

Public Abstract

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Title:Cultivating a Landscape for Food Justice: An Exploratory Study of Community Food Security Measurement to Inform Community-Based Intervention Strategies

Population increases, loss of arable land, and the dependence on non-renewable energy inputs threatens our global food system. Rising food prices impact vulnerable populations and strains communities. Food insecurity is related to impaired development, decreased educational attainment, depression, anxiety, social isolation, and chronic diseases.

This study extends the knowledge of food security beyond socio-demographic predictors (e.g., unemployment) to include food environment indicators. A method for measuring community food security and identifying protective and risk factors was developed.

County-level food insecurity was estimated using state-level data for nine food insecurity indicators. The sample included 114 counties and one city in a Midwest state. Most data came from the USDA and the U.S. Census.

A data reduction strategy, Principal Components Analysis, was used to reduce the data from 46 indicators to 22. Six unique components were retained, including food programs, access, agricultural production, direct farm sales, program usage, affordability and availability.

Component scores were used in an equation to identify the most important predictors of community food insecurity. Availability and affordability contributed the most, followed by program usage, access, and agricultural production. Transportation limitations and distance to food stores were risk factors. Housing affordability protected communities.

This method for measuring community food security allows a way to conceptualize areas to intervene. Examples include increasing affordable housing stock, piloting a CSA program, improving public transportation, or increasing emergency food supplies.

Since food insecurity exists in vulnerable populations, social workers can use this knowledge to cultivate a landscape for community food security.