

# Investigating food environments in selected areas of Tshwane

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## Abstract

A food environment is a combination of physical, biological, social and psychological factors that affect the eating habits and patterns of people. The food environment is determined by the availability, affordability and access to the food required for a nutritional diet. The characteristics influencing the food environment include the nature of the food retailers; transport network; physical barriers such as rivers, mountains, highways and industrial areas; cultural factors such as food taboos and the socio-economic profile such as poverty. The food environment influences what people eat, by constraining what consumers can purchase.

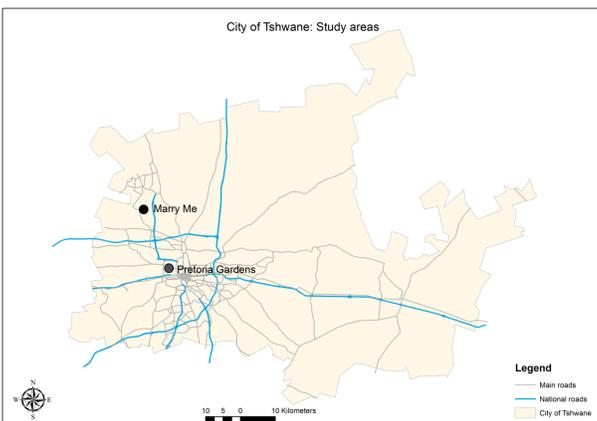
We report here on two preliminary investigations of food environments in Tshwane, South Africa. The one study was conducted in an informal settlement called 'Marry Me' in Soshanguve in the northern part of Tshwane. Informal settlements and food insecurity are a global concern and both are part of the South African community. Informal settlements do not have any form of planning and the structures are made of plastics, zinc material and hardboards.

The second study was conducted in Pretoria Gardens, an old, formal, low to medium-income suburb situated in north-central Tshwane. The physical barriers impeding access to Pretoria Gardens include a ridge, a railway line, a major road and commercial business district, an unused railway line and open spaces.

The results show that there is only one fruit and vegetable stall that provides healthy food to the residents of 'Marry Me' that is within a 400m walking distance, which is insufficient to provide nutritious healthy food to the community. Future research may include other variables such as food pricing, food quality, and be done in a larger scale to better understand the food environment in a township.

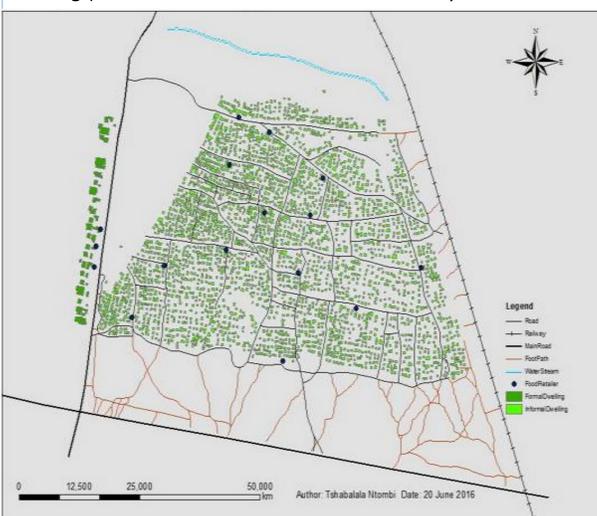
## Study areas

This map shows the locations of Marry Me and Pretoria Gardens.



## Marry Me, Soshanguve

The study area is an informal settlement situated in the township of Soshanguve. The boundaries of the informal settlement include a railway line (East), a stream (North), a national road (South) and a main road (West). This map shows the structures (informal dwellings) and the locations of food outlets in Marry Me.



## Pretoria Gardens

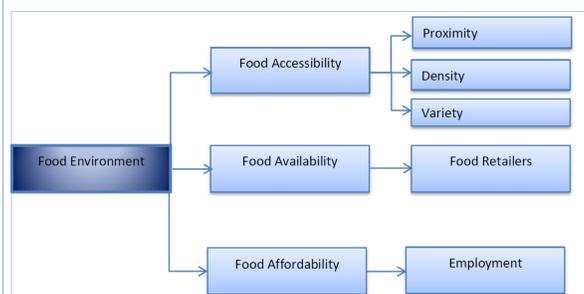
The study area in Pretoria West is a well-established, low to medium-income urban residential area. The physical barriers impeding access to Pretoria Gardens include a vegetated ridge to the south, a railway line and major highway to the east and another unused railway line and vegetated ridge to the north. A small informal settlement can be found to the west, near to the border of the study area. The area comprises of mostly residential land use with two primary schools, one high school and student housing for the Tshwane University of Technology.



## Results

### Marry Me

Conceptual diagram shows the elements that were used to describe the food environment in Marry Me.



Data concerns were that Marry Me was established after the 2011 Census and expanded rapidly, hence the difficulty of using publicly available data. Data collection was conducted in situ to ascertain the food environment. The map in the next column shows the rapid expansion between 2013 and 2016 using the SPOT building count (red dots) as the 2013 base. Imagery was used to map the situation in 2016 (building outlines).

Small food outlets were available inside Marry Me however with limited choice. Residents needed to travel out of the area to get access to a greater variety of foods.

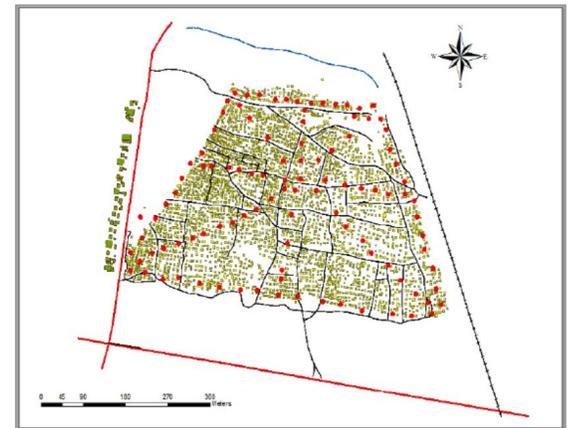


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## Marry Me

Map showing rapid change.



## Results

### Pretoria Gardens

The suburb has more formalised food outlets when compared to Marry Me, but they are only along the main road to the north. Food outlets are readily accessible when using buses (see map) but not when using taxis (not shown).



Most residents have access to own motor vehicles, thus access to food is in general much better than in Marry Me.

