



**School of Public Health
Department of Environmental and Occupational Health**

In partial fulfillment of the requirements for the degree of
Master of Public Health

Melissa Bartshe
will defend her final thesis:



THE RELATIONSHIP BETWEEN TREE CANOPY AND SOCIAL CAPITAL ON PHYSICAL ACTIVITY IN UNLV STUDENTS



Abstract

Despite the numerous health benefits, rates of physical activity are low, especially among the college student population. Neighborhood tree canopy is one aspect of the built environment that has been shown to positively impact physical activity. Social capital has also been correlated with higher rates of physical activity. The sprawling urban design and arid desert climate of Las Vegas pose unique challenges to both tree canopy and social capital. Additionally, the relationship between tree canopy, social capital, and physical activity is understudied in the college student population. The purpose of this study was to assess the relationship of tree canopy and social capital on self-reported minutes of physical activity in college students in Las Vegas. This study utilized survey data from students at the University of Nevada, Las Vegas (UNLV) to calculate social capital and self-reported minutes of physical activity. Tree canopy data from the Nevada Department of Forestry's Las Vegas Urban Tree Canopy study and spatial analysis in ArcGIS were used to assess the tree canopy coverage within a 1km walk buffer around each participant's home. Logistic regression was used to determine if tree canopy and social capital predicted whether participants met the physical activity recommendations of 150 minutes per week. The study found that only 42.1% of UNLV students met the physical activity recommendations and males were more likely than females to be meet the recommendations (OR = 0.499; 95% CI = 0.301, 0.827). Study findings support the hypothesis that social capital is a significant predictor of physical activity among the study participants (OR = 1.184; 95% CI = 1.077, 1.302). Findings do not support the hypothesis that tree canopy predicts physical activity (OR = 0.132; 95% CI = 0.990, 1.079). Public health interventions targeted at enhancing social capital in college students may be effective at increasing physical activity. These findings suggest the need for further investigations into built environment correlates of physical activity for specific populations, such as college students, in sprawling, desert environments.

Date: Friday, January 24, 2020

Time: 1:30 p.m.

Location: GTW 335

Faculty, students, and the general public are invited.

Committee in Charge:

Dr. Courtney Coughenour, Advisory Committee Chair

Dr. Jennifer Phar, Advisory Committee Member

Dr. Sheila Clark, Advisory Committee Member

Dr. Haroon Stephen, Advisory Committee Member

Dr. Shawn McCoy, Graduate College Representative