The state of urban parks in some of South Africa's metropolitan areas

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1. Introduction

Urban parks vary in terms of their surrounding neighbourhood, size and shape, amenities and features, as well as their quality and safety (Kaczynski et al., 2012). Despite this variation, all urban parks are considered important community resources that form a critical role in improving the mental, physical and spiritual health of urban residents and creating opportunities for social cohesion across all age groups, gender and race (Page and Connell, 2010). They also offer critical ecosystem benefits (Mexia et al., 2017). Additionally, they enhance tourism potential and property values. Their function is particularly significant in rapidly urbanizing cities. However, the use, quality and condition of urban parks depend on their planning, provision and management while social, physical and psychological factors may impact on their utilization (Moulay et al., 2018). The South African academic discourse on parks charts the challenges facing them. They are subject to decline and lack proper provisioning, in part due to historical legacy issues but also due to municipal budget and resource constraints (McConnachie and Shackleton, 2010). Rectifying this requires appropriate park design, planning, management and maintenance. These, however, require dedicated resources, funds and personnel (Thompson, 2002). But, in general, little is known about the state of urban parks across South Africa. Thus, the purpose of this study is to present the results of a national audit of parks in five of South Africa's metropolitan municipalities.

2. Parks in cities: An overview

Urban areas are associated with densely settled communities, a radically altered landscape and a significant loss of natural fauna and flora. In this context, enabling urban residents to access more natural infrastructure is vital. Parks are multi-functional spaces which provide people with social, psychological, environmental and health benefits (Chiesura, 2004). For example, they are vital spaces for physical activity (Page and Connell, 2010). Nevertheless, the attributes of parks often directly determine how park users employ physical activity such as walking, jogging and cycling. Landscape features such as wooded areas, views and lighting can also impact significantly on the use of parks (Kaczynski et al., 2008). Such that, increased park attractiveness has been found to enhance levels of walking amongst park visitors (Giles-Corti et al., 2005). Park facilities which have a positive relationship to park use include basketball courts, pools, picnic areas, available sidewalks amongst other things (Baran et al. 2014). Parks also contribute to

the psychological health of regular park users through reduced stress, enhanced relaxation, and improved well-being. Increased play in parks also benefits the physiological and cognitive development of children (Chiesura, 2004). Furthermore, parks benefit communities through enhanced social cohesion and sense of place and can spark landscape or place attachment (Halpenny, 2010). In addition to important cultural services, parks benefit the urban environment through ecosystem services such as wildlife habitat, micro-climate regulation, carbon sequestration, noise and wind reduction, flood control, air quality regulation and water purification (Giedych and Maksymiuk, 2017). The aesthetics of green spaces can stimulate increased property values and attract more people, therefore potentially boosting the local area and businesses (Sherer, 2006).

Urban parks, therefore, provide direct and indirect benefits and should be designed to accommodate a broad spectrum of needs (Özgüner, 2011). In particular, park usage is closely related to attraction or 'pull factors', however, perceived threats and lack of safety can be barriers to use (Yahaya and Mohd, 2013). Unfortunately, parks are generally underutilised (Veitch et al., 2017). Factors include amongst other; accessibility, size, location and land use, street connectivity, quality, maintenance, aesthetic and cleanliness, and perceived safety (Moulay et al., 2018). A lack of attractive facilities, services and programmes in parks may ultimately form 'push factors' and cause people to avoid them (Yahaya and Mohd, 2013). Honiball and Das (2015), in a study of Bloemfontein parks, also found the need for improved lighting to enhance the use of parks. While urban parks are potentially 'positively valued' locations, some people may associate them with a sense of insecurity, fear and anxiety (Chiesura, 2004). Safety in South African parks is a big concern. This includes park users and residents that live near the parks and would normally make use of the facilities. Crime and safety are some of the most critical challenges facing parks and other open spaces (Perry et al., 2008). Part of the challenge is park design and management. If there are insufficient park gates, isolated areas, facilities in disrepair, this can increase crime levels (Blöbaum and Hunecke, 2005). This is exacerbated if parks are located in poor neighbourhoods (Baran et al. 2014).

Another body of international literature undertakes park assessments and observations. The importance of auditing parks is that it provides insight into how specific parks function such that the benefits can be enhanced (Kaczynski et al., 2012). There are currently a large number of auditing and assessing tools designed to measure and characterise parks, green, and open spaces (Floyd, 2012). Each differs in complexity, length, and methodology, and vary from direct observation tools to the use of online technology and archival analysis and web-audits (Nelson et al., 2019). The present study made use of the Community Park Audit Tool (CPAT) which was designed in Kansas City, Missouri as a user-friendly, quick and reliable audit tool for community members to audit parks and measure potential to promote physical activity. The six-page audit tool takes approximately 32 minutes to complete and consists of four sections that include categories about park information, access and neighbourhood, activity areas, as well as quality and safety (Floyd, 2012). The tool allows for different categories to be checked and comments to be recorded. Kaczynski et al. (2012: 247) describes such direct observational audits as the most effective to assess the

quality and “capture the characteristics of parks”. The CPAT successfully balances a thorough level of detail, while being quick and simple to complete (Floyd, 2012).

3. Methodology

The CPAT was undertaken by University of South Africa postgraduate students, using convenience sampling. This methodological approach allowed a least-cost national audit. It is acknowledged that the results of the national audit cannot be generalizable but it is the first nationwide audit into metropolitan urban parks in South Africa using this international CPAT tool. Data from five large South African metros, namely City of Cape Town; Tshwane; eThekwini; Johannesburg and Ekurhuleni, is presented here.

4. Results

A total number of 71 parks were included in the study. In terms of distribution, 12 were in Cape Town, 14 in Durban, 16 in Ekurhuleni; 18 in Johannesburg and 11 in Tshwane. The data captured by field workers using CPAT was collated into six various criteria. These were: (1) General information pertaining to the park; (2) Accessing the park; (3) Security; (4) Maintenance and care; (5) Physical activity infrastructure; and (6) Comfort amenities. Results for each criterion are presented in various tables and colour coded as part of the presentation of the analysis. To this end, of the five metros, the worst performer per criteria is coded red. The overall worst performer of the various categories is also coded red. The best performer is coded green, as is the overall best performer for the category. Those criteria were more than half (50%) of the parks audited per metro met the criteria are coded blue (as are the overall criteria) and those metros where less than half met the criteria are coded yellow, as are the overall criteria.

Table 1: General information on the parks

Metro	Name	Hours	Contact info	Park rules	Map
Cape Town	12 (100%)	6 (50%)	5 (42%)	10 (83%)	2 (17%)
Durban	13 (93%)	5 (36%)	7 (50%)	13 (93%)	1 (7%)
Ekurhuleni	11 (69%)	8 (50%)	4 (25%)	8 (50%)	1 (6%)
Johannesburg	12 (67%)	8 (44%)	8 (44%)	12 (67%)	4 (22%)
Tshwane	7 (64%)	1 (9%)	2 (18%)	4 (36%)	2 (18%)
Total 71 (%)	55 (77%)	28 (39%)	26 (37%)	47 (66%)	10 (14%)

Overall, the majority (77%) of parks have a sign indicating their name and many (66%) have the park rules on display. Cape Town is the best performer in terms of names (all parks had name boards up) while Johannesburg was the best in terms of having a map of the park on display. Operating hours and contact

information are lacking in most, although the poorest feature is that of a map of the park, which only 14% have. For this indicator, Tshwane is the worst performer in four of the five categories. Durban and Cape Town are the best performers out of the metros, especially in contact information and park rules (Durban) and name and operating hours (Cape Town).

Table 2: Accessing the park

Metro	Access for vehicles		Access for pedestrians and cyclists	
	Parking lot	Parking in street	Sidewalks	Bike routes
Cape Town	4 (33%)	10 (83%)	9 (75%)	1 (8%)
Durban	11 (79%)	6 (43%)	14 (100%)	0 (0%)
Ekurhuleni	6 (38%)	5 (31%)	12 (75%)	0 (0%)
Johannesburg	8 (44%)	10 (56%)	16 (89%)	5 (28%)
Tshwane	2 (18%)	5 (45%)	8 (72%)	0 (0%)
Total 71 (%)	31 (44%)	36 (51%)	59 (83%)	6 (8%)

The best performer in terms of accessing the park is Johannesburg and the worst is Tshwane. Durban is doing well in some indicators but very poorly in terms of catering for cyclists. Overall, catering for cyclists is a very low priority, while pedestrians do well in terms of having sidewalks surrounding the park. Most parks need to improve the provision of parking in terms of a parking lot.

Table 3: Security features

Metro	Multiple entry points	Lights	Fully lit?	Guarded?	Feel safe?	Dangerous spots
Cape Town	12 (100%)	6 (50%)	2 (17%)	4 (33%)	10 (83%)	2 (17%)
Durban	14 (100%)	11 (79%)	0 (0%)	4 (29%)	8 (57%)	3 (21%)
Ekurhuleni	14 (88%)	11 (69%)	2 (13%)	5 (31%)	11 (69%)	2 (13%)
Johannesburg	18 (100%)	16 (89%)	1 (6%)	7 (39%)	12 (67%)	3 (17%)
Tshwane	10 (91%)	7 (64%)	0 (0%)	1 (9%)	5 (45%)	3 (27%)
Total 71 (%)	68 (96%)	51 (72%)	5 (7%)	21 (30%)	46 (65%)	13 (18%)

Overall the biggest problem is multiple entry points, but fortunately, dangerous spots are very few in number. Again, Tshwane is the worst performing metro, while Ekurhuleni is the best. In terms of lighting, Tshwane is doing well, although lights in general do not fully light most parks other than two in Cape Town. The lack of guards is also a concern, although the majority (65%) of field workers reported feeling safe in the parks.

Table 4: Indicators of maintenance and care

Metro	Graffiti	Vandalism	Excessive litter	Excessive noise	Maintenance issues
Cape Town	3 (27%)	5 (42%)	2 (17%)	5 (42%)	4 (33%)
Durban	4 (29%)	3 (21%)	4 (29%)	1 (7%)	5 (36%)
Ekurhuleni	3 (19%)	3 (19%)	5 (31%)	5 (31%)	7 (50%)
Johannesburg	2 (11%)	6 (33%)	7 (39%)	5 (28%)	3 (17%)
Tshwane	4 (36%)	5 (45%)	5 (45%)	2 (18%)	7 (64%)
Total 71 (%)	16 (22%)	22 (31%)	23 (32%)	18 (25%)	26 (37%)

Overall the worst performer is Tshwane and the best is Johannesburg. Generally, maintenance and care performed well compared to the other indicators, but general maintenance is an issue while graffiti is not much of a problem.

Table 5: Physical activity infrastructure

Metro	Playground	Sports field	Trail	Gym	open green space
Cape Town	12 (100%)	6 (50%)	4 (33%)	4 (33%)	12 (100%)
Durban	10 (71%)	2 (14%)	6 (43%)	4 (29%)	14 (100%)
Ekurhuleni	16 (100%)	6 (38%)	1 (6%)	10 (63%)	13 (81%)
Johannesburg	17 (94%)	10 (56%)	6 (33%)	5 (27%)	16 (86%)
Tshwane	10 (91%)	5 (45%)	2 (18%)	1 (9%)	10 (91%)
Total 71 (%)	65 (92%)	29 (41%)	19 (27%)	23 (32%)	65 (92%)

The best performer is Cape Town and the worst is Tshwane. In general, most parks (92%) have a playground and open green space. They are least likely to have a trail for joggers, making this the worst performing indicator.

Table 6: Comfort amenities

Metro	Toilets	Drinking fountain	Benches	Dustbins	Landscaping
Cape Town	5 (42%)	1 (8%)	12 (100%)	6 (50%)	7 (58%)
Durban	9 (64%)	4 (29%)	14 (100%)	13 (93%)	9 (64%)
Ekurhuleni	8 (50%)	6 (38%)	14 (88%)	12 (75%)	10 (63%)
Johannesburg	12 (67%)	7 (39%)	17 (94%)	18 (100%)	12 (67%)
Tshwane	6 (55%)	0 (0%)	10 (91%)	7 (64%)	6 (55%)
Total 71 (%)	40 (56%)	18 (25%)	67 (94%)	56 (79%)	44 (62%)

The best performing metro for comfort amenities is Johannesburg and the worst is Ekurhuleni. Most (75%) parks are very poorly supplied with drinking fountains, while the majority (94%) have benches.

5. Discussion

Across the metros, most parks are likely to have benches (94%), a playground (92%), open green space (92%) and sidewalks around the park (83%). Thus, at the very least the parks offer opportunities for the general public to rest and relax in a natural environment. Many do not have dangerous spots, graffiti and many have a name board. The minimal dangerous spots and little graffiti speaks to efforts to maintain the parks by park management. Most parks have multiple entry points, making managing access to the park difficult. Roughly one-third of the parks have maintenance issues. Of concern is that few have a trail for joggers or drinking fountains. Even fewer have a map or bike routes for cyclists to access the park.

Based on the score (%) of features and amenities an overall score could be allocated to each metro for each criterion. On this basis, overall Tshwane is the worst performing metro across five of the six criteria, whereas Johannesburg is the best performing metro based on being the best across three of the criteria, and second best across the other three criteria. Ekurhuleni is performing below the mean, although the top performer in terms of security. Durban and Cape Town are above the mean, in the case of physical activity infrastructure, Cape Town is the top performer.

6. Conclusion

The findings on general park information show that most urban parks have a sign indicating their name and that many have the park rules on display. Operating hours, contact information and a map of the park, is lacking in most. In terms of access, overall, catering for cyclists is a very low priority and the provision of parking in terms of a parking lot needs improvement. Most parks do however have sidewalks for pedestrian

access. The results indicate that security is a concern in parks on account of multiple entry points and a lack of security guards. The majority of field workers, interestingly, reported feeling safe in the parks while dangerous spots are recorded to be few in number. Furthermore, maintenance and care performed well in terms of the other indicators, but general maintenance remains an issue. In terms of physical activity infrastructure, most parks have a playground and open green space, however, they are least likely to have an outdoor gym, sportsgrounds and a trail for joggers. In addition, most parks are very poorly supplied with drinking fountains, while the majority have benches and dustbins. Based on the results, overall, it is determined that Tshwane is the worst performing metro whereas Johannesburg is the best performing metro.

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