



THE UNIVERSITY OF ARIZONA

College of Nursing

The Role of Connected Communities and Technology Access on Perceived Health in Southern Arizona

MAP Talk Webinar

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Our digital, physical, and biological worlds are converging impacting economy, social well-being, and physical health.



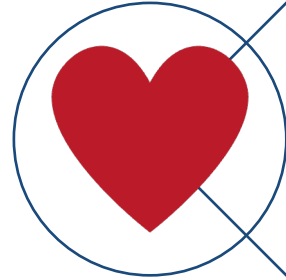
A map of Southern Arizona showing county boundaries. The map is divided into several counties, with the southern portion shaded in a dark blue color. The text "Southern Arizona" is overlaid in white, centered horizontally across the map. The background is a light gray color.

Southern Arizona

Southern Arizona
is a unique
geographic
location which
contributes to
population health.



Population is quickly
growing and aging



Cardiovascular disease,
cancer, and diabetes are
leading causes of mortality



\$18.6B economic burden



Technology landscape
rapidly advancing

A cityscape at sunset with mountains in the background. The sky is a mix of orange and blue, and the city buildings are silhouetted against the light. The text is overlaid in white, bold, sans-serif font.

Determine relationship between
SDOH, technology access, and
perceived health in SAZ using
geographic information systems
(GIS) analysis

C3: Connected Community Classification



Final *SDOH* score from PCA component named and cut into deciles to represent classifications



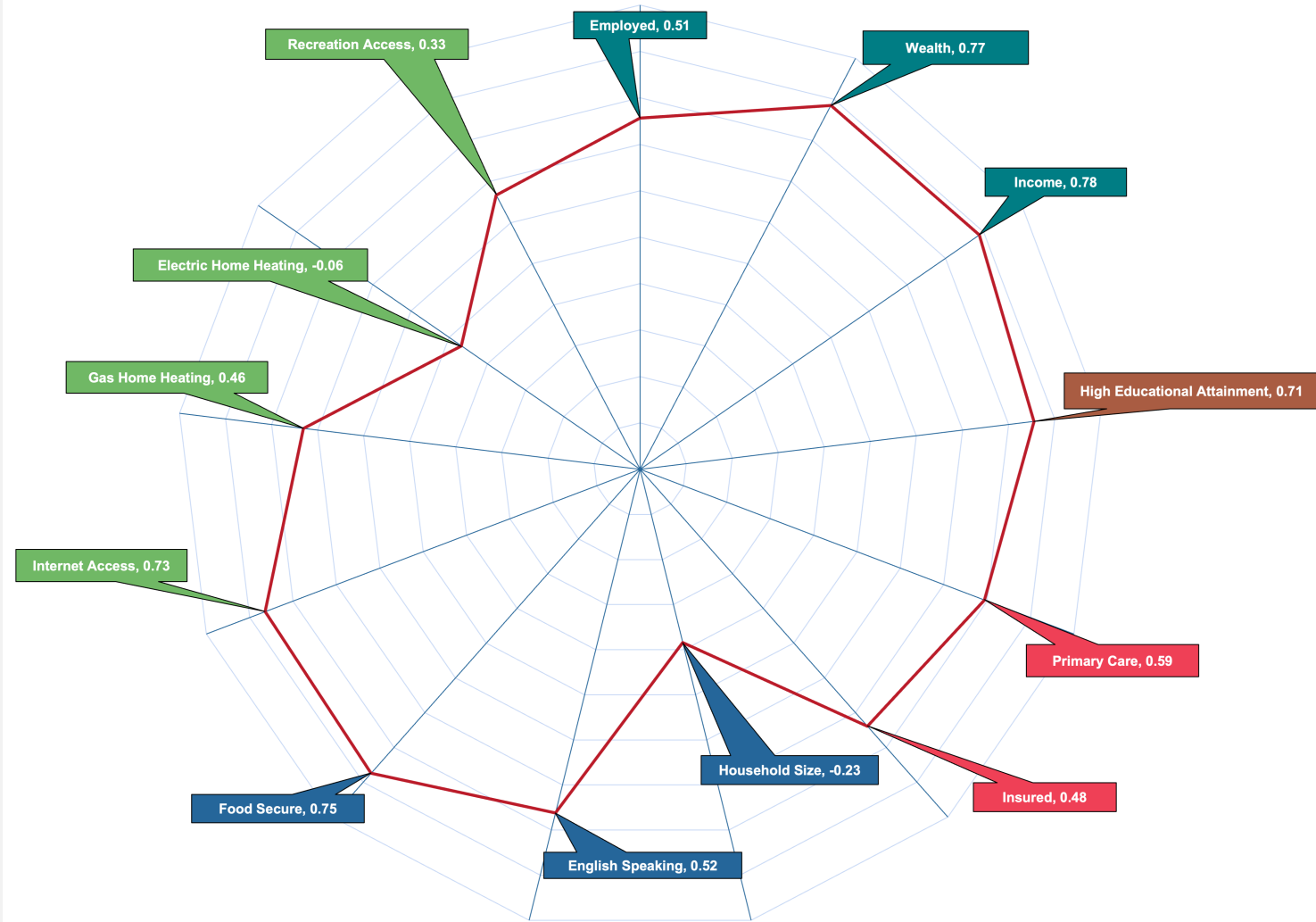
A C3 score of 10 indicates more connected communities while a 1 indicates more isolated communities



118 Zip Code Tabulation Areas (ZCTA) in Southern Arizona with available and complete data

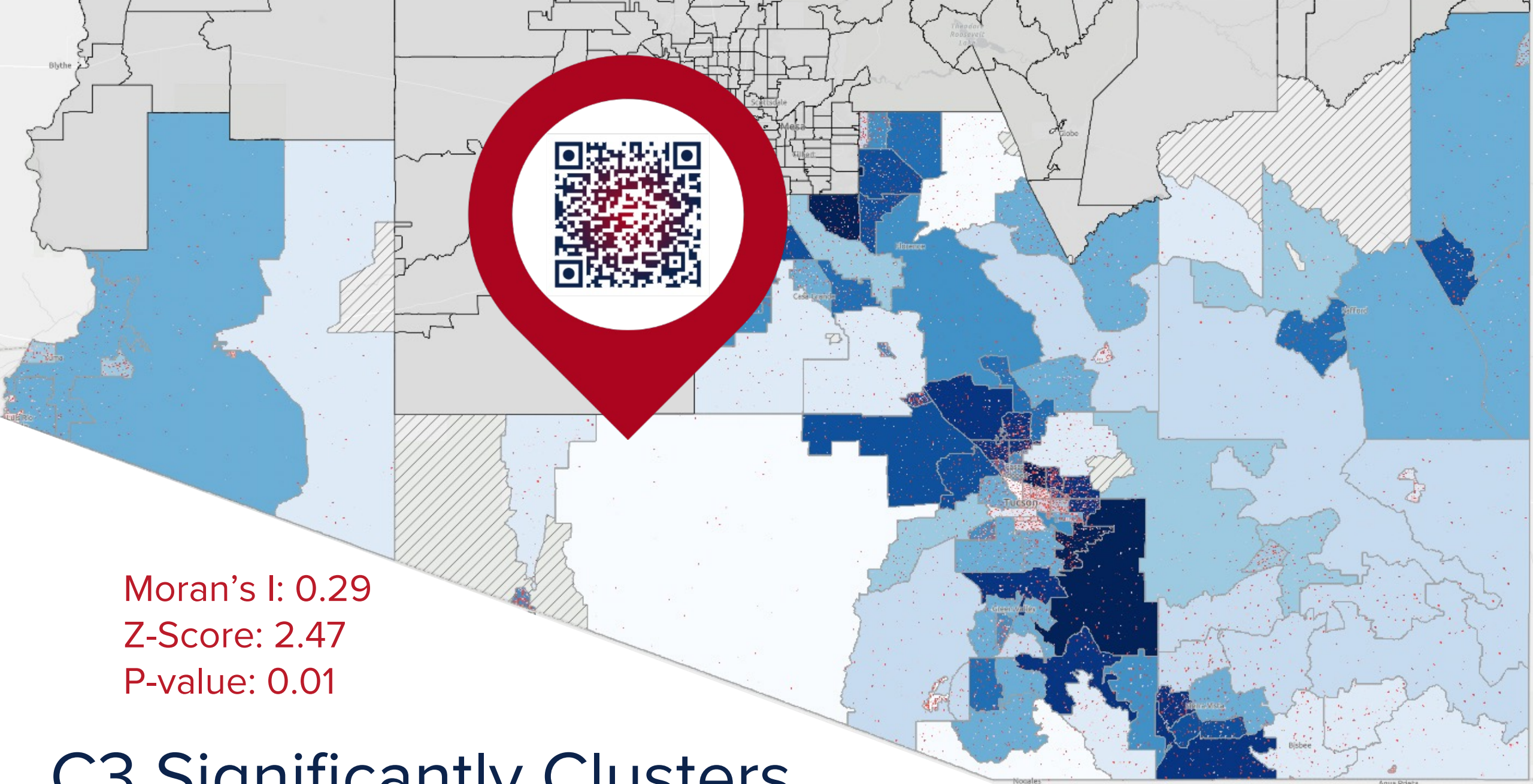


Analyzed using ArcGIS Pro + STATA 17





COMMUNITY FORUM



Moran's I: 0.29
Z-Score: 2.47
P-value: 0.01

C3 Significantly Clusters

Technology access is positively associated with perceived health

Good Overall Health	SAR Coef β (95%CI)
Smartphone	0.84 (-0.10, 1.79)
Tablet	1.58 (0.40, 2.75)*
Laptop/Desktop	1.95 (0.57, 3.34)*

Spatial autoregressive (SAR) models adjusted for health behaviors.

*All significant p-values <0.001

C3 directly effects technology access and *indirectly* effects perceived health

SAR Coef β (95%CI)	Smartphone	Tablet	Laptop/Desktop
C3 (Direct)	1.74 (1.00, 2.48)*	3.24 (2.44, 4.05)*	2.80 (1.76, 3.84)*
Good Overall Health (Indirect)	0.01 (-0.05, 0.08)	0.02 (-0.05, 0.10)	0.16 (0.07, 0.25)*

Spatial autoregressive (SAR) models adjusted for health behaviors.

*All significant p-values <0.001

C3 and technology *directly* effect health behaviors

Health Behavior	SAR Coef B (95%CI)	P-Value
Low Fruit/Veg Intake	-0.35 (-0.51, -0.19)	<0.001
Physically Inactive	-0.32 (-0.48, -0.16)	<0.001
Obese	-0.20 (-0.35, -0.06)	0.005
Smoking	-0.34 (-0.62, -0.07)	0.01
Alcohol Use	0.77 (0.49, 1.06)	<0.001

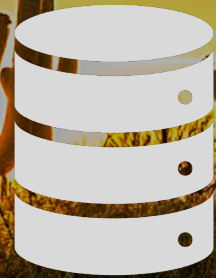
Spatial autoregressive (SAR) models adjusted for demographics, technology access, and rurality



Connected communities with greater access to technology have better population health.



Social Capital



Public Data



Community



Protective



Regional

Data to Action

Research, Programs, and Policies for:

Internet
Access

Food
Security

Educational
Attainment

Health
Insurance
Coverage

Population Engagement in
Protective Health Behaviors

Better Population Health
Outcomes

Acknowledgments

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WHITE PAPER: SOUTHERN ARIZONA



MANUSCRIPT: FOUR CORNERS



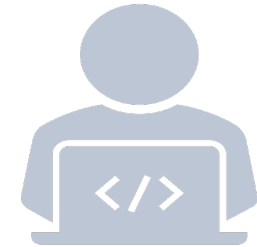
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Thank you!

Let's stay connected:



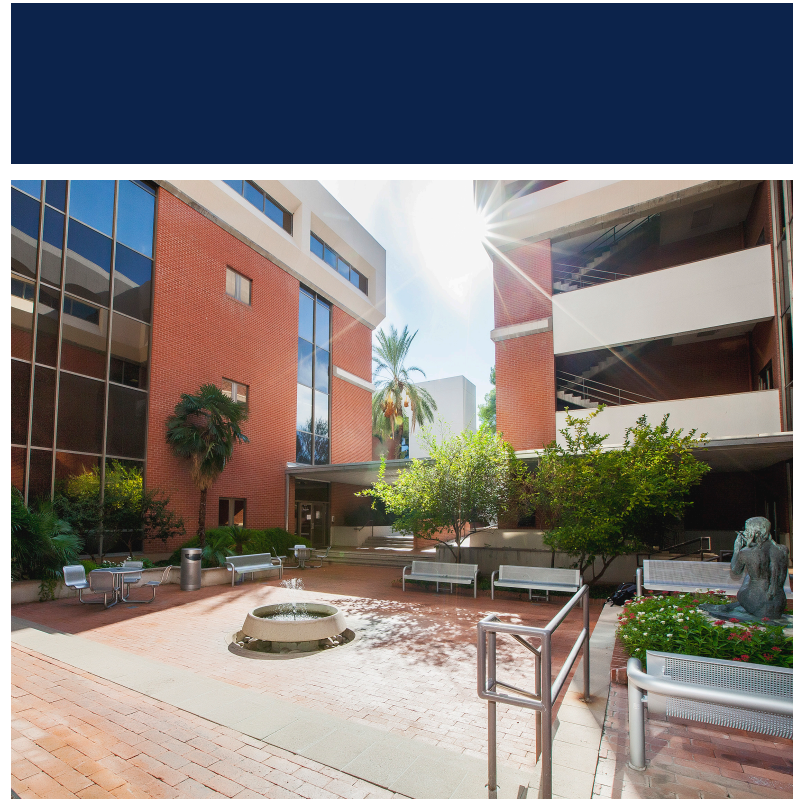
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