Hart, J. L., Yeager, R. A., Riggs, D. W., Fleischer, D., Owolabi, U., Walker, K. L., ... & Keith, R. J. (2022). The relationship between perceptions and objective measures of greenness. *International Journal of Environmental Research and Public Health*, *19*(23), 16317. https://doi.org/10.3390/ijerph192316317

Definitions

- **Greenness**: The amount of vegetation, like trees and plants, in an area.

- **Equity**: Fairness or justice in the way people are treated.

- **Socioeconomic Status (SES)**: A person's economic and social position based on income, education, and occupation.

- **NDVI (Normalized Difference Vegetation Index)**: A measurement of the amount of live green vegetation in an area using satellite images.

- **LAI (Leaf Area Index)**: A measurement of the leaf area in a given ground area, indicating the density of foliage.

Key Findings

- Higher income participants live in greener areas.

- Greenness is more associated with single-family homes than multi-family homes.

- Socioeconomic factors do not significantly influence the adoption of no-cost tree planting.

- Higher lot size, home value, and baseline greenness increase tree planting adoption.

Introduction

This study explores the relationship between income, greenness (vegetation), and the adoption of no-cost tree planting in residential areas. It aims to understand how socioeconomic factors influence the availability of greenery and the willingness of residents to plant trees.

Main Content

Background

The research was conducted to investigate how socioeconomic status, particularly income, affects the amount of greenness around residences and the uptake of tree planting programs. Previous studies have shown a link between higher income and more vegetation, but this study looks at more specific contexts and spatial extents.

Objectives

The main objective was to understand if higher income leads to more greenery and if socioeconomic status influences the adoption of no-cost tree planting programs.

Methods

Data were collected from 215 participants living in single-family homes who were eligible for no-cost tree planting. Various factors such as income, lot size, home value, and initial greenness levels were analyzed to see how they affect the adoption of tree planting.

Results

- Higher income was positively associated with greenness around homes, particularly in single-family residences.

- No significant relationship was found between socioeconomic status and the adoption of no-cost tree planting.

- Participants with larger lots, higher home values, and more initial greenery were more likely to adopt tree planting.

<u>**Conclusion**</u>

The study confirms that higher income is linked to more greenery in residential areas. However, removing financial barriers alone does not significantly increase tree planting among low-income residents. The findings suggest that other factors beyond cost need to be addressed to improve greenness equity. These results highlight the complexity of greenness equity and suggest that additional strategies are needed to promote tree planting in lower-income areas to achieve more equitable greenness distribution.

Word Count: 401