

Effect of straight-line and road network distances to parks and markets on anthropometric measurements, biochemical markers, and a healthy lifestyle in adult people

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Background: The purpose of this study was to examine the effect of the straight-line and road network distances to parks and markets on anthropometric measurements, biochemical markers, and a healthy lifestyle in adult people. **Methods:** We studied 832 subjects aged 18?74 years selected by a probability sampling. Geographic information systems were used to calculate access distance (straight-line and road network distances) from the participant?s homes to the nearest public place for physical activity and commercial center. **Results:** After adjusting the population by age and gender, a significant and negative relation was found between glycemia and both straight-line and road network distances to markets in both males and females. Moreover, males aged 35?54 had a significant and positive relation between triglycerides and distance to parks. In addition, a negative correlation was observed only in females between sport frequency and road network distances to markets. **Conclusion:** In this article, we have observed a similar correlation between the biochemical marker (glycemia) and both straight-line and road network distances to markets. Also, it raises the need to analyze other possible factors that could influence the relationship between the built environment and health. © 2015, Springer-Verlag Italia.

Cardiovascular risk factors

Geographic information system

Glycemia

Road network distance

Straight-line distance