried out in Temeke area, though not representative of the entire city, produced fairly similar figures. Trips per person were estimated at 1.9 trips per day (De Langen & Tembele, 2001), but this figure concerned only people aged 14 and older. A 1994 study (Ministry of Work [MoW] & JICA, 1995), which covered 1.7% of all households in the city, estimated an average trip rate at 2.3 trips per person per day whereas car owners made 2.9 trips per person. The 2007 study estimated an average trip rate at 1.2 trips per day (DCC & JICA, 2008). It is important to note that the above data were based on trip-based travel survey instruments. The decrease in trip rate as reported by the 2007 study could be associated with the fact that the survey was conducted during school holidays and hence registered a low number of school trips.

The modal split in Dar es Salaam, identified from various studies, is shown in Table II. De Langen & Tembele (2001) observed that an estimated 3% of all trips in the city were made by bicycle by 1995. This estimation was based on a trip-based household survey that was limited to Temeke district only, and the survey focused on the most important trip of the previous day. MoW & JICA (1995) conducted a city-wide trip-based household travel survey which involved 10,000 households as part of the Dar es Salaam transport policy and system development master plan and the survey results showed that 4.7% of all trips in the city were made by bicycle and motorcycle. The 2007 trip-based household travel survey (DCC & JICA, 2008) also involved 10,000 households and it found that about 1.4% of all trips were made by bicycle.

Further, based on a household survey for the Dar es Salaam master plan study in 2007, 74% of the total trips made per day in Dar es Salaam were motorised. The share of motorised public modes of transport is 82.3%, mostly made up of minibuses, commonly termed as Daladala. The majority of Daladala users were found to be workers, accounting for 73% of the sampled Daladala passengers (DCC & JICA, 2008). It was also found that a total of 68,600 households, which is about 10% of the total households, have one or more cars (DCC & JICA, 2008). The total number of passenger cars plus pick-ups was estimated at 778,000 vehicles in 2007; in other words it was 25.9 vehicles per 1000 people.

School travel by bicycle was estimated at 1.11% (including motorcycle) in 1994 by the MoW & JICA (1995) and 0.1% in 2007 by the DCC & JICA (2008) studies. The modal split for school trips

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is presented in Table III. The household travel survey for 2007, however, was conducted during school holidays and hence registered a low number of school trips. Overall, the two studies have indicated that over 90% of school trips are made by bus and walking. The level of cycling and car use in Dar es Salaam City is still very low (though the rate of car ownership is increasing rapidly) and consequently the use of bicycles and cars for school trips is still very low for most school children as well.

Mode	1983 (COWI CONSULT Ltd, 1983)	1987 (Maunder & Fouracre, 1987)	1994 (de Langen & Tembele, 2001)	1995 (MoW & JICA, 1995)	2007 (DCC & JICA, 2008)
Bus	47	48	43	48	60
School bus					1
Truck				3	
Staff bus/car	21	25			
Car and taxi				12	
Car			6		6
Taxi	1	2			1
Bicycle and motorcycle				5	
Motorcycle					1
Bicycle			3		1
Walk	31	25	43	33	26
Others				0	5

Note: Blank cells indicate that the mode was not considered by the study in either modal share summary or data collection.

Table II. Percentage modal share.
Source: Bwire (2009).

Mode	1995 (MoW & JICA, 1995)	2007 (DCC & JICA, 2008)
Bus	38	48
Mini-bus	7	
Truck	1	
Car and taxi	4	
Car		3
Bicycle and motorcycle	1	0
Walk	49	48
Others	0	1

Table III. School travel by children modal share.
Source: Bwire (2009).

On the other hand, a recent feasibility study by Bwire (2009) found that the share of walking school trips was 35%, with 59% of school trips being made by public transport minibus (Daladala) and only 2% of trips by bicycles. The majority (74.7%) of the school children preferred to use the school bus for school trips and 15.2% indicated that they would prefer to go by Daladala. The level of cycling was higher in older children than among younger children, but the latter group of children who were cycling showed interest in continuing with cycling as opposed to the older ones who preferred to reduce the level of cycling for school travel.

School Children Mobility Challenges

Bwire (2009) found that even at distances of less than 2 km, Daladala was most widely used by school children. It was also found that some school children walked greater distances, as far as 5 km. Beyond 5 km, cycling and walking seemed to be an unattractive travel option among the

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children. The majority of school children (56.6%) indicated distance and family income as the main factors influencing their choice of school travel mode. It should also be noted that Tanzania is currently putting efforts into establishing publicly owned primary and secondary schools in every ward as a way of reducing distances to schools and increasing access to education. Other factors affecting children's travel modes, in the order of their rank, were noted to be safety (47.2%), mode availability (37.9%) and cost for mode use (30.2%).

Rwebangira (2001) pointed out two of the most important impediments to cycling: lack of traffic safety for cyclists and lack of affordability of a bicycle. It was further pointed out that cycling in Dar es Salaam was entirely limited to men due to bicycle use hierarchy in the household and partly because no tradition of cycling by women existed.

3. Methodological Aspects of This Study

Survey questionnaires for both school children and parents were developed by the Policy Studies Institute, Westminster University, London, England. The Institute also designed and developed coding and variable definition in the SPSS computer program for data entry and analysis. The contents of the questionnaire for children covered questions on the following main items:

- Travelling to and from school;
- Walking;
- Cycling;
- Buses;
- Activities done at the weekend;
- Where children live; and
- Children's particulars, like age and gender.

The contents of the questionnaire for parents/carers of children were designed to collect information on:

- Children coming home from school;
- Children's other journeys;
- Crossing roads;
- Going out after dark;
- Cycling;
- Buses;
- Mobile phones;
- Traffic;
- Parent/carer particulars, like age, gender, paid work, workplace, recent job, and what is done at workplace; and
- Household particulars, like regular use of car, number of driving licence, household size, ownership of house, and access to outside space.

In view of the fact that some school children and parents were not fluent in spoken and written English, the questionnaires were translated from standard English to Kiswahili, which is a national language for Tanzania. The translated questionnaires were tested to check whether they conveyed the same meaning to respondents as the original English questionnaires. The survey was conducted using questionnaires that were in Kiswahili.

Once permission to carry out the study at the selected schools was obtained from the municipalities' directors, head teachers of selected schools were visited and asked to nominate a teacher and part of a class to participate in the study. Researchers conducted field visits at the school sites during October, November and early December 2010. Pen-and-paper self-completion questionnaires were given to the nominated teacher, who in turn distributed them to the children. Parents were given questionnaires through their children and both questionnaires (for children and parents) were collected at school at a later date suggested by the teacher. The characteristics of the case-study schools are presented in Table IV, including district and settlement type.

A total of 300 questionnaires were distributed to the selected schools and 284 questionnaires were completed and returned, resulting in a response rate of 94.6%. Table V shows the distribution of questionnaires and the response rate per school for children and parents. The table shows that

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96% of school children and 88% of parent questionnaires were completed and returned. In view of the sample size compared with the total school children population, it cannot be claimed that the results of the study are representative of all school children as well as parents.

S/no.	Name of school	Location	Districts	Settlement type	Level	Type
1	Tegeta	Tegeta	Kinondoni	Suburban	Secondary	Government
2	Bunju 'A'	Bunju	Kinondoni	Suburban	Primary	Government
3	Mugabe	Sinza	Kinondoni	Urban	Primary	Government
4	Tungi	Kigamboni	Temeke	Suburban	Secondary	Government
5	Levy	Kigamboni	Temeke	Suburban	Secondary	Private
6	Kigamboni	Kigamboni	Temeke	Suburban	Primary	Government
7	Ufukoni	Kigamboni	Temeke	Urban	Primary	Government
8	Mchikichini	Kariakoo	Ilala	Urban	Secondary	Government
9	Liku	Gongolamboto	Ilala	Suburban	Secondary	Private
10	Mzinga	Kitunda	Ilala	Suburban	Secondary	Private
11	Buguruni	Buguruni	Ilala	Urban	Primary	Government
12	Bunge	Posta	Ilala	Urban	Primary	Government

Table IV. Selected schools for the study.

Name of school	District	Location	Children questionnaire			Parents questionnaire		
			Distrib.	Return	%	Distrib.	Return	%
Tegeta	Kinondoni	Tegeta	20	17	85	5	3	60
Bunju 'A'	Kinondoni	Bunju	20	20	100	5	5	100
Mugabe	Kinondoni	Sinza	20	16	80	5	5	100
Tungi	Temeke	Kigamboni	20	20	100	5	3	60
Levy	Temeke	Kigamboni	20	19	95	5	5	100
Kigamboni	Temeke	Kigamboni	20	20	100	5	5	100
Ufukoni	Temeke	Kigamboni	20	20	100	5	4	80
Mchikichini	Ilala	Kariakoo	20	20	100	5	4	100
Liku	Ilala	Gongolamboto	20	20	100	5	4	80
Mzinga	Ilala	Kitunda	20	20	100	5	5	100
Buguruni	Ilala	Buguruni	20	19	95	5	5	100
Bunge	Ilala	Posta	20	20	100	5	5	100
Total			240	231	96	60	53	88

Table V. Survey response rate.

The age of school children respondents ranged between 7 and 15 years, and 57% were girls and 41% boys (with 2% non-response for each of the two items). Five per cent of the children were aged between 7 and 9 years old, 44% between 10 and 12 years and 49% between 13 and 15 years old; 2% did not indicate their age. For parent respondents, 13% were under 30 years old, 53% between 30 and 44 years, and 26% were 45 years old or over (with 8% item non-response). In terms of gender, 60% of parent respondents were male, 34% female and 6% did not indicate their gender.

4. Survey Findings

Children's Travel Behaviour and Perceptions

Travel to and from school. As shown in Figures 2a and 2b, walking and Daladala (minibus) are the main modes of transportation of children to and from school. It can also be noted that the use of car mode for travel from school decreases from 4% to 1% amongst school children. On the other hand, Figure 3 shows that the majority (about 90%) of children aged between 7 and 9 years take less than 5-15 minutes to travel to school. This result explains why 90% of children aged between 7 and 9 years walk to school and 100% walk from school. It was also found that 79% of girls and 76%

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of boys travel to school unaccompanied, and the number reduces to 75% and 63% respectively for travel from school (Figures 4a and 4b).

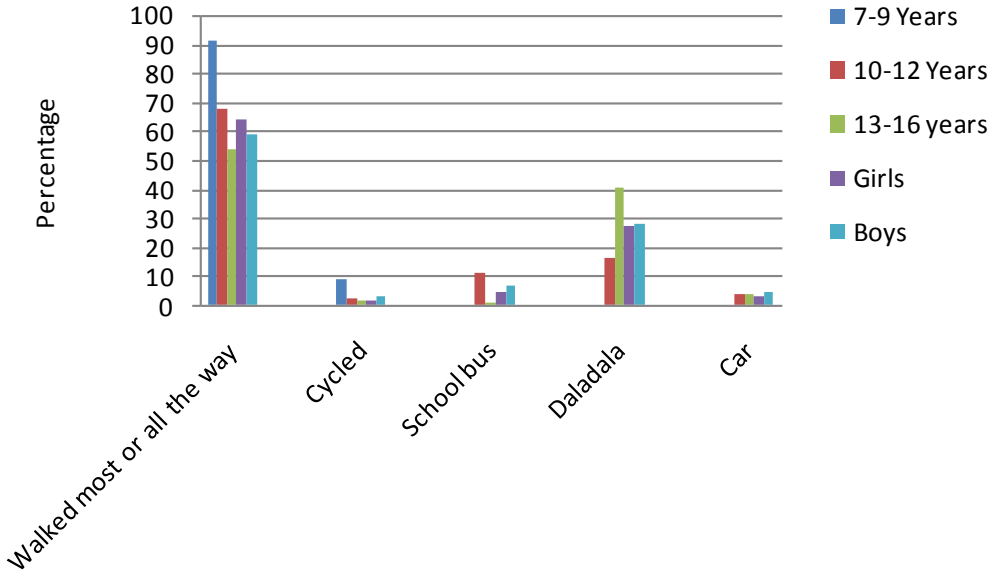


Figure 2a. Mode used by children to travel to school.

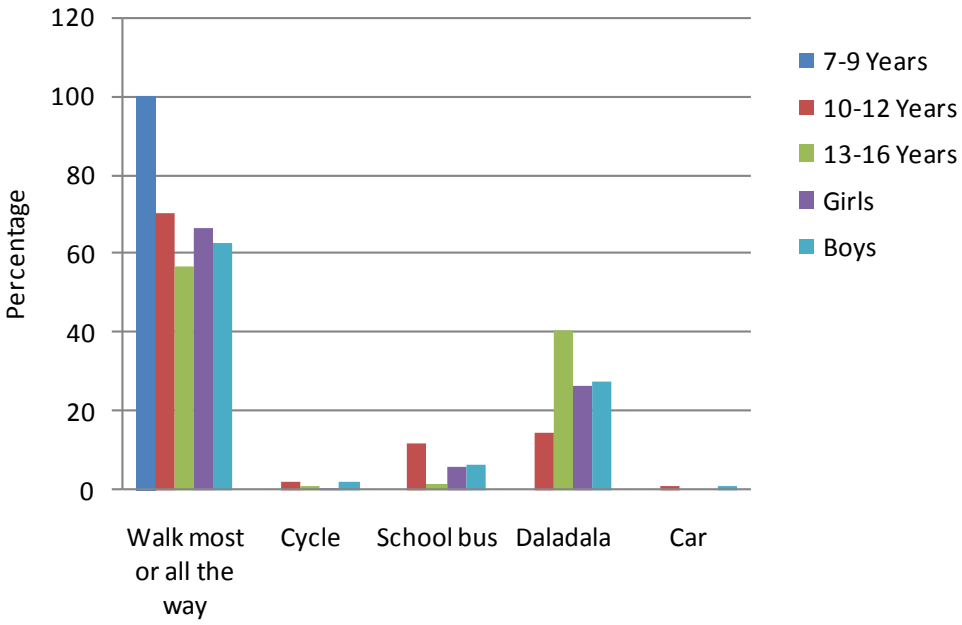


Figure 2b. Mode used by children to travel from school.

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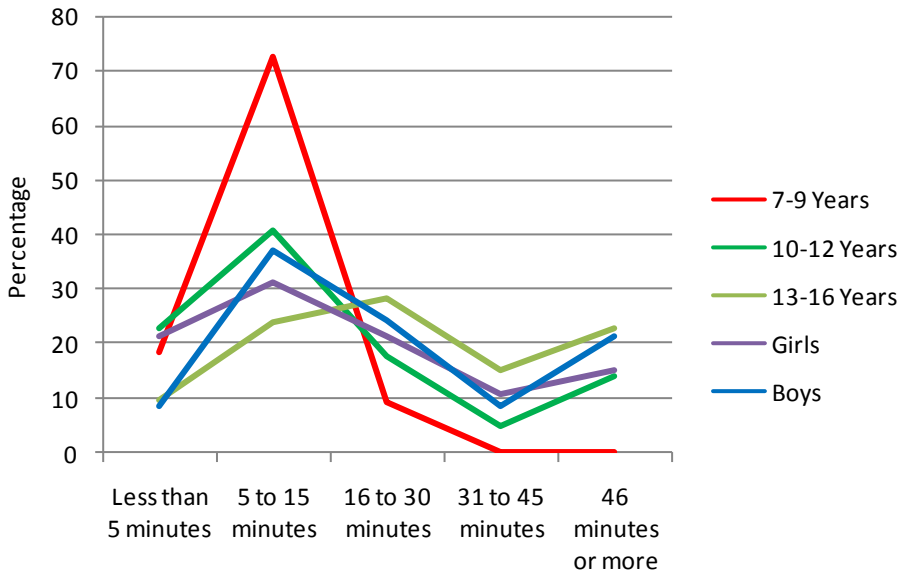


Figure 3. Travel time taken by children to school.

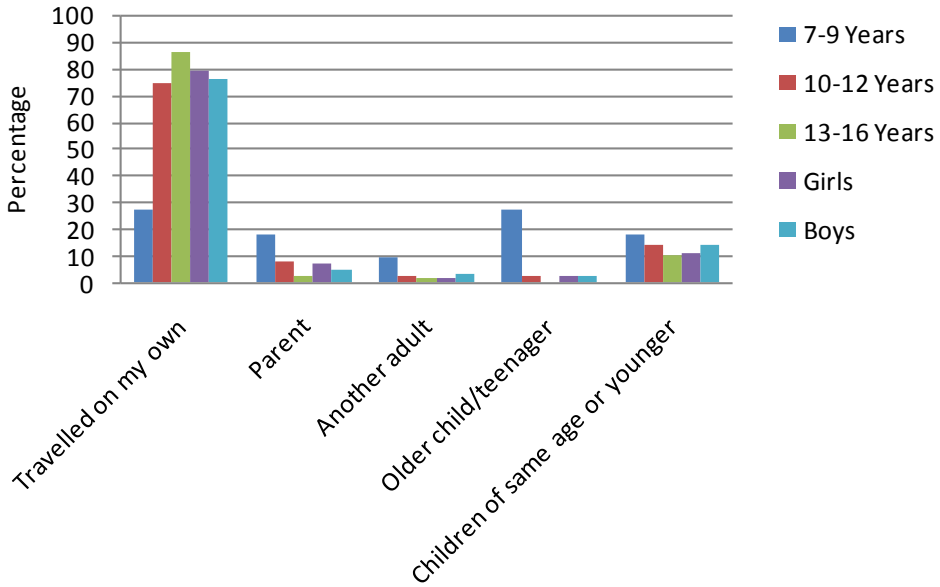


Figure 4a. People who travel with children to school.

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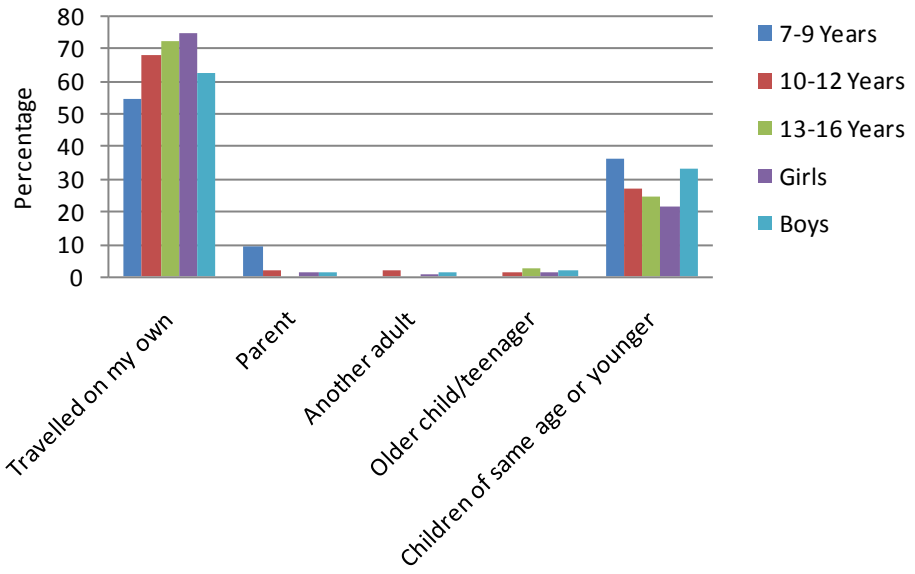


Figure 4b. People who travel with children from school.

School travel mode preferences. Figure 5 shows school children's school travel mode preferences for travel to/from school in Dar es Salaam City. It can be seen that 66% of girls prefer to use the school bus to travel to/from school and more girls than boys prefer walking while more boys than girls prefer cycling. The results show that minibus, i.e. Daladala, bus services are not favoured by school children, as only 5% of boys and girls showed a preference for this mode. A feasibility study by Bwire (2009) also noted that fewer school children (15.2%) showed a preference for Daladala transport for school travel. The results show that car mode preference (5-9%) was still uncommon amongst school children.

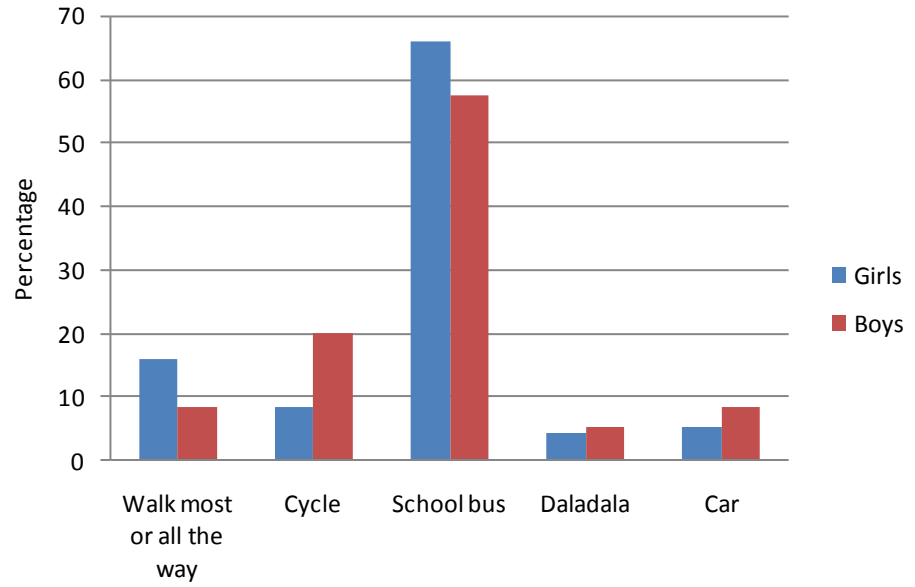


Figure 5. Travel mode preference of children at selected schools.

Crossing main roads. The children were also asked to indicate whether they were allowed to cross main roads on their own. Figure 6 summarises children's responses in terms of their age and

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gender. It can be seen that permission to cross main roads by walking increases as children get older, i.e. 18% of children aged between 7and 9 years were allowed to travel to school on their own compared to 63% of children aged between 13 and 16 years. In terms of gender, 51% of girls and 42% of boys were restricted from crossing main roads on their own, which shows that girls are relatively more restricted. Children who indicated that they were not allowed to cross main roads on their own were further asked if they would like to be allowed to cross main roads on their own. It was found that 40% of them would like do so.

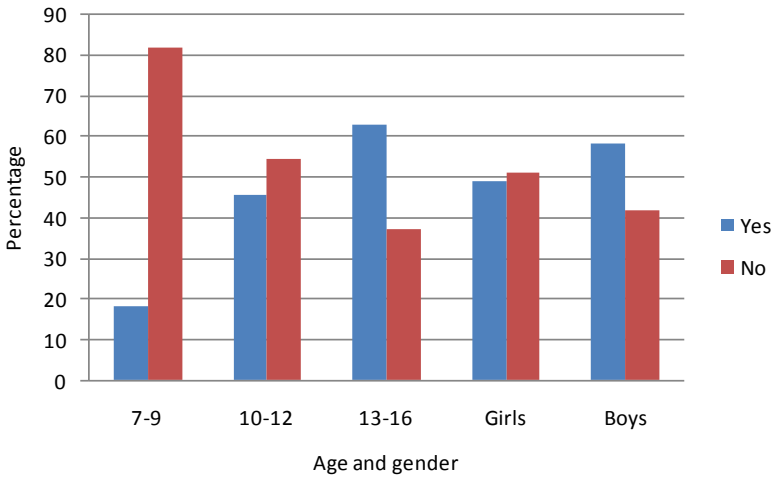


Figure 6. Children allowed to cross main roads on their own.

The ages at which children were allowed to cross the road for the first time is shown in Figure 7. It may be noted that children aged between 7 and 9 years are the ones who are most restricted from crossing main roads on their own. Figure 3 showed that these children take less than 5-15 minutes to travel to school and therefore such restrictions can be associated with children's views and parents' perceptions, as discussed below. The licence for children to cross main roads depends largely on age, location and parental perception about children's safety. Parents/guardians were asked to indicate whether their children were allowed to cross main roads and their responses show that 68% of them allowed children to cross main roads.

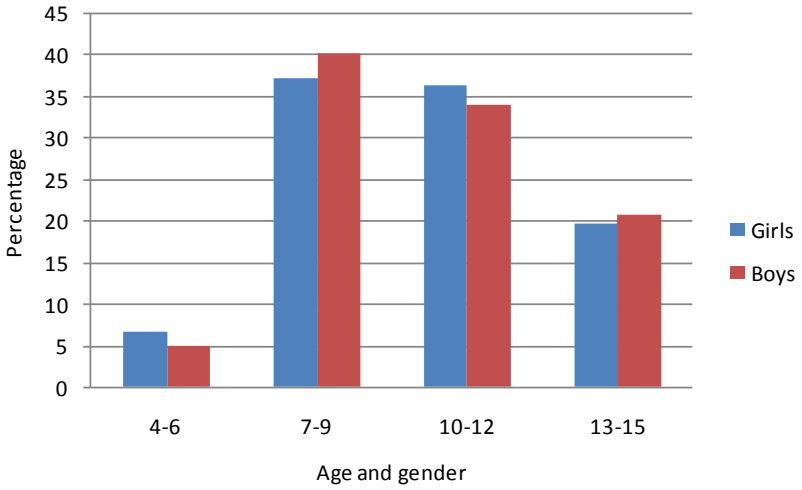


Figure 7. Age at which children were first allowed to cross main roads by walking.

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Bicycle use on main roads. On the question of bicycle ownership and permission to cycle on main roads, it was found that many children (83%) do not have a bicycle. It can be seen from Figure 8 that more boys own bicycles than girls. Further analysis of the results showed that 14% of children own bicycles, of which 10% are boys who are allowed to cycle on main roads. Rwebangira (2001) observed that cycling in most parts of Tanzania was entirely limited to men due to bicycle use hierarchy in the household and partly because no tradition of cycling by women existed.

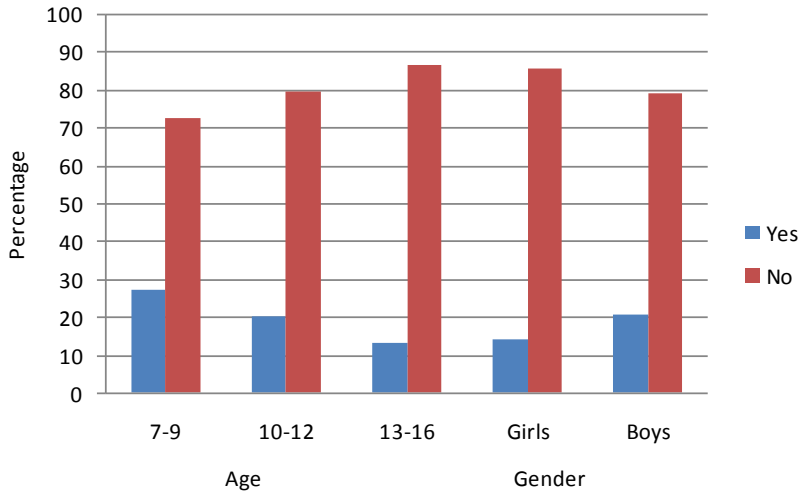


Figure 8. Children who own bicycles.

Children who owned bicycles were asked if they were allowed to ride it to a place, e.g. to a house of a friend, without any grown ups. Since some non-bicycle-owning children answered this question, cases of bicycle-owning children were filtered and analysed. The results ($n = 34$) show that 71% of children, 41% of whom were boys, and 69% of whom were 10 years old or above, indicated that they would be allowed to ride their bicycle to other places without any grown ups.

Use of local bus (Daladala). As reported by Bwire & Chacha (2011), 78% of school children indicated that they were allowed to go on local buses (Daladala) on their own. Figure 9 shows that most children are allowed to use Daladala at the age of 10 years and above. The majority of girls (80%) and boys (76%) are granted a licence for moving around by Daladala. For children who are not allowed to catch Daladala alone, their parents indicated that they will allow them to go on Daladala alone when they reach the age of 9-16 years. The data suggest that there is broad range of views held by parents about the appropriate age at which Daladala use is acceptable.

Children's Perceptions of the Public Outdoor Environment

Children's perceptions of their local neighbourhood are shown in Figure 10. Most children aged from 10 to 12 years (39%) and those over 12 years (41%) perceived their local neighbourhood to be very safe. Likewise, 42% of boys and 37% of girls perceived their local neighbourhood to be very safe. As can be observed in Figure 10, 27% of children aged between 7and 9 years indicated that they are not allowed outside alone. These children perceived their local neighbourhood to be very unsafe. Further analysis of results showed that the majority (72%) of children who were not allowed out alone were girls aged 10 years and above, suggesting parents permitted greater independent mobility to boys.

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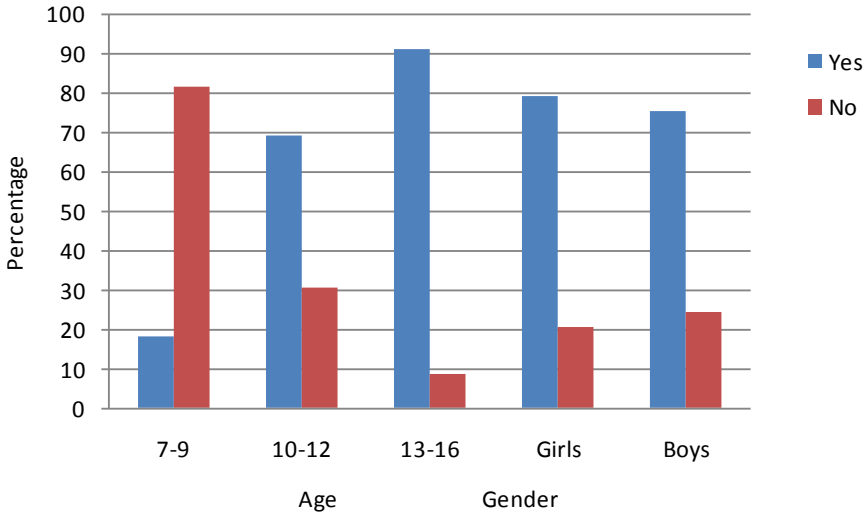


Figure 9. Use of local buses other than a school bus by children.

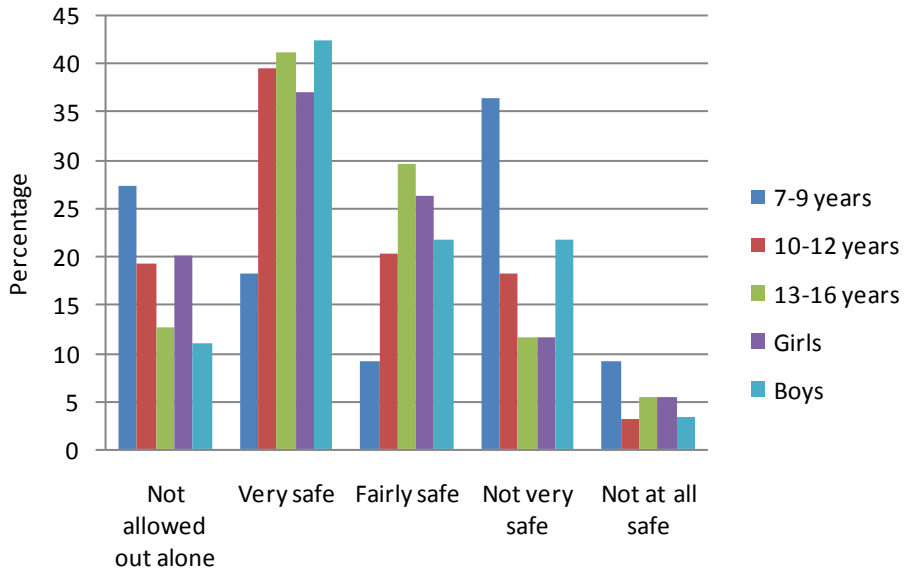


Figure 10. Children's concern over safety in their local neighbourhood.

Children were also asked to indicate issues that worry them when they are outside on their own or with friends. The major concerns for most children, in the order of priority, were bullying (80%), getting lost (78%), stranger danger (75%) and road traffic (65%). In addition, 51% do not feel that they are old enough to go places on their own, and 19% do not know what do if someone speaks to them. Figures 11a and 11b illustrate these concerns further in terms of age and gender of school children. It can be seen that the most affected age groups are the younger children aged between 7 and 9 and 10and 12 years. However, there is a high degree of concern about all matters for the majority of children regardless of age, with the exception of not knowing what to do if someone speaks to them.

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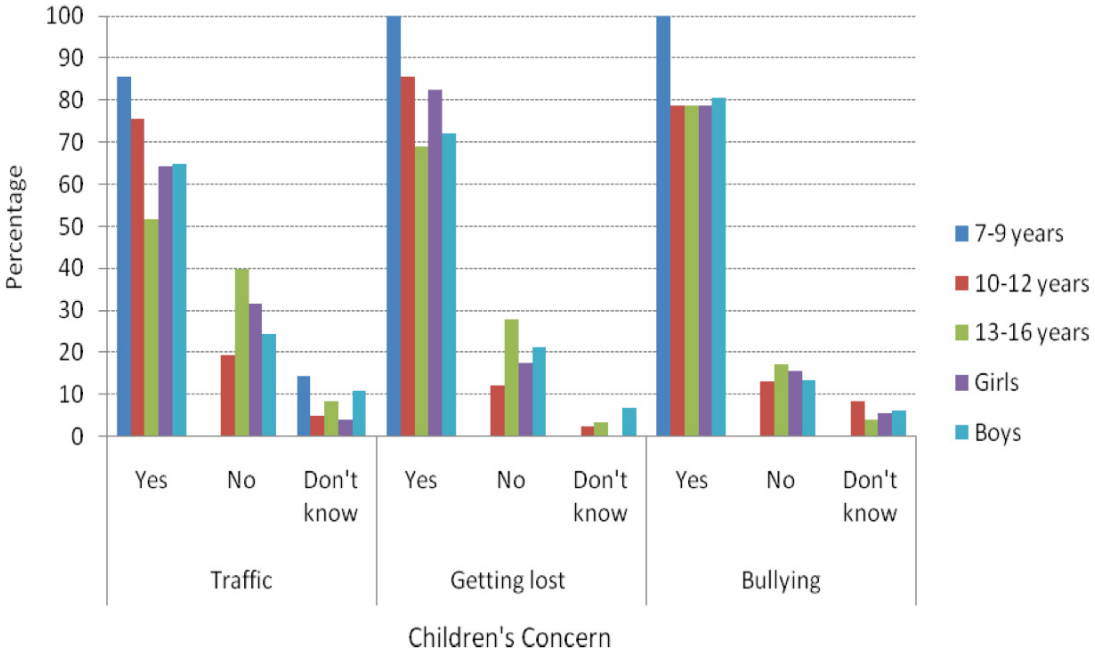


Figure 11a. Children's concerns when they are outside on their own or with friends.

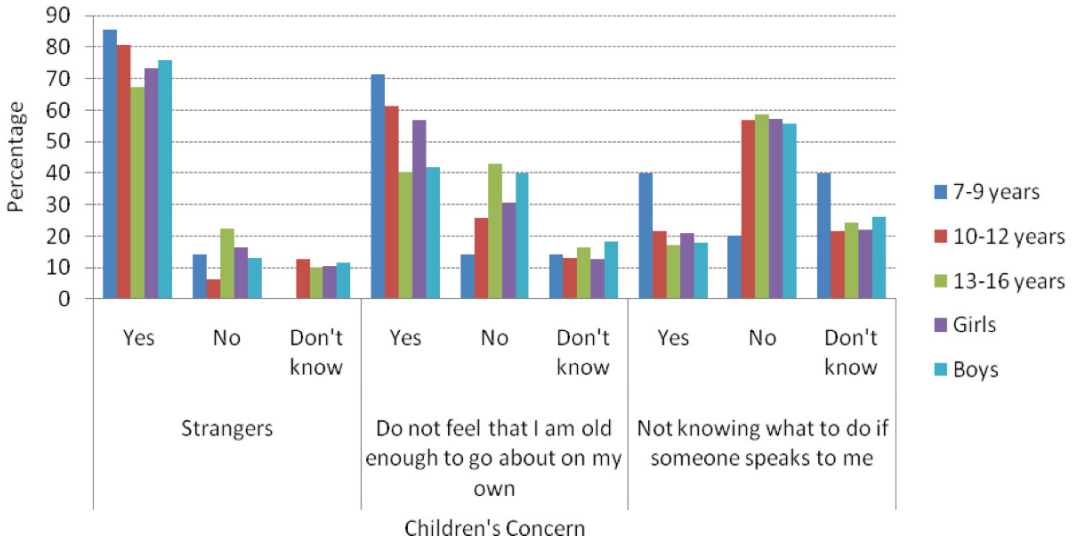


Figure 11b. Children's concerns when they are outside on their own or with friends.

More freedom to go outside. Children were also asked to indicate whether they wish they had more freedom to go outside their home. It was found that 61% of girls and 49% of boys do not want more freedom to go outside (Table VI).

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Gender	Number responded		Total
	Yes	No	
Girls	47	75	122
Boys	45	43	88
Total	92	118	210

Table VI. Children's views about wanting more freedom.

Children who want more freedom to go outside were asked about the activities they would like to do when they go outside. The results, shown in Table VII, indicate in the order of ranking that children would like to go to church (63%), visit (13%), visit friends or go to school area for further reading and discussion (9%), play with others (7%), do leisure activities (4%), shop and have time for learning more things, and go to work.

Activities	*n*	%
Go to church	145	63
Go for discussion	20	9
Time for learning more things	1	0
Go for leisure	8	4
Playing	17	7
Shopping	2	1
Visiting	31	13
Go to work	2	1
Total	231	100

Table VII. Activities children would do if they had more freedom.

Weekend activities. Children engage in different activities during the weekend. Generally, the results in Table VIII show that many children undertake activities during the weekend either alone or with another young person as opposed to being accompanied by a parent or an adult person. These activities included visiting a friend's home, spending time with friends outside after dark, going to a playground, and going to shops. It can be said that socialisation seems to play a large part in children's activities during the weekend.

Activities done by children over the weekend	Alone or with another young person	%	With parent or adult	%
Visited a friend's home	160	94	11	6
Spent time with friends outside after dark	120	91	12	9
Went for a walk or cycled around	97	91	10	9
Went to a youth club	90	80	22	20
Went to a playground, park or playing fields	101	76	32	24
Went to a library	87	72	34	28
Went to the shops	113	72	45	29
Played sport or went swimming	84	67	42	33
Other	28	56	22	44
Went to a cinema	46	54	39	46
Visited a place of worship	82	47	92	53
Went to a concert or nightclub	27	35	50	65
Visited relatives or grown-ups	48	31	107	69

Table VIII. Activities done by children over the weekend.

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Parents' Responses and Concerns

Picking children up from school. Parents were asked about children's licences for school travel and their reasons for picking up children from school. The majority of parents (n = 52, 90%) indicated that children travel home from school alone and 10% travel accompanied. The age at which parents first let their children travel home alone ranged from 5 to 17 years old, with the majority being permitted to travel alone for the first time at 6 and 7 years old. Figure 12 shows parents' reasons for picking up children from school. The most frequently selected reasons indicated were concerns about traffic danger, children unreliable or too young, danger from adults, school too far away, and opportunity to spend time with their children and meet other people.

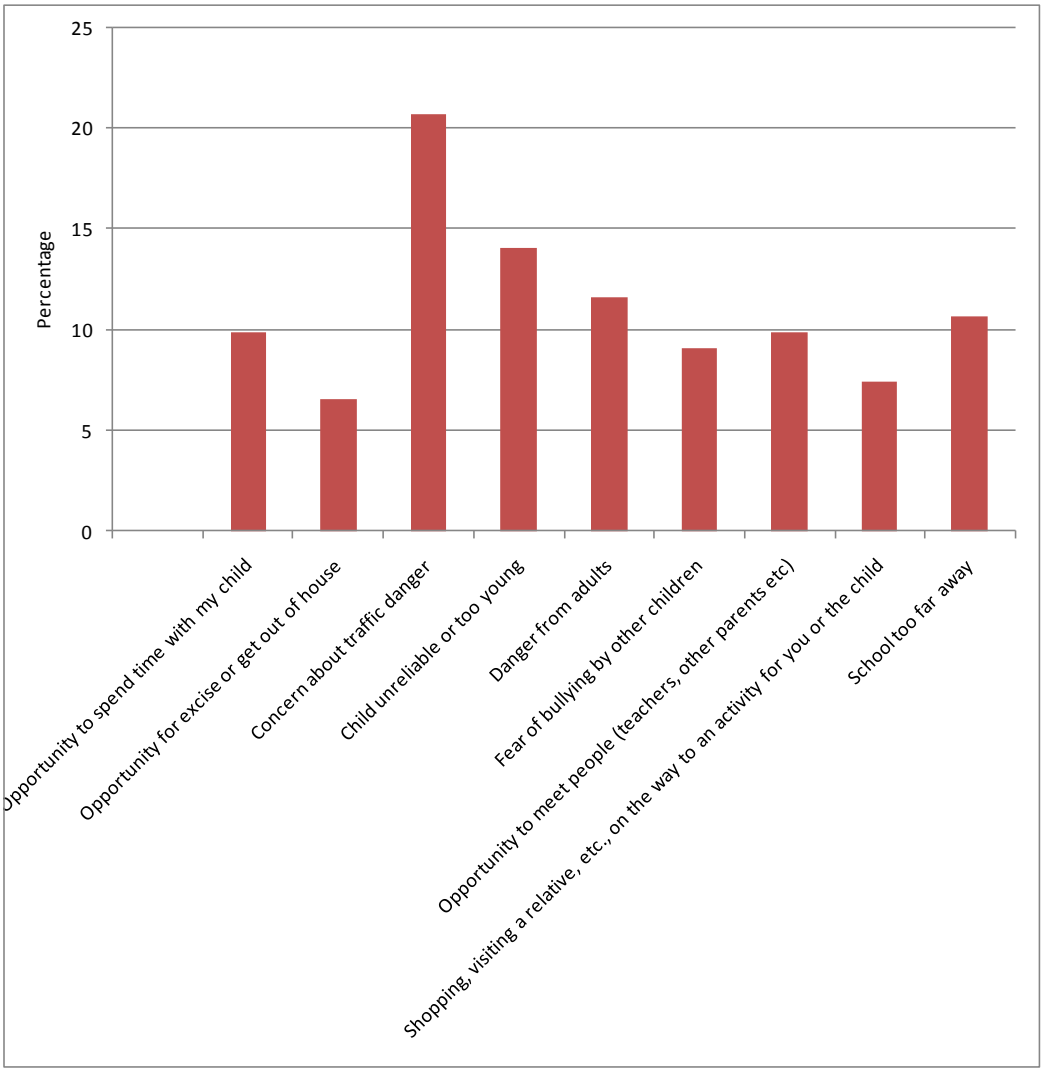


Figure 12: Reasons for picking children up from school.

School travel mode used by parents. Parents/guardians were asked to indicate the mode of transport they used when they were aged 8 or 9 years. Figure 13 provides a comparative analysis of results of travel modes used by school children compared with their parents/guardians during the time they also were at school. Analysis of the results shows that 90% of parents/guardians walked most or all the way and 2% used Daladala. It can be seen that parents did not have access to school bus transport and the rate of cycling was relatively higher than the current rate amongst school children. Further, fewer parents than children used Daladala as a travel mode. However, car use was similar between children and their parents.

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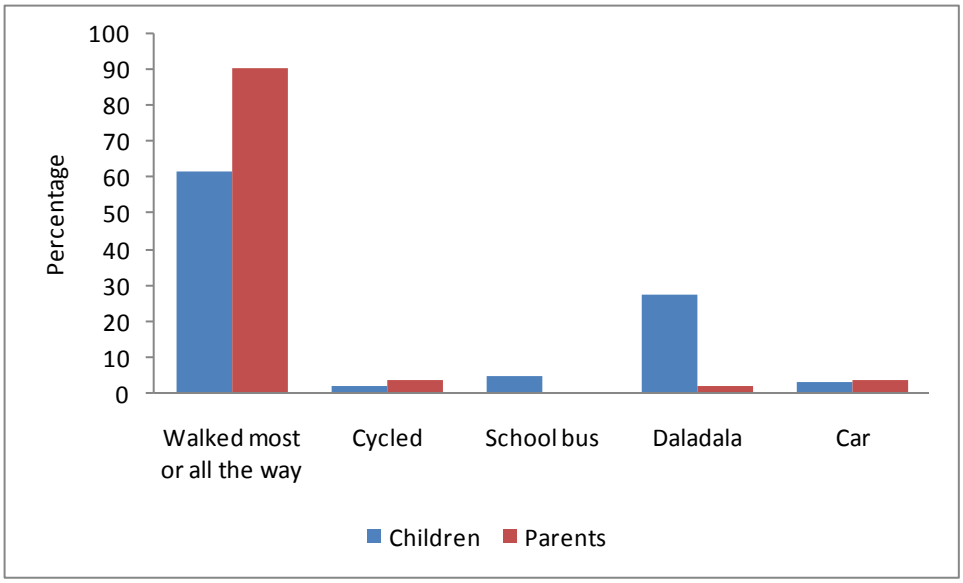


Figure 13. Comparison of school travel modes used by parents and children.

Children's journeys to places other than school. As shown in Figure 14, it was found that 34% of children go to places other than school alone and 11% of parents said children are usually taken to other places within walking distance. Regarding the travel modes used, further analysis of results showed that 33% of children walk, 55% use Daladala, 8% car, and 4% cycle, when they go to places other than school.

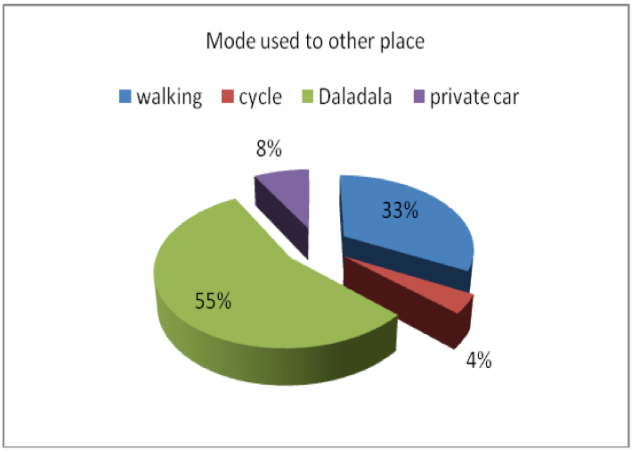


Figure 14. Other journeys and mode used.

Children's licences to go out after dark. On whether children are allowed to go out alone after dark, 91% of parents indicated that they do not allow their children to go out after dark (with 2% item non-response). The main reasons for restricting children's mobility after dark as reported by parents are shown in Table IX. The highly ranked reasons noted were to keep children from evil things (32%) and bad groups/thieves (20.7%), and these represent concerns about other people.

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Reasons	*n*	%
Away from evil	17	32
Bad groups/things/thieves	11	21
Because of the dark	9	17
Accident	6	11
Being raped	4	8
To have a time of study	3	6
Not grown up	1	2
No activities to do out	1	2
Dangerous animals (dogs)	1	2
Total	53	100

Table IX. The main reasons for not allowing children to go out alone after dark.

Variation of distance travelled by parents compared with the distance travelled by children. On the question of 'How did the distance you had to travel to school compare with the distance your child has to travel to school?', most of parents indicated that the distances they travelled were further (30%) and much further (24%) as compared to the travel distances of their children (Figure 15).

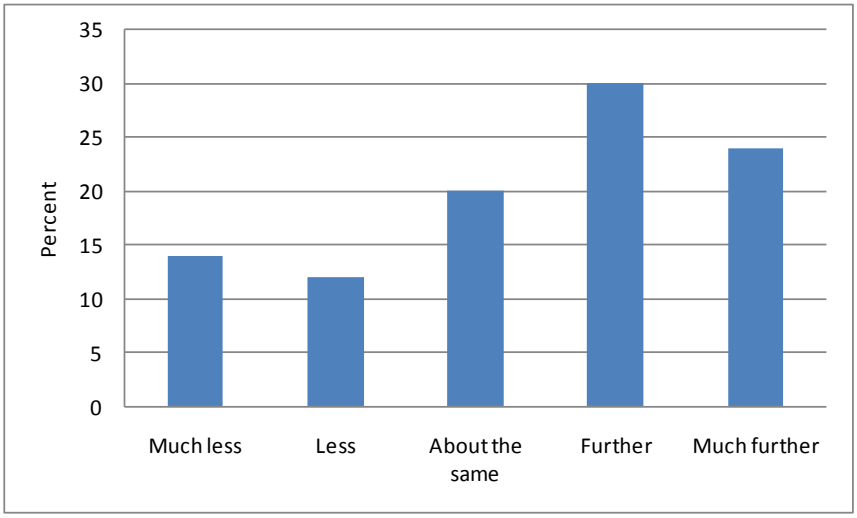


Figure 15. Distance travelled by parents in relation to children.

Looking out for other people's children in the area and safety of children outdoors. Parents/guardians were also asked about whether adults who live in the neighbourhood look out for other people's children in the area. As shown in Figure 16, it was found that 55% of parents/guardians of primary school children neither agree nor disagree, 7% disagree, 14% disagree strongly, whilst for secondary school children 35% of parents agree and 12% agree strongly. It can therefore be said that that parents/guardians of primary school children disagree that most adults who live in the neighbourhood look out for other people's children in the area, whilst parents of older children agree and agree strongly that adults who live in the neighbourhood look after other people's children.

On the question of whether some young people and adults in the area make parents/guardians afraid to let their children play outdoors, it was found that 52% of parents/guardians of primary school children agree and 17% agree strongly, whilst for secondary school children 50% of parents agree and 6% agree strongly. The results indicate that parents/guardians of both primary and secondary school children have concerns that young people and adults make them afraid to let their children play outdoors (Figure 16).

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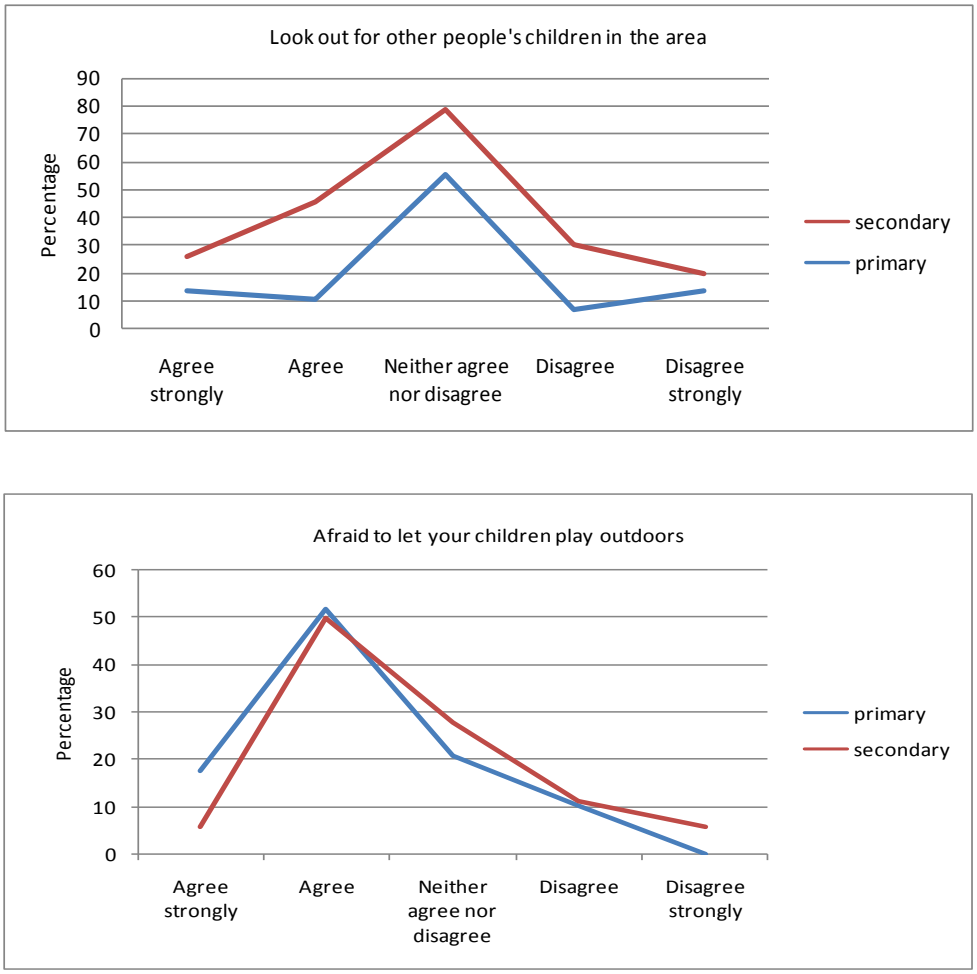


Figure 16. Outdoor perceptions of parents/guardians.

Access to outside space(s) where children can play. In response to the question 'do you have access to outside space(s) where your children can play?', results showed that 41% of parents/guardians indicated a park which they can reach without crossing a main road, 19% noted other reasons not mentioned, 14% indicated shared communal space, and 11% a garden outside. Less than 10% of parents indicated the other items listed (Table X).

Space	Number of 'yes' responses	%
Garden outside	7	11
Park which you can reach without crossing a main road	26	41
Park you reach by crossing a main road	4	6
Quiet residential road		8
Shared communal space	9	14
Other reasons not mentioned	12	19
Total	63	100

Table X. Outside space(s) where children can play.

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5. Conclusions

This article has expounded further the results presented by Bwire & Chacha (2011) on CIM in Dar es Salaam City. The main focus in this article has been on the difference age and gender have on CIM, CIM after school hours and during the weekend, parents' perception of public outdoor environments and licences parents permitted children. Parents indicated that traffic danger, children being unreliable or too young, danger from adults, school too far away, and opportunity to spend time with their children and meet other people are their reasons for picking up children from school. Also, the majority of parents indicated that they do not allow their children to go out after dark. The main reasons are to keep children from evil things and bad groups/thieves, and these represent concerns about other people. Parents/guardians of primary school children disagreed that most adults who live in the neighbourhood look out for other people's children in the area, whilst parents of older children agreed and agreed strongly that adults who live in the neighbourhood look after other people's children in the area. On mode use, parents did not have access to school bus transport during their schooldays and the rate of cycling was relatively higher than the current rate amongst school children. Further, fewer parents than children used Daladala as a travel mode. However, car use was similar between children and their parents.

It was found that the percentage of girls who prefer school bus transport is relatively higher than that of boys. The majority (about 90%) of children aged between 7 and 9 years take less than 5-15 minutes to travel to school as opposed to 46 minutes or more for children aged 10 years and above. It was also found that 79% of girls and 76% of boys travel to school unaccompanied, and the number reduces insignificantly to 73% and 63% for travel from school, respectively.

The study results showed that permission to cross main roads by walking increases as children get older, i.e. from 18% for children aged 7-9 years to 63% for children aged 13-16 years. In term of gender, 51% of girls and 42% of boys are restricted from crossing main roads on their own, which shows that girls are relatively more restricted. Some 40% of children who indicated that they are not allowed to cross main roads on their own indicated that they would like do so.

The rate of bicycle ownership amongst children is very low and 14% of children who own bicycles, of which 10% are boys, are allowed to cycle on main roads. Some 71% of bicycle-owning children, 41% being boys and 69% being 10 years old or above, indicated that they would be allowed to ride their bicycle to other places without any grown ups. Most children are allowed to use Daladala at the age of 10 years and above and the majority of girls (80%) and boys (76%) are granted a licence for moving around by Daladala.

On outdoor environments, 27% of children aged between 7and 9 years indicated that they are not allowed outside alone while 36% of children of the same age perceived their local neighbourhood to be not very safe. On the other hand, 20% of girls and 11% of boys are not allowed outside alone while 12% of girls and 22% of boys perceived their local neighbourhood to be not very safe. It was noted that parents/guardians of primary school children disagree that most adult who live in the neighbourhood look out for other people's children in the area whilst parents of secondary school children agree and agree strongly that adult who live in the neighbourhood look after other people's children in the area. The results indicate that parents/guardians of both primary and secondary school children agree and agree strongly that some young people and adults make them afraid to let their children play outdoors.

Children aged 7-9 years old and 10-12 years old were noted to be the most affected groups in terms of issues that worry them when they are outside on their own or with friends. On whether children would wish to have more freedom to go outside their home, it was found that 61% of girls and 49% of boys do not feel like they need more freedom to go outside. Further, many children undertake activities during the weekend either alone or with another young person as opposed to being accompanied by a parent or an adult person.

Interventions which may help to quell worries and concerns of the school children and parents when children are outside on their own or with friends and encourage walking and cycling include physical environmental interventions, social interventions such as designated days on which walking and cycling to school is encouraged, as well as walking and cycling school buses, enforcement of road safety laws and regulations and road safety education.

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Acknowledgements

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