

MAPPING AND GENERAL PUBLIC PERCEPTION ON THE USE OF PARKS IN ARUSHA CITY, TANZANIA



**Promoting Livable Cities Programme in Tanzania,
Mount Meru University
2016**

MAPPING AND GENERAL PUBLIC PERCEPTION ON THE USE OF PARKS IN ARUSHA CITY, TANZANIA

Prepared by

Furaha Abwe
Geography Unit, Department of Science
Mount Meru University
PO Box 11811 Arusha,
Tanzania

Submitted to

HealthBridge Foundation
1 Nicholas Street, Suite 1004
Ottawa, ON K1N 7B7
Canada

Contact person:

Kristie Daniel
Director, Livable Cities Programme

FINAL REPORT

August 2016

Table of Contents

Acknowledgements	5
1. Introduction	5
1.2. Research Objectives	7
1.3. Methods and data analysis	7
1.4. Description of the study area: Arusha	7
2. Findings and discussion.....	8
2.1. Mapping of the availability of open spaces	9
2.1.1. Location and number of the Open spaces	9
2.1.2. Quality of open spaces.....	10
<i>Park activities.....</i>	11
<i>Attractiveness, sounds, litter and trash</i>	11
<i>Graffiti, sitting areas and toilet facilities.....</i>	12
2.1.3 Streets and footpaths around the parks	13
2.1.4. Green spaces.....	14
2.1.5. Playgrounds	14
2.1.6. Sports field	14
2.2. General public perception on the use of parks	15
2.2.1. Demographic profiles of the respondents	15
<i>Age Distribution and gender of respondents</i>	15
2.2.2. Visiting Parks close to residential houses	16
<i>Distance from residence to the closest park.....</i>	16
<i>Residents visits the park closest to their residential houses.....</i>	17
2.2.2. Encouraging residents to visit more often or stay longer	18
2.3. Visiting parks in other parts of Arusha city	19
<i>The most visited parks or open spaces in Arusha city.....</i>	20
2.3.1. Reasons for visiting these parks	20
2.3.2. Mode of Travel	21
2.3.3. Reasons for not visiting.....	21
2.3.4. Encouraging to visit more often or stay for longer.....	22
3. Conclusions.....	23
4. Recommendations	23
5. Reference list.....	24

List of figures

Figure 1: Park Activities in Arusha	11
Figure 2 : Street Crossing aids	13
Figure 3: Age groups of the respondents.....	15
Figure 4: Gender distribution of respondents	16
Figure 5: Distance in meters from home to the closest park.....	17
Figure 6: Reasons for Visiting Park closest to the houses	17
Figure 7: reasons for staying longer	19
Figure 8: Visiting parks in other parts of the city	19
Figure 9: Main reasons of visiting parks in other parts of the city	20
Figure 10:Transport modes used in accessing parks	21
Figure 11: reasons for not visiting parks in other parts of the city	22
Figure 12: Reasons for staying longer in other part of the city	22

List of maps

Map 1: Location of the study area (Arusha) in Tanzania.....	8
Map 2: Location of open spaces in Arusha city.....	9

List of tables

Table 1: Population by Ward and Distribution of Open Spaces.....	10
--	----

Acknowledgements

Writing this final research report was a long journey that has been made possible by the assistance of many people to whom we would like to extend our appreciations. First of all, we owe our heartfelt gratitude to the HealthBridge Foundation of Canada for funding this survey. Further, we heartily express our gratitude to Kristie Daniel, Director of Livable Cities Programme within HealthBridge for her guidance, constructive comments and numerous fruitful discussions. We would also like to extend our sincere thanks to Dr Rachelle Desrochers, GeoHealth Specialist working with HealthBridge, for her support and accepting to bring Tablets for the project all the way from Canada to Mount Meru University in Arusha, Tanzania. Thank you once more Rachelle for facilitating the hands-on seminar with the Research Assistants on the online data collection using Tablets. Thank-you Kristie and Rachelle for visiting our University.

Our warmest appreciation goes to all staff members of the Arusha City Council, particularly the Department of Town Planning, and all the ward officials and sub ward (*mtaa*) leaders who helped the Survey team in one way or the other during the exercise of data collection. Furthermore, our appreciation also goes to the administration of the Mount Meru University, mainly the Vice Chancellor Prof Rev Harrison Olang, the late Deputy Vice chancellor for Academic Affairs Dr Simeon Kabigumila, Deputy Vice Chancellor for Administration and Finance Rev Jackson Ecuna, and the University Bursar Mr Midian Kashambagani, for their support during the whole period of this project. Last but not least, our gratitude to my brother, friend and colleague Eng. Tunzo T. Mnzava for his voluntary work in assisting on analysing data using Statistical Package for Social Sciences (SPSS) and to the Survey team mainly Augustin Yamuno, Rehema Masimango, Wilbroad Gabriel, Nafikahedi Kizigha, Jibulika Mussa, and Sarah Piniel for assisting in fieldwork execution.

1. Introduction

In Tanzania, there are several measures and efforts to protect nature for environmental, ecological, and tourism purposes. These measures are focused mainly on large, bio-diverse and relatively untouched ecosystems. However, little attention has been paid to the type of natural environments that are close to where people live and work, including small-scale green areas in cities or towns, and their benefits to people. This is the case despite the empirical evidence stressing the importance of natural environments for socio-economic and psychological benefits to urban residents, including enhancing quality of life (Chiesura, 2004).

The terms public parks, green spaces, open spaces or public open spaces are all used as synonyms to refer to publically accessible land that is set aside for recreation, leisure, sport, conservation and/or associated environmental and urban design functions (Latrobe city 2013). A number of studies have demonstrated numerous benefits linked to the use of public open spaces, which include physical and psychological benefits, health benefits, mental health and well-being, and environmental benefits in this climate changing globe (Lee & Maheswaran, 2010). Participation in a broad range of leisure activities has the potential to assist in social learning, which includes tolerance, respect, cooperation, and leadership.

In addition, participation in such activities may also contribute to a reduction in anti-social behaviour, assist in the improvement of educational performance, promote a sense of community belonging and reduce incidences of social isolation ((Latrobe city 2013). Open spaces influence physical health through its effect on physical activity levels, which, when performed in sufficient quantity, reduces risks for non-communicable diseases (WHO, 2015). Thus, the design of the urban built environment, by designating specific areas for open space, offers opportunities for beneficial 'green exercise' such as walking and cycling.

Whilst there is strong evidence of the health benefits of physical activity, the evidence that shows the availability and quality of parks in Arusha is unclear and not well documented. In addition, little is known about the perceptions of the general public on the use, and accessibility to parks or open spaces in Arusha. Therefore, empirical evidence is highly needed in Arusha as this evidence will be used to help the city council and key stakeholders make informed decisions related to parks.

This research report is divided into two main parts. The first part reports on the mapping and the availability of the parks or open spaces in Arusha. And the second part focuses mainly on the perceptions of the general public both users and non-users of public open space in order to determine what the reasons for using parks or open spaces, the

barriers to using these spaces, and their general experience in using public spaces. The survey also investigated on the elements of the public spaces or parks that would make them more desirable places in which to engage in recreational activities.

1.2. Research Objectives

In light of the above background, this survey was designed to create an understanding of the availability and quality of parks, and the public perception about the parks in Arusha city. Specifically, this research intended to:

- i. identify and map the available parks in Arusha
- ii. assess the quality of the parks and open spaces that are available in Arusha
- iii. assess the general public perception on the use of the parks in Arusha

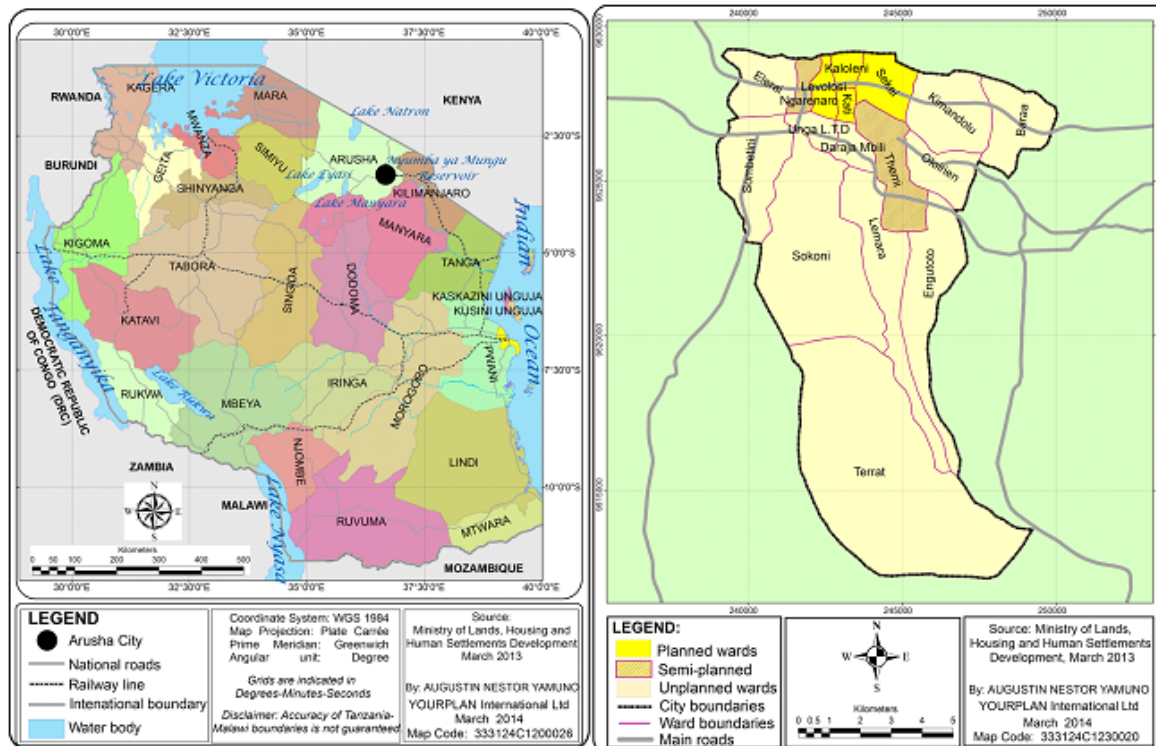
1.3. Methods and data analysis

This study used three data collection methods: face-to-face interviews using mobile devices, photographing, and mapping (Yin, 2009; Creswell, 2003; Nachmias and Nachmias, 1996). Both the mapping and the perception surveys used and adapted HealthBridge Survey tools. For the mapping of open spaces, the survey adapted the public spaces audit tool, and for the general public perceptions on the use of open spaces, the general public survey tool was adapted. During the mapping exercise, the survey team visited all the 19 administrative wards of the Arusha city council with aid of ward executive officers or sub-ward leaders. And for the general public survey, the survey team interviewed 160 respondents from all the administrative wards of the Arusha city council using ODK online data collection tools. Open Data Kit (ODK) is a free and open-source set of tools that helps researchers manage mobile data collection solutions and is an open source software programme. We used ODK to collect our data for the face-to-face surveys to capture the pictures, and conduct the mapping. Tablets with Google Android mobile technology were used since it an open source platform.

Analysis of the collected data was an interactive process through the data collection exercise. After every data collection stage, data was compiled and organized for close scrutiny. Analysis of the collected data was done with aid of Statistical Package for Social Sciences (SPSS) by establishing frequencies of phenomena, and the spatial data was analysed through Geographical Information System (GIS) Software namely ArcGIS.

1.4. Description of the study area: Arusha

Arusha is one of the cities in Tanzania with growing political and urban management challenges. Arusha is currently home to 416,442 people (URT, 2012) and covers a total area of 208 km². The city is the commercial hub of the northern and eastern parts of the country and hosts a number of small and medium sized industries, and is the headquarters of the East African Community, the International Criminal Tribunal for Rwanda, and several other international organisations and corporations. Arusha is famously known for its touristic attractions such as Mount Kilimanjaro (Abwe, 2013). Map 1 shows the study area in Tanzania.



Map 1: Location of the study area (Arusha) in Tanzania

2. Findings and discussion

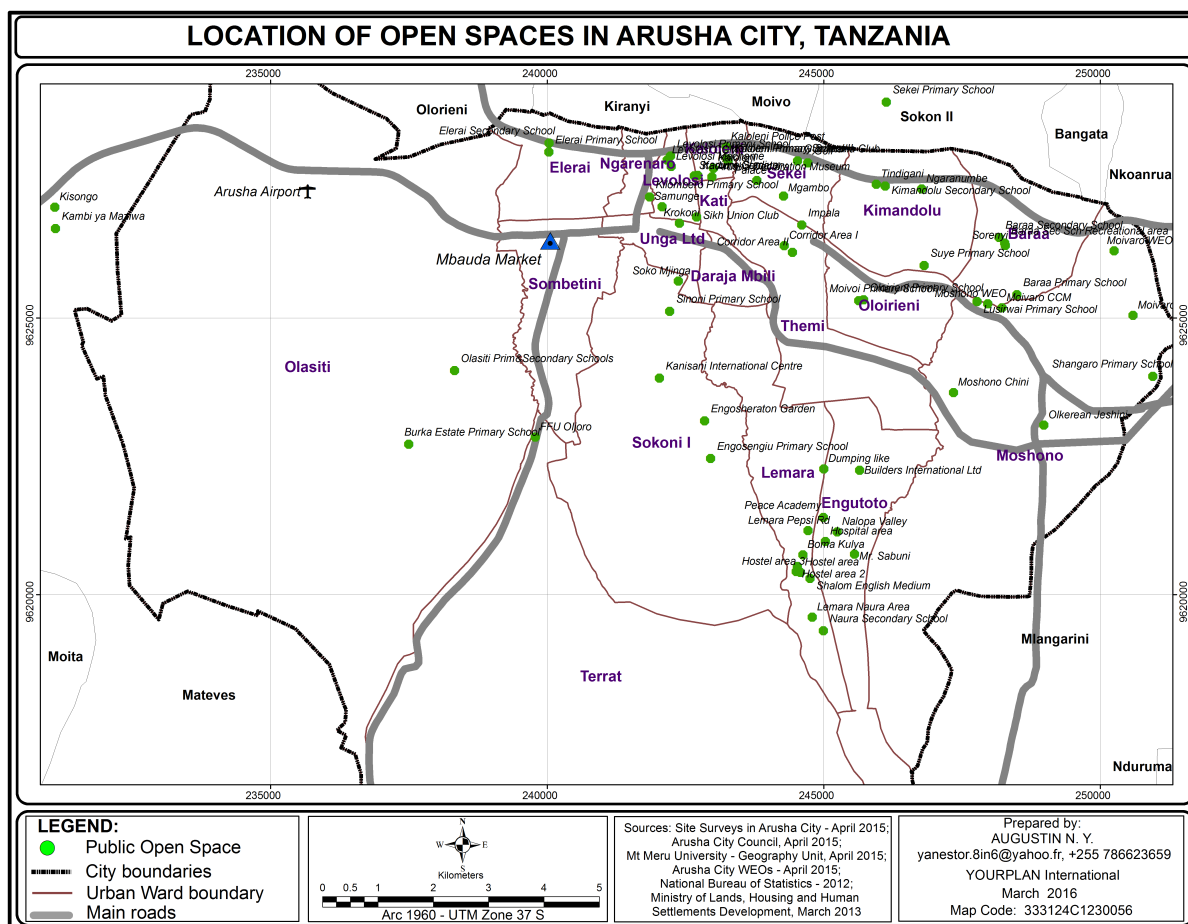
The following section reports on the findings of the mapping of available parks and open spaces and the assessment of the public perceptions conducted in Arusha.

2.1. Mapping of the availability of open spaces

This section presents the survey results including the location and number of the open spaces, quality of the open spaces, streets and footpaths, green spaces, playground and sports field.

2.1.1. Location and number of the Open spaces

A total number of 66 open spaces were documented and mapped. These open spaces are divided into three categories of ownership: public, public school, and private. The survey shows that 56% of all open spaces are publicly owned, 35% are under public school-ownership, and 9% are privately owned. Map 2 shows the location and the distribution of all of the documented open spaces in the city.



Map 2: Location of open spaces in Arusha city

The location of the 66 identified Open Spaces are distributed in the city administrative wards is here presented in the flow where the name of ward is followed immediately by the number of documented open space(s) in brackets as follows: Olasiti (3), Elerai (2), Sombetini (0), Ngarenaro (1), Unga Limited (1), Sokoni I (5), Levulosi (6), Kaloleni (6), Kati (0), Daraja Mbili (0), Lemara (9), Sekei (5), Kimandolu (4), Oloirieni (2), Baraa (4), Engutoto (5), Themis (3), Terrat (2), Moshono (8).

The analysis shows that there is uneven distribution of open spaces in the wards of in Arusha. In addition, the distribution does not match the population living in the ward as shown in Table 1. For instance, Kati, Daraja Mbili and Sombetini wards, which have 3,114; 19,491 and 48,268 residents respectively, have no open spaces for children and adults to visit. Further, Daraja Mbili has the highest population density than any wards, but it has zero open spaces. It was observed that Engutoto ward has a fairly low population and a much lower population density, and yet has a more reasonable number of open spaces. Table 1 illustrates the distribution of open spaces and population in Arusha.

Ward	Population	Pop Density /km ²	Parks	Population/park
Olasiti	36,361	549.2	2	18180.5
Elerai	40,749	10,876	2	20374.5
Sombetini	48,268	9331.7	0	0
Ngarenaro	48,268	12471.8	1	48268
Unga Ltd	17,342	11,707.3	1	17342
Sokoni I	73,331	4052.1	5	14666.2
Levulosi	8,838	7,695.3	6	1473
Kaloleni	9591	10636.1	6	1598.5
Kati	3114	5363.4	0	0
Daraja Mbili	19,491	15,877.3	0	0
Lemara	19,564	2798.5	9	2173.8
Sekei	9213	3485.3	4	2303.25
Themis	9458	1525.5	3	3152.7
Kimandolu	27,649	5188.8	4	6912.25
Oloirieni	18697	5829.4	2	9348.5
Baraa	12,498	2775	4	3124.5
Moshono	20698	841.8	8	2587.25
Engutoto	7426	949.8	5	1485.2
Terrat	21790	205.3	1	21790

Table 1: *Population by Ward and Distribution of Open Spaces*

2.1.2. Quality of open spaces

Park activities

Of all the 66 Open Spaces found in Arusha city, 45% of them are used as green spaces, 24% are used as sports fields, and 15% as playground fields. However, it was revealed that some of the open spaces are used for other purposes such as for urban agriculture (8%), car parking (3%), and dumping sites (5%). See Figure 1.

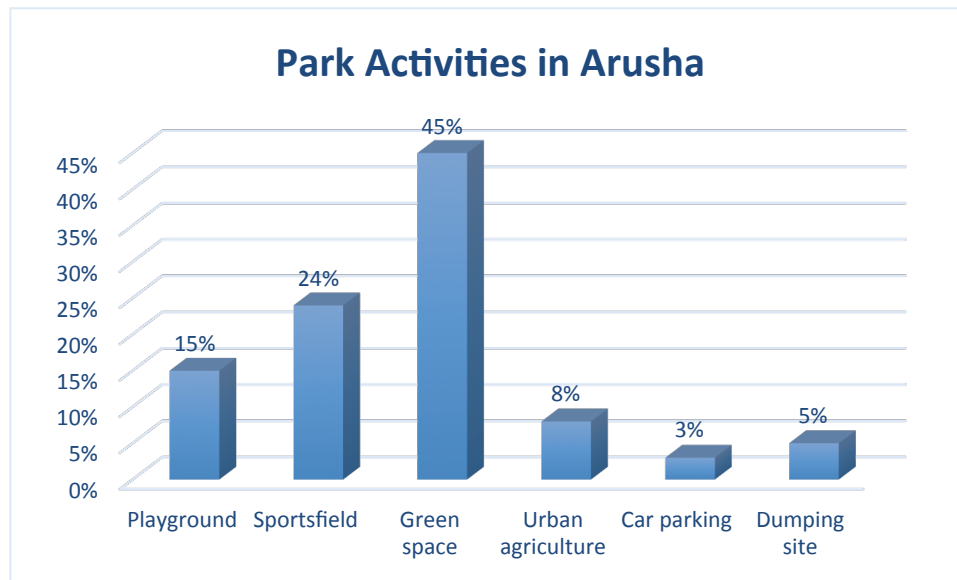


Figure 1: Park Activities in Arusha

Source: Fieldwork in Arusha, April 2015

Attractiveness, sounds, litter and trash

The analysis of attractiveness of open spaces can be summarized as follows: average (48%), poor (35%) and good (17%). Regarding landscaping elements, the survey reveals that 52% of the parks had no landscaping while 48% had some kinds of landscaping. In terms of sounds, traffic noise could be heard in (35%), voices (58%), and birds (23%). In some parks it was possible to hear music (29%), water (0) and other sounds (21%). On smell the survey reveals the following, most of parks had good smells (56%), while the remaining were average (29%) and poor (15%). The availability of litter and trash was used a benchmark in assessing the cleanliness of the parks or open spaces. Litter consists of small discarded items, not in a can, that can be picked up by an individual. On the other hand, trash consists of large items that take an organised effort to dispose of by many individuals. Overall there is cleanliness is an issue in the documented parks with 55% of the parks having a lot of litter, 30% had some litter, while 15% had no trash. In rating how much trash were present in the area,

the survey reveals that 65% had no trash, 18% had a little trash, 9% had some trash, and 8% had a lot trash. In this study, trash consists of large items that take an organized effort to dispose of, while litter. In term of risky litter such as broken bottles, empty cans and sharp stones, the parks had none (71%), and a little (29%).

Graffiti, sitting areas and toilet facilities

All the open spaces or parks were found with no graffiti. Graffiti refers to any unauthorized writing or drawing on a public surface. The survey reveals that toilets were present in 50% of the open spaces. However, cleanliness of these toilets is of concern as the majority of them were of average (55%), and poor (27%). Only (18%) had clean toilet facilities. There were many open spaces with no seating (56%), while 44% had some seating whereby the quality of the available seating facilities was good (34%), average (32%) and poor (34%).



Toilet at Arusha Peace Park



Seating at Elerai Sec School



Seating at Engutoto Green space

Food items, water taps, monuments, security, first aid

The survey results show that there were no water taps in 71% of parks (i.e. 47 parks), and 29% (i.e. 19 parks) had had water taps. However, only 58% of the available taps were functioning. Further, the results reveal that parks with security guards were 29% against 71% without any security personnel. It was noted that many of the parks with guards were either privately owned or within or close to public schools. In documenting the number of small vendors of various food items, a total 97 vendors were observed: fruit juice (14%), ice cream (15%), water (19%), soft drinks (20%), fruit (7%), puffed rice (6%) and lastly popcorn (19%).



Monument at Arusha Palace, Petty vendor at Baraa Sec School, Water tap at Moivaro Open Space

2.1.3 Streets and footpaths around the parks

The survey results show that most of the open spaces are bordered by streets (85%), 8% cross the open spaces, and 6% have no streets at all. on the number of street lanes, 77% of these streets are of 2-3 lanes, and 15% are of one lane. Most of the streets, 78.7% of the streets have no crossing aids, 9% have traffic lights, 5% have speed bumps and 2% zebra crossings (see Figure 2). It is also worth noting that there were no streets leading to 6% parks, hence unable to assess. The findings show that the volume of traffic is distributed as follows, fewer or five cars per minutes (62%), 6 to 10 cars per minutes (17%), and 11 or more cars per minutes (14%), and all the available 61 streets have no speed limit signs. One side footpath along the streets (32%), both side of the streets (29%), no footpaths (32%), on footpath conditions, poor (33%), average (32%), good (8%) and unable to assess (32%).

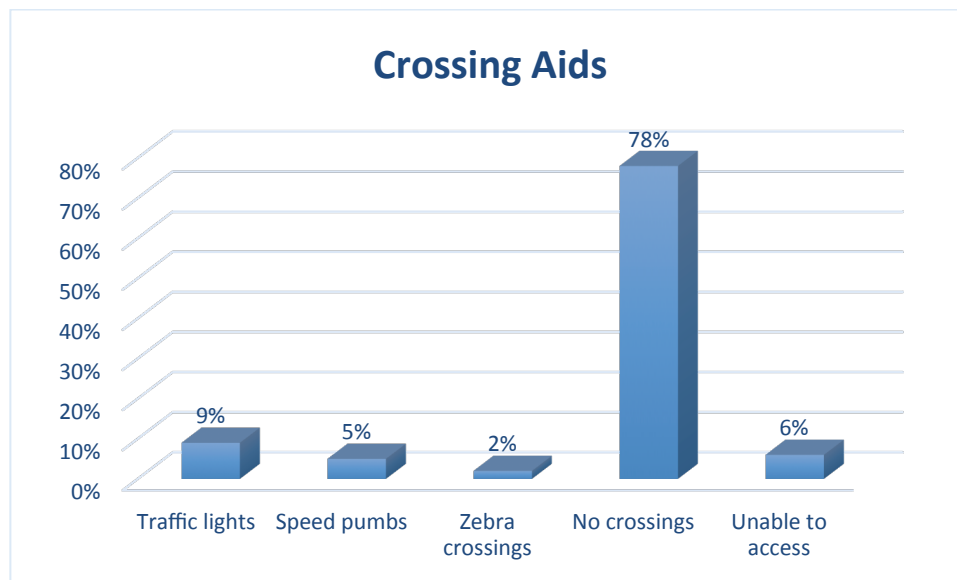


Figure 2 : Street Crossing aids

2.1.4. Green spaces

The survey reveals that of the 30 open spaces used as Green Spaces, 50% are landscaped while other 50% are natural. Children are only allowed to play in 60% of the green spaces. In addition, 50% green spaces appeared to be regularly maintained, and the surface of 80% spaces is covered mostly by grass, and 17% are covered mostly by soil. On attractiveness the surveyors rated the green spaces as: average (43%), poor (40%) and good (17%). It has been revealed that 87% spaces have no water features, and trees are the sources of shades in more half of them.



Arusha Peace Park (Impala Green Space)



Arusha Palace Garden



Baraa Green Space

2.1.5. Playgrounds

The survey identified ten playgrounds of which 7 of them were surfaced with soil and 3 with grass and soil. On condition of the playground, the findings show that poor (50%), average (30%), below average (10%) and good (20%). None had playing equipment.

2.1.6. Sports field

Of the 16 spaces documented as sports fields, 12 are intended to be used for football, 2 for multipurpose, 1 for cricket, and 1 golf. Structures available in the sports fields are as follows football goal posts (75%), seating (13%), cricket (6%) and golf (6%). The condition observed of the sports fields is average (56%), good (25%), and below average (19%). The surveyors assessed whether the available equipment was broken or missing, and determined that none of the equipment was broken or missing in 69% of the sports fields and 31% had very little. Only 3 fields have flood lights and 13 do not have any lights for illuminating the field at night. The survey shows that only 3 fields could be locked and 13 could not be locked.



Krokoni Sports fields



Karume Stadium



Mgambo Sport field

2.2. General public perception on the use of parks

2.2.1. Demographic profiles of the respondents

Age Distribution and gender of respondents

Prior to asking other interview questions, the 160 respondents were asked to indicate the categories that best described their age. The survey results show that the largest number of respondents (35.6%) were found to be in the 20-29 age group, followed by 30.6% in the 30-39 age group, and 40-49 group with 11.3%. The age groups of more than 75 and less than 16 years of age were under-represented with only 1.9% of respondents belonging to those age groups. See Figure 3 for more details. The respondents were 57% male and 43% female as shown in Figure 4.

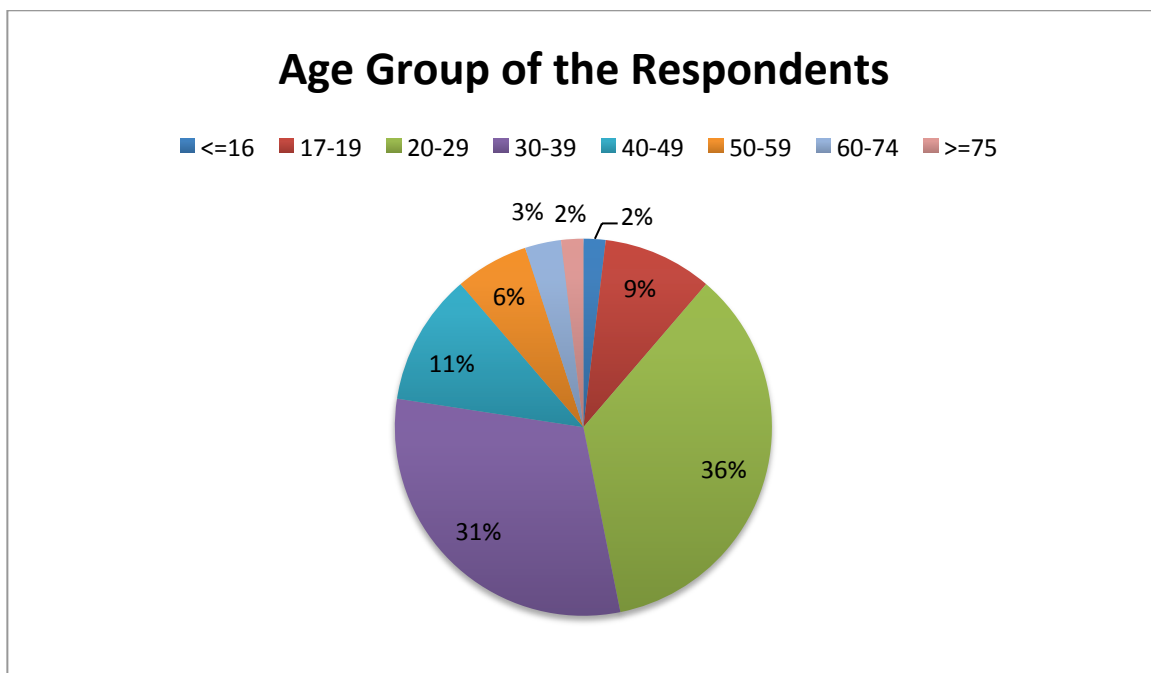


Figure 3: Age groups of the respondents

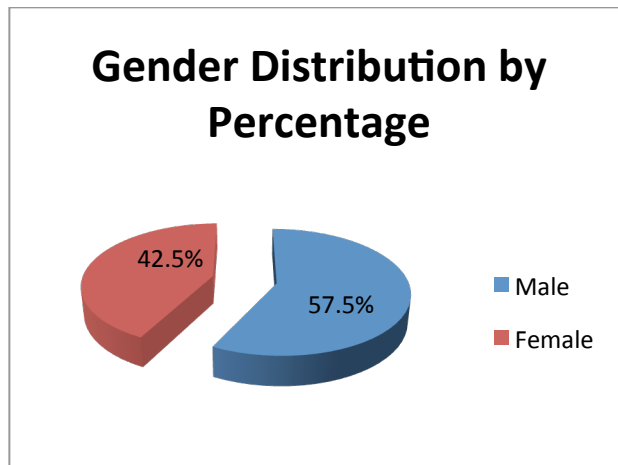


Figure 4: Gender distribution of respondents

2.2.2. Visiting Parks close to residential houses

Distance from residence to the closest park

City residents were interviewed about the distance they travel from their residences to the closest park in the city, and the survey results show that 75% respondents could not tell the distance they travel from their residences to the closest park, while 14% travelled a distance of less than one hundred meters. Only 6% travelled a distance of between 101 and 400 meters, 3% travelled a distance between 401 and 800 meters, 2% travelled a distance of 801 and 1200 meters. None reported to have travelled a distance of more than 1200 meters. See Figure 5.

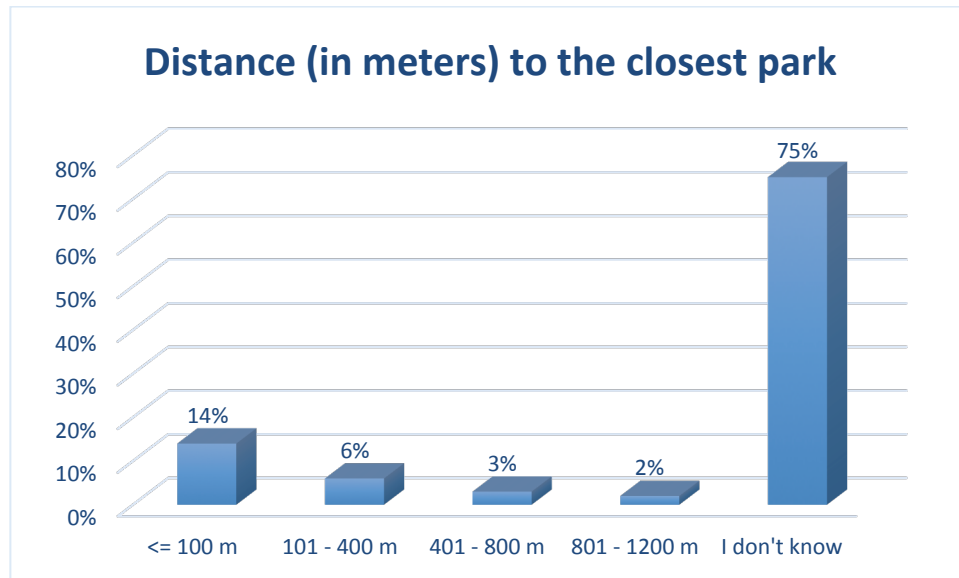


Figure 5: Distance in meters from home to the closest park

Residents visits the park closest to their residential houses

The respondents were asked whether they visit the parks closest to their houses or residences and the results show that 63% agreed that they do visit, and 37% said they do not. The 101 respondents gave different reasons for visiting various parks closest to their residences. Thirty-three percent mentioned relaxation after some hard work or just for fresh thinking, while 27% mentioned they visit parks to keep themselves physically fit, 21% for peace and quiet, 16% said for playing, and lastly 3% seeing birds and wildlife as the main reasons. See Figure 6.

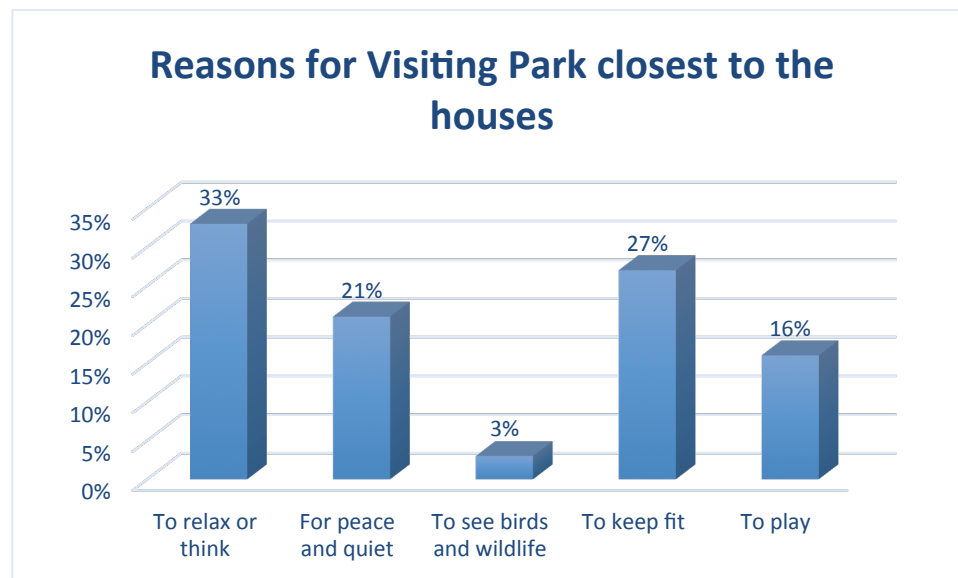


Figure 6: Reasons for Visiting Park closest to the houses

On the other hand, the reasons for not visiting parks close to their houses that were given by the 59 respondents also vary. Fifty-one percent of those respondents indicated that they do not visit parks due to poor accessibility to enter the park, 17% said the parks are not clear or the park environment is not conducive or attractive to them. In addition, 10% complained of lack of tree shade and 7% mentioned health reasons while 5% of respondents argued that they do not visit their park because of lack of space to walk or play within the park. Additional responses included: 5% indicated access roads going to the park are very poor, 3% said lack of shelter in the park prevented them from using the parks, and 2% said lack of park furniture was the main reason for not visiting parks closest to their residences. See Figure 7.

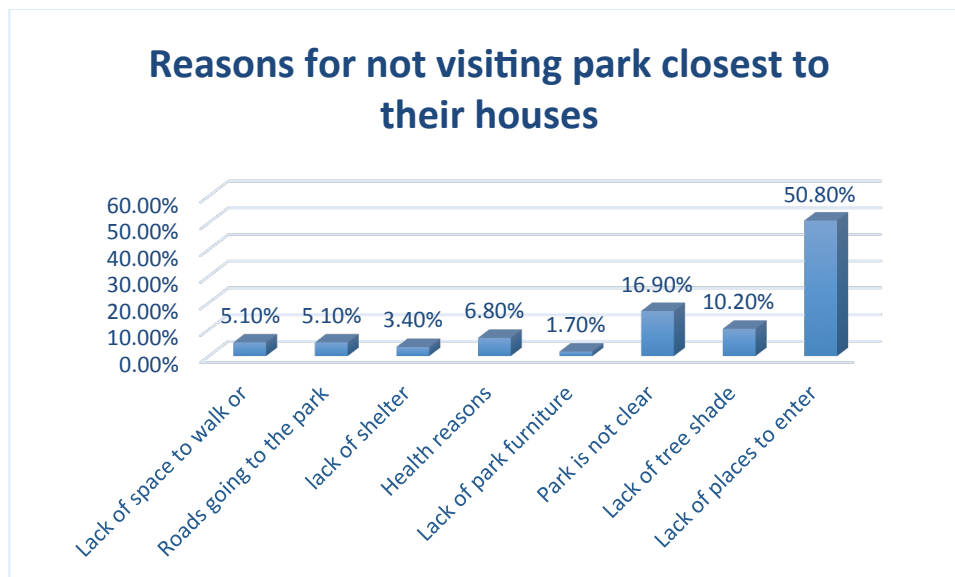


Figure 7: Reasons for not visiting park closest to their houses

2.2.2. Encouraging residents to visit more often or stay longer

The 104 respondents who do visit parks were asked to consider the things that would encourage them to visit more often or stay at the park longer. Responses included: better security in the park (69%), improved conditions of park facilities (64%), more spaces to walk or play (59%), better landscaping (56%), increased tree shade (30%), safer ways to cross the street heading to parks (28%), more shelter to protect from rain or sun (20%), others (7%). Others responses included awareness creation, more park activities or events, snacks and hand carvings and crafts. See Figure 8:

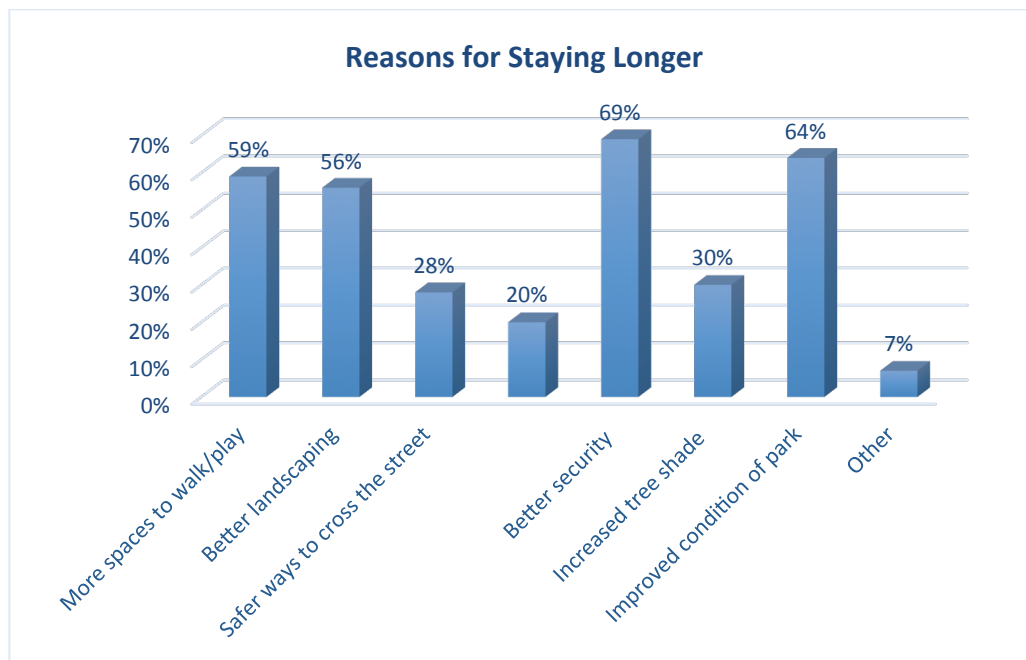


Figure 8: reasons for staying longer

2.3. Visiting parks in other parts of Arusha city

The survey respondents were asked whether they visit the parks in other parts of the city and, the survey results show that 65% agreed that they do visit, and 35% said they do not visit as illustrated in Figure 9.

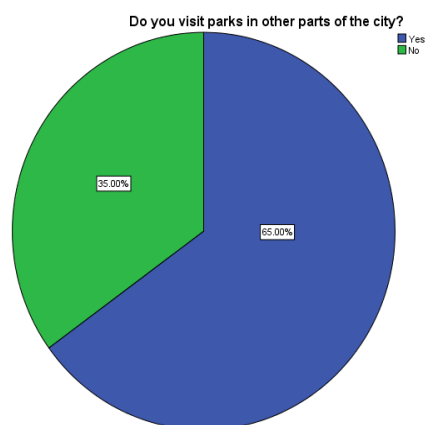


Figure 9: Visiting parks in other parts of the city

The most visited parks or open spaces in Arusha city

The 104 respondents who indicated they visited parks outside of their neighbourhoods were asked to list the names of the parks, playgrounds, and open spaces that they mostly visited. The percentage of respondents is presented in brackets following the names of the park or open spaces. The top 10 mostly mentioned are Soweto (19%), Sheikh Abed Amani Karume (14%), Uhuru park (10%), Arusha Palace Hotel Park (8%), Arusha Museum (5%), Gymkhana (3%), Masai Camp (4%), Botanical Garden (3%), Arusha Peace Park (or Impala Hotel Park) (3%), and Bamakambi (3%).

2.3.1. Reasons for visiting these parks

The 104 survey respondents who do visit parks in other parts of the city were asked to explain the main reasons for visiting parks, and the findings are as follows: good condition of park facility or park furniture (39%), good security at the park (25%), nice spaces to walk or to play (19%), safe ways to access the park that include road and zebra crossing (12%), good landscaping (4%), and lastly good tree shade (1%). See Figure 10.

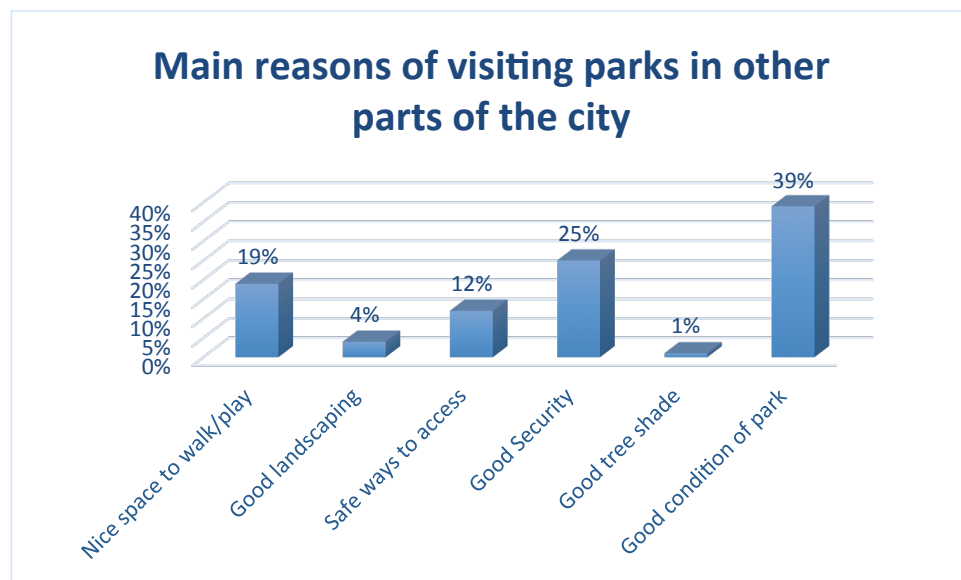


Figure 10: Main reasons of visiting parks in other parts of the city

2.3.2. Mode of Travel

The survey team investigated the modes of transport mostly used by park visitors in accessing parks in other parts of Arusha city. The survey results show that among the 104 respondents who confirmed visiting parks in other parts of the city, 31% use mini-bus public transport commonly known as daladala, 27% use private cars, 18% use motorbikes commonly called bodaboda or pikipiki, 16% go on foot, 4% use taxi and other 4% use bicycle. It is worth noting that motorbikes are also integrated in public transport system in Tanzania. This implies that if we combine those who use daladala and motorbikes, this makes 49% using public transport from a total of 104 respondents as indicated in Figure 11.

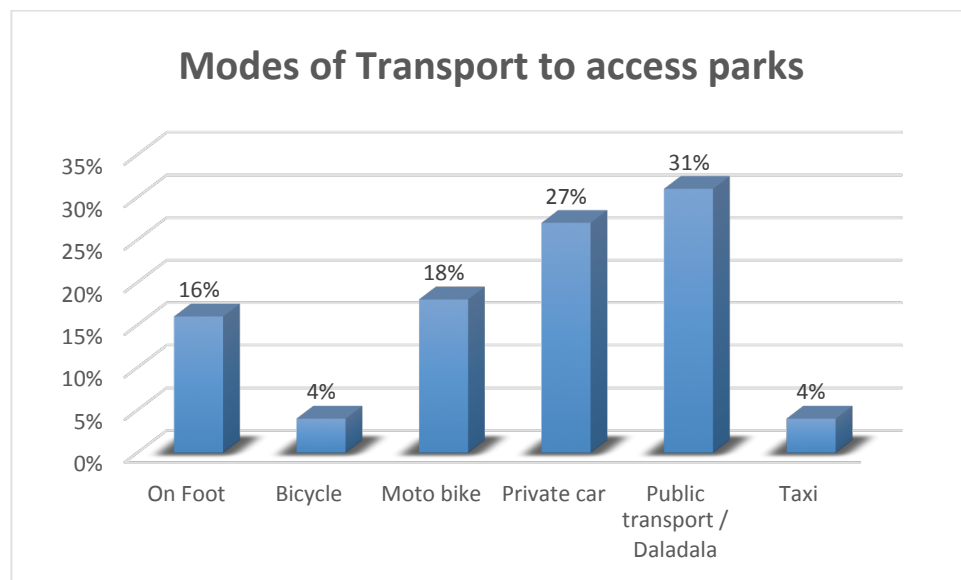


Figure 11: Transport modes used in accessing parks

2.3.3. Reasons for not visiting

The reasons that discourage the 56 respondents from visiting parks in other parts of the city also vary. Twenty-nine percent of them said lack of park furniture, 23% said lack of places to enter the park area, 16% said lack of spaces to walk or play, 11% said roads going to parks are poor, 9% said park area is not clear, 5% said lack tree shade, 5% said lack of shelter, and lastly 2% of respondents said that they don't visit any park because of health problems as shown in Figure 12.

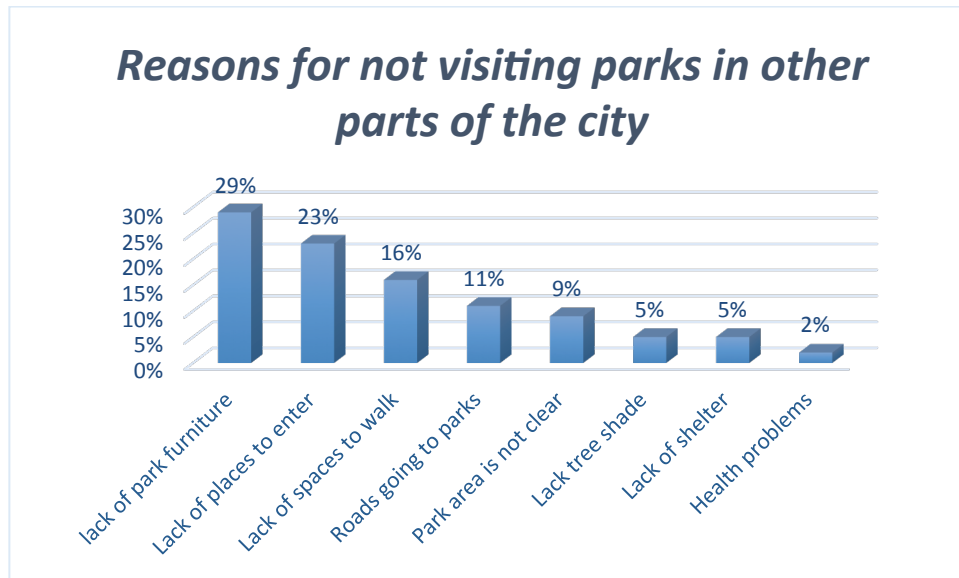


Figure 12: Reasons for not visiting parks in other parts of the city

2.3.4. Encouraging to visit more often or stay for longer

The 104 respondents who do visit parks outside their neighbourhoods were asked to describe what would encourage them to visit more often or stay at the park longer, and the survey results are as follows, better security in the park was mentioned (21%), improved conditions of park facilities (19%), more spaces to walk or play (19%), better landscaping (17%), safer ways to cross the street heading to parks (10%), increased tree shade (8%), and lastly more shelter to protect from rain or sun (6%). See Figure 13.

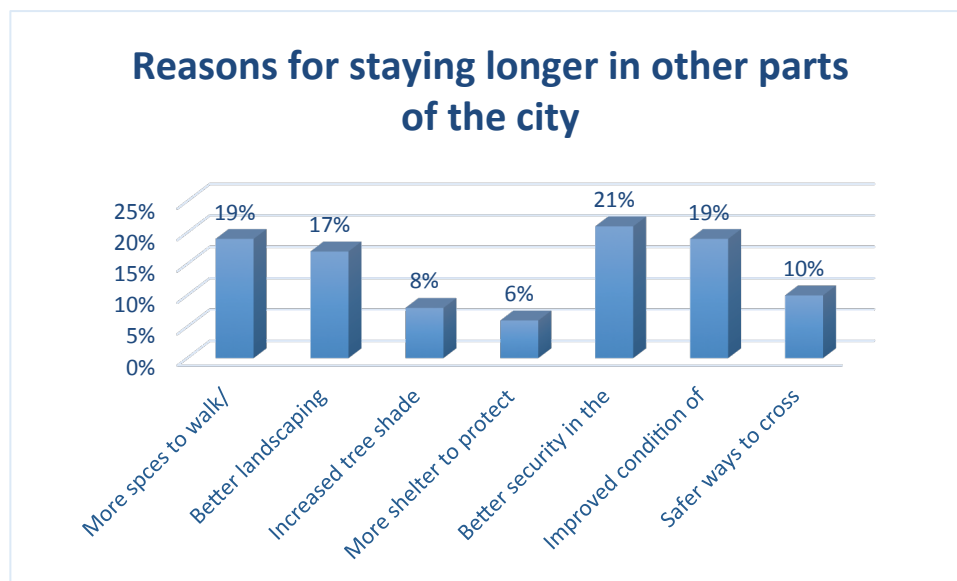


Figure 13: Reasons for staying longer in other part of the city

3. Conclusions

Based on the findings, 56% of all open spaces are publicly owned, 35% are under school-ownership. However, it has been revealed that most of the parks are unevenly distributed, and that the distribution does not match the population number living in a particular area. Only 17% of the parks/open spaces can be rated as attractive and more than half (52%) of them have no proper landscaping. Cleanliness is an issue in the documented parks. In addition, cleanliness of the available toilets is an issue of concern as only 18% can be rated as good. Furthermore, 56% of parks have no seating facilities, and many of them (71%) had no security guards or any other security measures. Worse still, none of the playground had playing equipment.

It is clear that many people want to visit parks for relaxation, exercise, peace and quiet. However, it seems that parks are not meeting city residents' needs as there is a significant number (37%) who are not visiting parks because of poor accessibility to enter the parks, and because of the park quality as many respondents indicated that the park environment is not conducive or attractive to them. Issues such as lack of tree shade, lack of space to walk or play within the park, access roads going to the park are very poor, lack of shelter in the park, and lack of park furniture all contribute to creating an unpleasant environment for park users. Lastly, the study demonstrated that majority of the city residents use public transport commonly known as 'daladala' (mini-bus) and bodaboda (motorbike) in reaching various public parks.

4. Recommendations

we suggest the following issues to be taken into consideration for making public open spaces or parks more user friendly or more usable:

- The City Council and ward officials should collaborate with key stakeholders for developing and maintaining available public spaces.
- The city and ward officials should innovate ways that can make the community members, including children, to continue using public spaces.
- The city and ward officials and stakeholders should educate the community members on the protection and maintenance of public spaces and their use.
- Stakeholders should collaborate to improve and/or develop parks for their functionality, set security measures, facilities and landscaping elements.

5. Reference list

Abwe, F.G. (2013). PhD thesis proposal in City and Regional Planning, University of Cape Town. Cape Town, South Africa.

Chiesura, A. (2004). The role of urban parks for the sustainable city, *Landscape and Urban Planning* 68, 129- 138.

Cresswell, J.W. (2003), Research Design. Qualitative, Quantitative and Mixed Methods Approach, 2nd ed., University of Nebraska, Sage Publications: Omaha.

Frankfort-Nachmias C and Nachmias D; 1996 Research Methods in Social Sciences; Fifth Edition; ANORLD.

Latrobe city (2013) Public Open Space Strategy Volume 1: strategy and recommendations. Final report. INSIGHT Leisure Planning.

Lee and Maheswaran, (2010) The health benefits of urban green spaces: a review of the evidence. *Journal of Public Health*, Vol. 33, No. 2, pp. 212–222

United Republic of Tanzania (2012) National Census report, National Bureau of Statistics. Dar es salaam.

World Health Organization, (2015) Physical Activity. Accessed on April, 22nd, 2015 from <http://www.who.int/mediacentre/factsheets/fs385/en/>

Yin, 2009 Yin, R. (2009), *Case study research, design and methods*, 4th ed., Sage publications: London