

Systems Science in Implementation Research

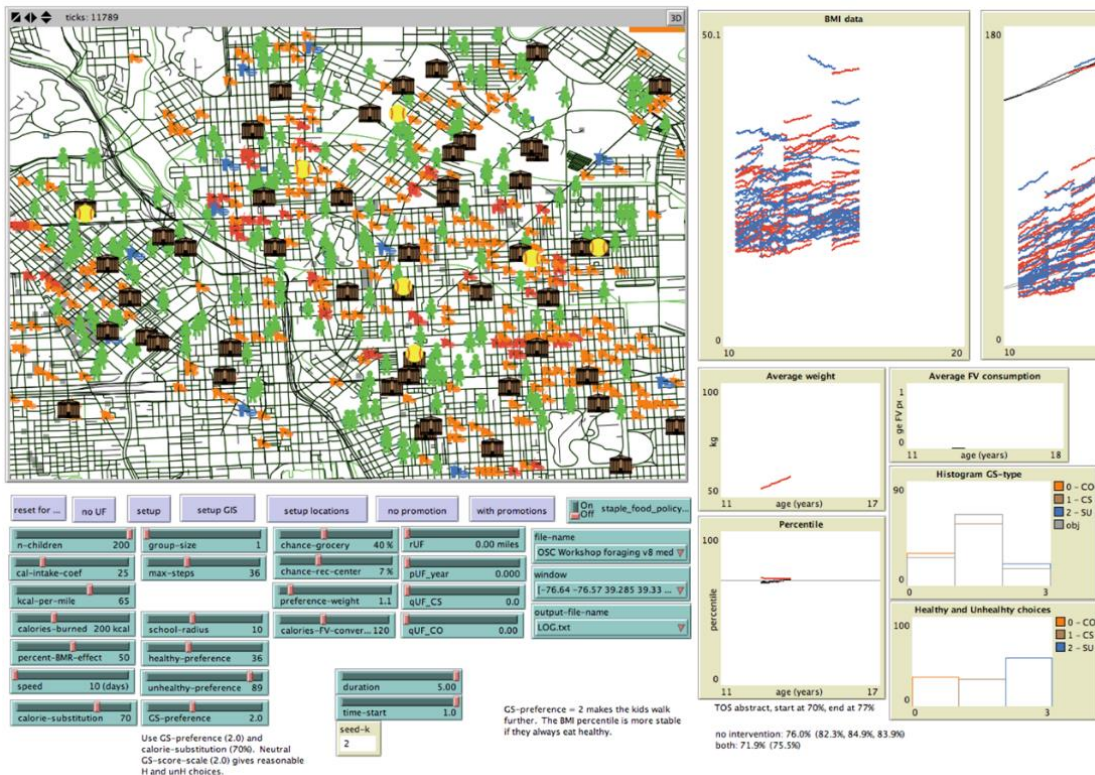
Tak Igusa, PhD; Johns Hopkins University

Key points

1. Simulation dashboards are useful in engaging policy makers in the implementation process.
2. Simulated agents can include:
 - a. Children walking to and from school, purchasing foods at neighborhood food sources, and using recreation facilities.
 - b. Residents using vehicle services in mobility deserts
3. Simulation of mobility interventions can utilize freely available, commercial grade transportation simulators (SUMO).

Sample figures

Dashboard of school-aged children interacting in their food and recreation environment



The map shows geographic features; sliders on bottom-right can control parameters; plots on right side present results simultaneously.



Simulated ride sharing services in a mobility desert in South Baltimore



Autonomous vehicles are red cars operating as ridesharing; ovals are pedestrians traveling in network in different modes. The destination is the grocery store on left side (red rectangle). This simulation is used to estimate the impact of autonomous vehicles on access to nutritious food.

References

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