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Health promotion for children in rural settings

An aerial photograph of a rural farmstead. In the foreground, there is a large red barn with a white roof, a white silo, and several other smaller white buildings. A dirt road winds through the fields. The middle ground is dominated by vast green cornfields. In the background, there are rolling hills, more fields, and a small cluster of houses under a blue sky with scattered white clouds.

Chris Pfladderer, PhD
Assistant Professor
Health Promotion and Behavioral Sciences
UTHealth Houston, School of Public Health in Austin

Webinar Agenda

- Defining “rural”
- Statistics on obesity and obesity-related health behaviors among youth in rural United States, with urban comparisons
- Strategies to improve rural health promotion efforts
- Some rural-specific resources
- Q&A

What is rural?

What is rural?



The Census does not define “rural.” They consider “rural” to include all people, housing, and territory that are not within an urban area. Any area that is not urban is rural.

The Census defines urban as:

- Urbanized Areas (UAs) of 50,000 or more people
- Urban Clusters (UCs) of 2,500 - 49,999 people

Health Resources and Services Administration, 2022

What is rural?



19.3% of the population (59.5 million people) and 97% of the land area is classified as rural.

Health Resources and Services Administration, 2022

What is rural?



OMB decides which counties are metropolitan (metro), micropolitan (micro), or neither.

Area/County	Rural/Not Rural
Metro area (urban core of 50,000 or more people)	Not rural
Micro area (urban core of 10,000-49,999 people)	Rural
Counties outside of Metro or Micro Areas	Rural

Health Resources and Services Administration, 2022

What is rural?



Non-metro counties contain 46.2 million people, about 15% of the population and cover 72% of the land area of the country.

Health Resources and Services Administration, 2022



What is rural?



Rural-Urban Commuting Area (RUCA) codes

Code	Classification description
1	Metropolitan area core: primary flow within an urbanized area (UA)
2	Metropolitan area high commuting: primary flow 30% or more to a UA
3	Metropolitan area low commuting: primary flow 10% to 30% to a UA
4	Micropolitan area core: primary flow within an urban cluster of 10,000 to 49,999 (large UC)
5	Micropolitan high commuting: primary flow 30% or more to a large UC
6	Micropolitan low commuting: primary flow 10% to 30% to a large UC
7	Small town core: primary flow within an urban cluster of 2,500 to 9,999 (small UC)
8	Small town high commuting: primary flow 30% or more to a small UC
9	Small town low commuting: primary flow 10% to 30% to a small UC
10	Rural areas: primary flow to a tract outside a UA or UC

USDA Economic Research Service, 2023

What is rural?



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**RUCA 4-10 are
typically considered
“rural”**

USDA Economic Research Service, 2023

What is rural?

33

definitions of
“rural” used by the
federal
government

Scoping Review



Off the beaten path: A scoping review of how ‘rural’ is defined by the U.S. government for rural health promotion

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Abstract

Background: Given the recognition that the U.S. government lacks a consensus definition of the word *rural*, the purpose of this scoping review was to uncover how the federal government defines the term and to establish a nuanced understanding of what criterion is used to designate an area as rural.

Methods: Arksey and O'Malley's framework was used to synthesize, analyze, and summarize the existing literature. A multi-system search was conducted, and articles were screened for eligibility by two independent reviewers using pretested forms.

Results: Initially, 929 articles were screened that used the search terms *rural* and some variation of the word *definition*. After eliminating all ineligible studies, 49 documents were included in the final analysis. These documents revealed 33 federal definitions of *rural*. The majority of definitions centered on either population, population density, or urban integration provisions. Additionally, the analysis showed that the literature could be separated into two categories: how *rural* was defined in a particular industry or for a specific population and the multiple adverse effects of having multiple definitions of *rural*.

Conclusion: The discrepancies found in current classification systems reveal the need for a standardized definition of *rural*. Ultimately, policies centered on securing health care services for rural populations are impacted by whatever definition of *rural* is used. Failing to establish a gold standard definition of *rural* could have harmful consequences to the health and wellbeing of the many people living in rural communities across the U.S.

Introduction

The word *rural* conjures up an amalgam of images. Many liken *rural* to socially isolated and sparsely populated areas, with farmland that stretches as far as the eye can see, long dirt roads, and having a distinctive socio-cultural context with unique demographic configurations. While people claim to spot *rural* when they see it, most cannot define it and often overlook its complexity.¹ Moreover, while it seems much more natural to depict what *rural* looks like in ordinary life, arriving at a precise and meaningful definition is much more challenging.^{2,3} Kroot maintains that the term *rural* is often used so carelessly that it is virtually impossible to conclude its meaning.⁴ As a result, there is no standard or universal definition of *rural*,⁵ which partially explains why “at least 75 definitions of *rural*” (p. 5) are used by the U.S. government.⁶

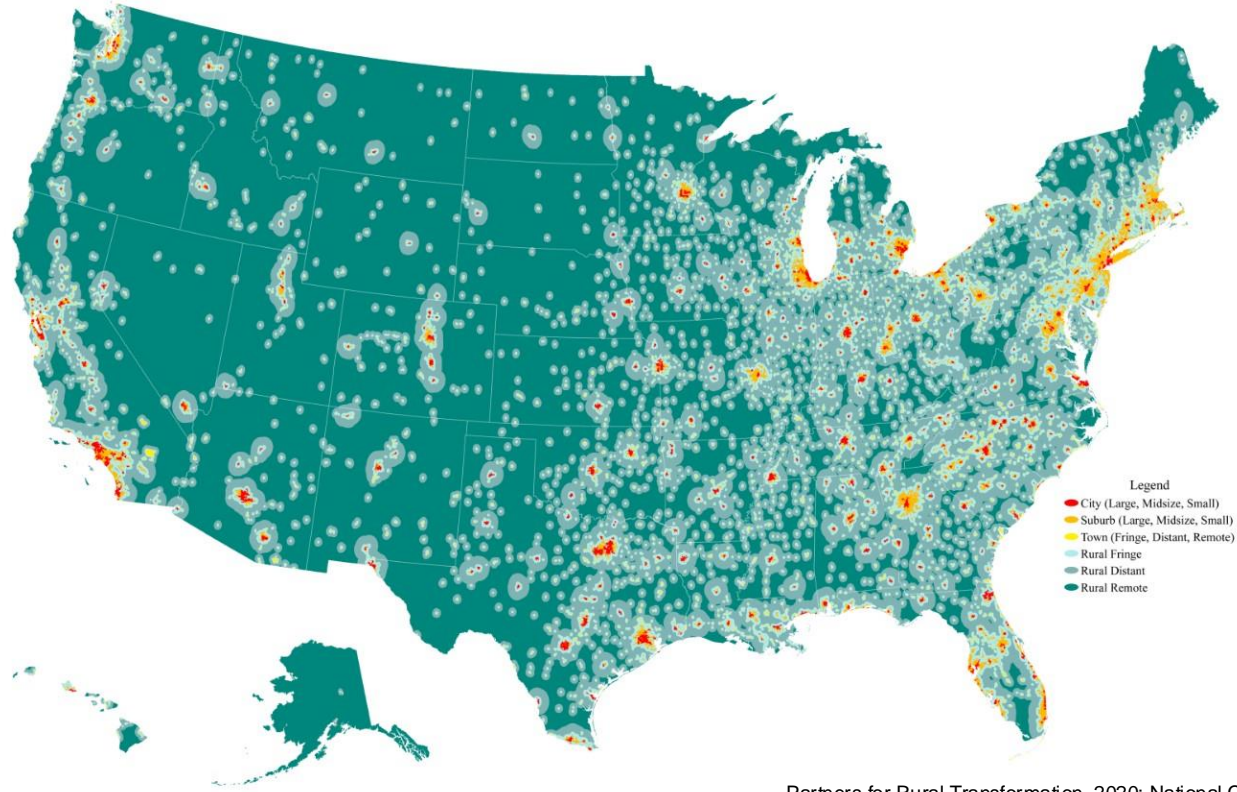
Lacking a consensus definition at the federal level can affect rural communities in several ways. First, different sets of criteria can change the designation of any given area from rural to urban (or vice versa).⁷ Such interchangeable criteria can impact decisions about the number of resources available to communities, which may

create and/or further health, education, and infrastructure disparities. Second, classifications of *rural* used by the federal government justify the planning, application, and monitoring of policy interventions and developmental efforts used to meet the needs of a population.⁸ This presents an exacerbation of resource issues when different federal agencies fund communities with department-specific definitions of *rural*. Third, lax standards for how areas are classified can make it difficult to justify and set aside resources to aid rural communities across the U.S.

Definitions of *rural* can also have significant impacts on health promotion and disease prevention. Rural classifications delineate how government functions in terms of policymaking, monitoring, and administration. In fact, definitions shape public policies, which create legislative action that can lessen impediments, build prospects, or offer motivations that influence health decisions.⁹ To that end, in 1987, Congress established the Federal Office of Rural Health Policy (FORHP) as part of the Health Resources and Services Administration (HRSA).¹⁰ FORHP oversees funding for rural health research, and it gives direct support to rural communities

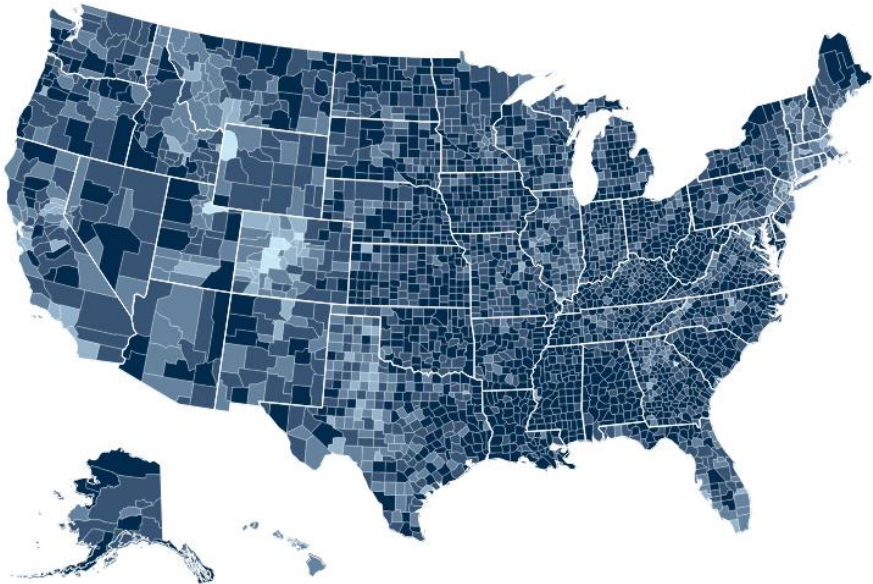
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Where is rural?



Partners for Rural Transformation, 2020; National Center for Education Statistics, 2023

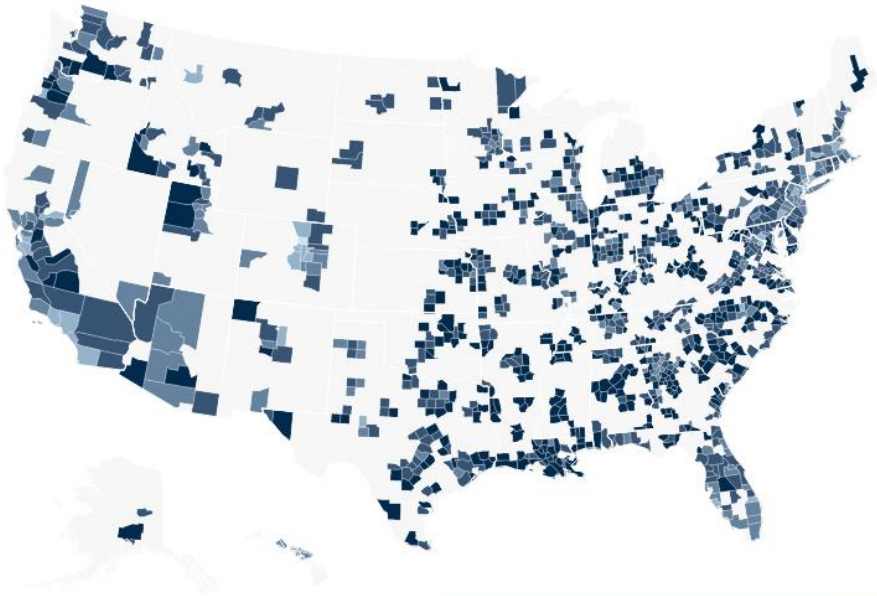
Obesity prevalence in the US by county



33.4%

United States Diabetes Surveillance System, 2023; Rural Health Information Hub, 2023

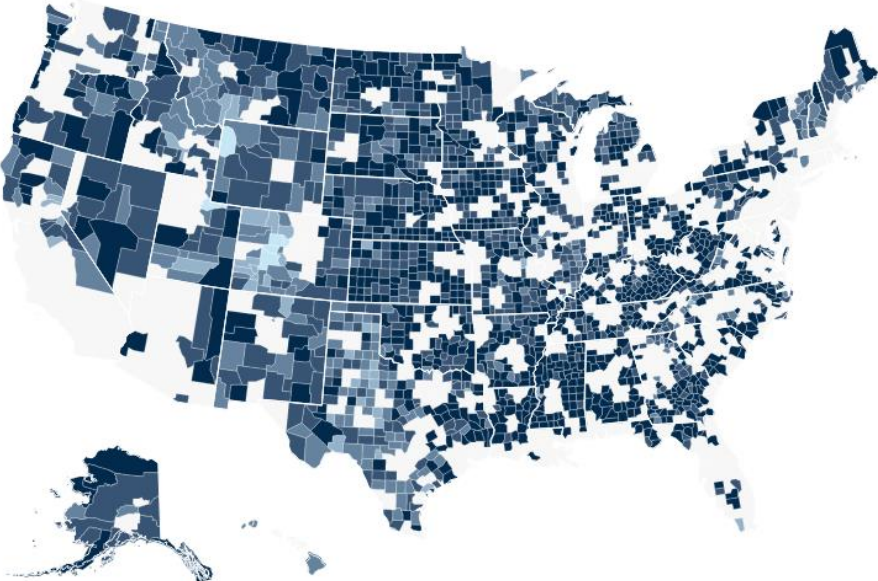
Obesity prevalence in METRO counties



28.7%

United States Diabetes Surveillance System, 2023; Rural Health Information Hub, 2023

Obesity prevalence in NON- METRO counties



36.3%

United States Diabetes Surveillance System, 2023; Rural Health Information Hub, 2023

Other health-related issues not discussed

Alcohol and **Substance Use**

Tobacco Use

Mental Health

Injury

Cancer

Stroke

Respiratory Disease

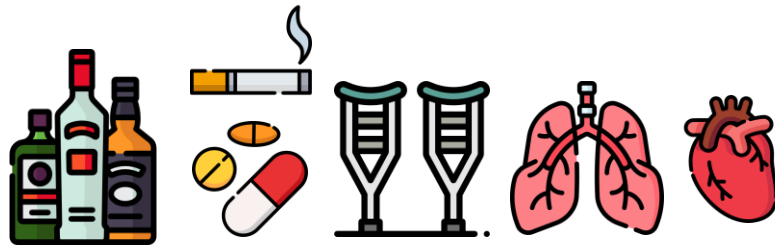
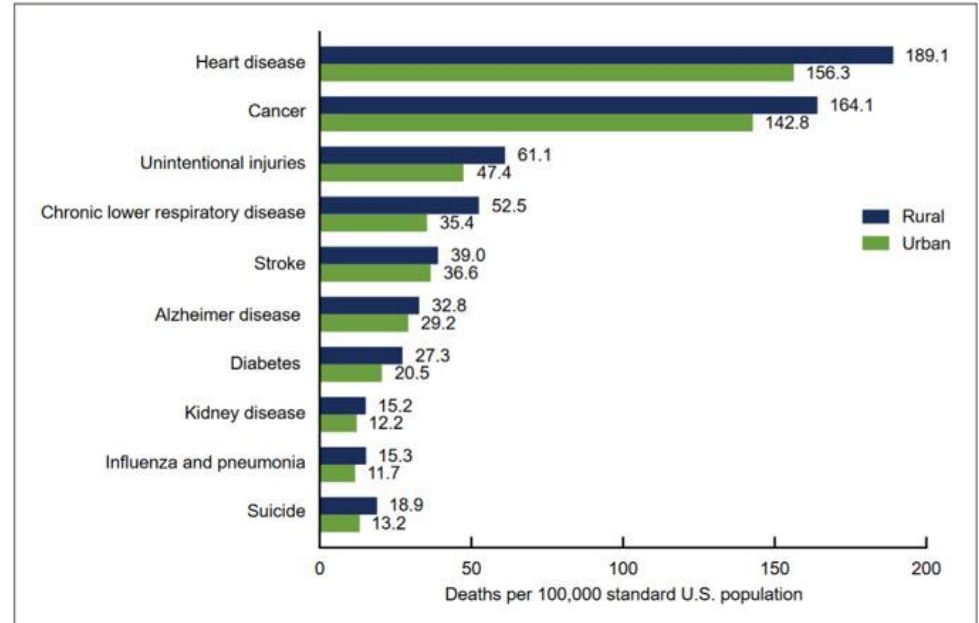


Figure 3. Age-adjusted death rates for the 10 leading causes of death, by urban-rural classification: United States, 2019



NOTES: Urbanicity of county of residence is based on the 2013 NCHS Urban-Rural Classification Scheme for Counties; see Data source and methods. Causes of death are ranked according to the number of deaths for the total population. Rates for all causes in rural areas were significantly higher than rates in urban areas ($p < 0.05$). Access data table for Figure 3 at: <https://www.cdc.gov/nchs/data/databriefs/db417-tables.pdf#3>. SOURCE: National Center for Health Statistics, National Vital Statistics System, Mortality.

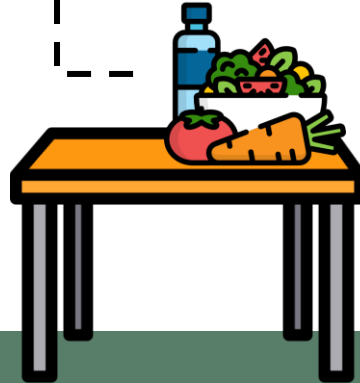
From: Trends in death rates in urban and rural areas: United States, 1999-2019

Obesity-related outcomes

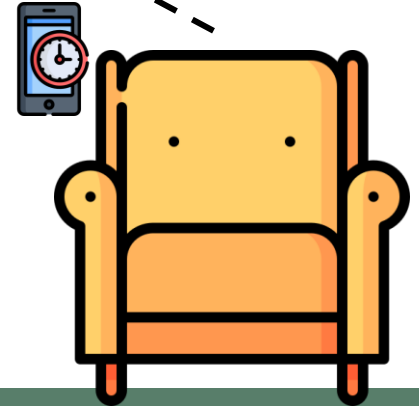
Physical Activity



Diet

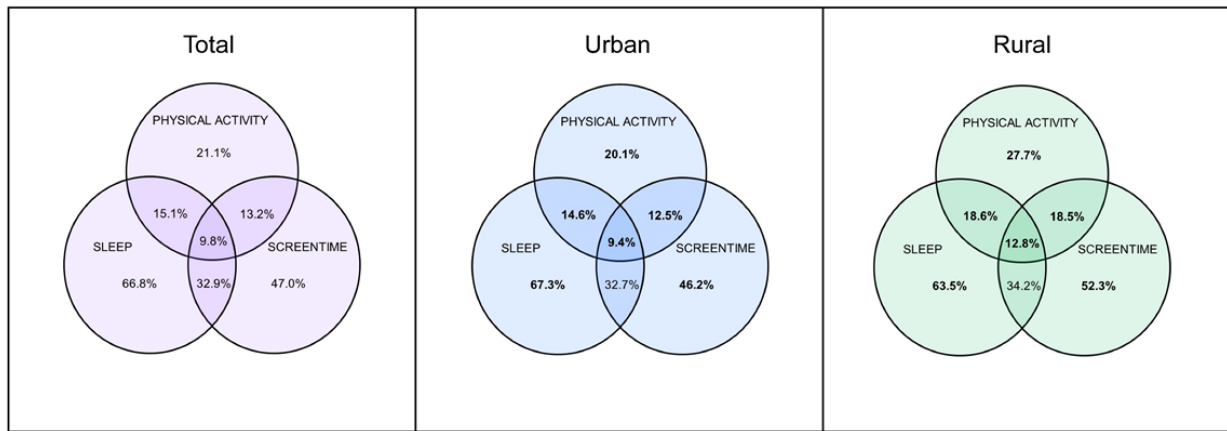


Screen time/Sedentary Behavior

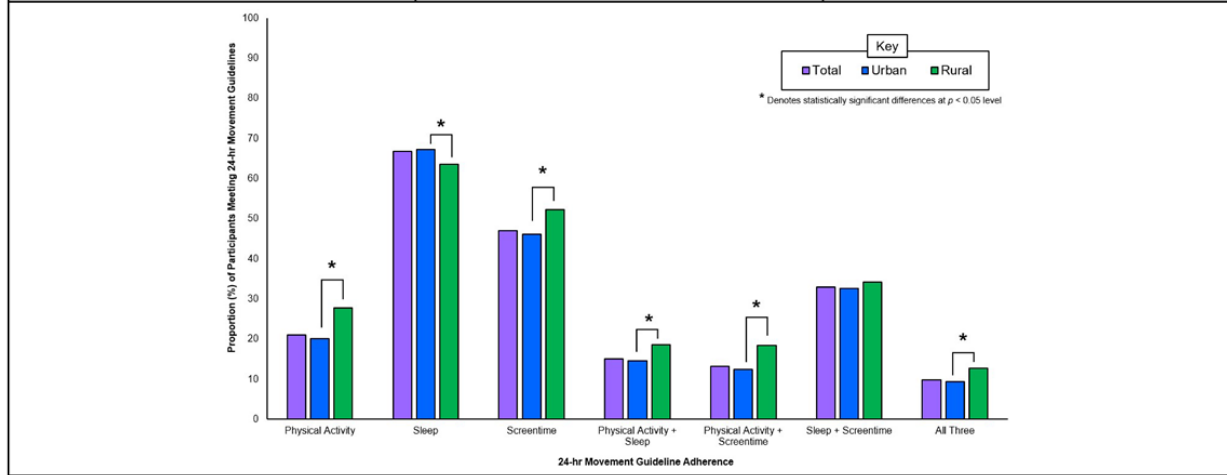


Sleep

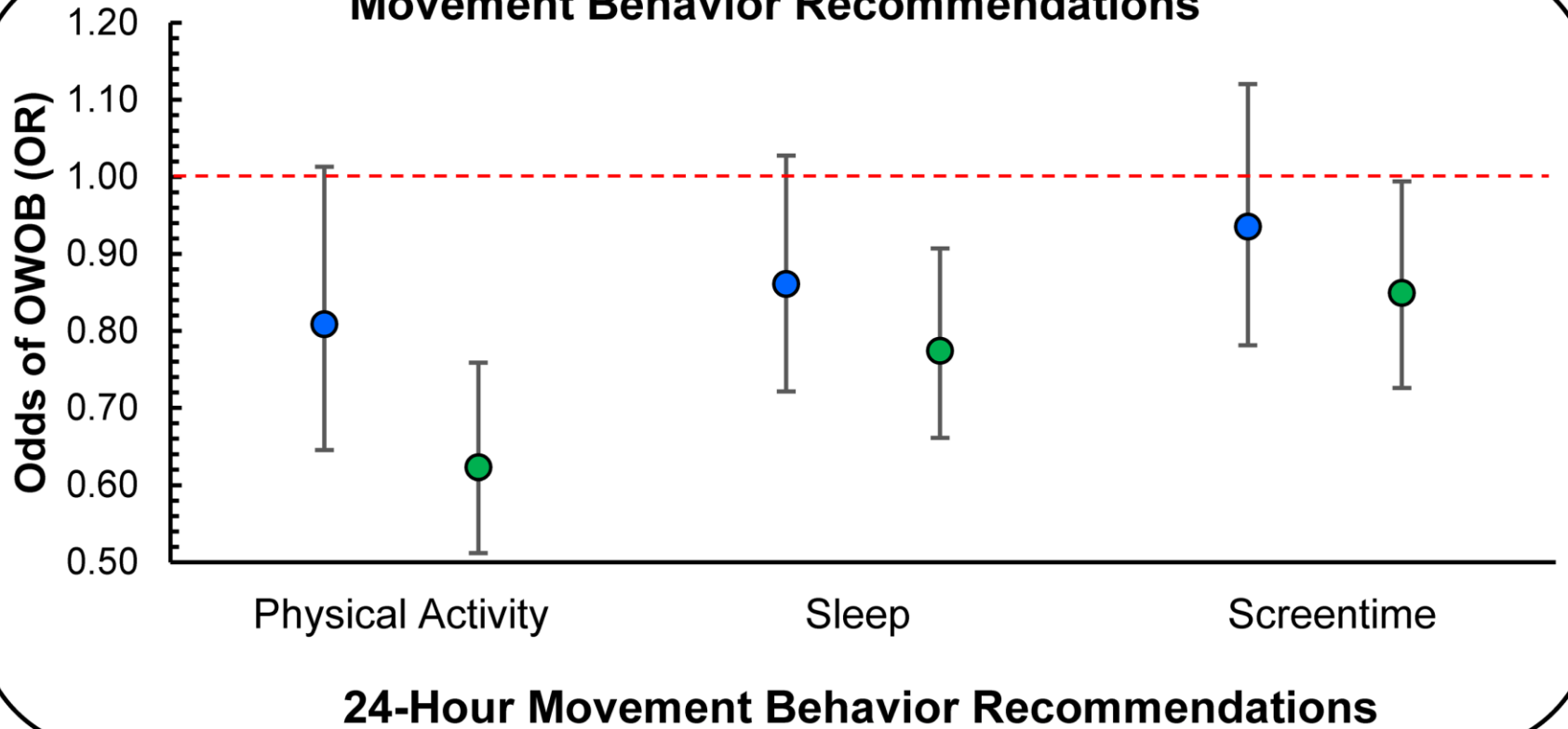




Pfledderer CD, Hunt ET, Prochnow T, Brown DMY, Salvo D, Springer AE. Urban-rural differences in overweight and obesity, 24-hour movement guideline adherence, and neighborhood characteristics among children in the United States: Evidence from a national survey. *In Progress*



Odds of OWOB When Meeting 24-Hour Movement Behavior Recommendations



Obesity-related outcomes

Zenic N, Tairar R, Gilic B, Blazevic M, Maric D, Pojskic H, Sekulic D. Levels and changes of physical activity in adolescents during the COVID-19 pandemic: contextualizing urban vs. rural living environment. *Applied Sciences*. 2020;10(11):3997.

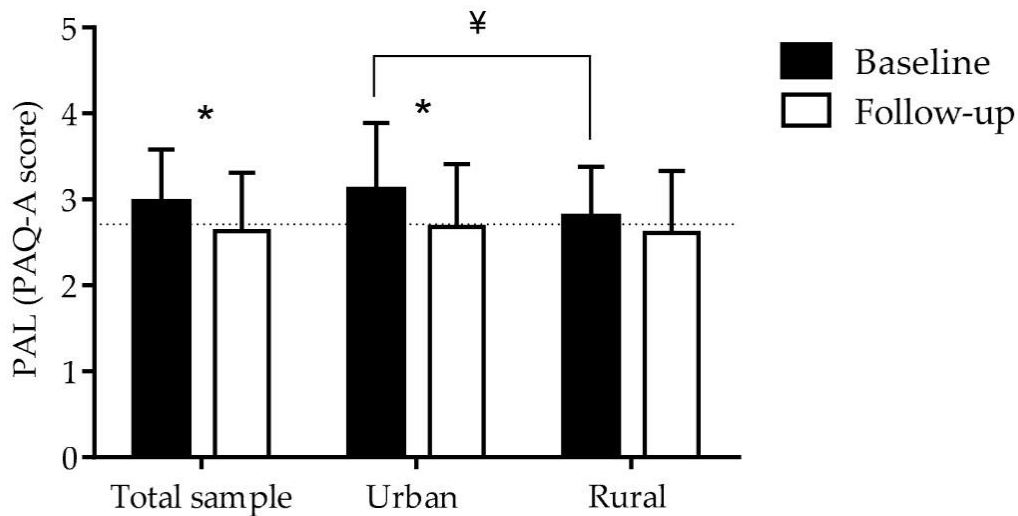


Figure 2. Descriptive statistics for physical activity levels at baseline (before the COVID-19 pandemic), and at follow-up (during the COVID-19 pandemic) with significant *t*-test differences (¥ indicates significant ($p < 0.05$) differences between groups, * indicates significant ($p < 0.05$) differences within groups); dotted line presents normal PAL.



Obesity-related outcomes

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At baseline, urban residents had higher PA levels compared to rural residents. During COVID-19 urban residents PA levels decreased such that urban-rural differences were non-significant.

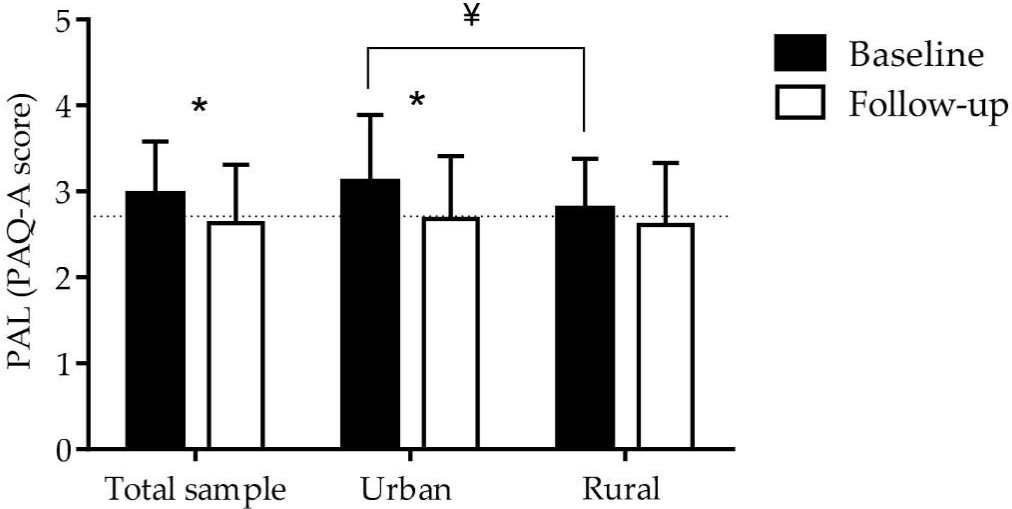


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Obesity-related outcomes



Table ##. Demographic characteristics and health-related behavioral variables presented as unweighted and weighted prevalence for the total sample and for children living in urban and rural areas separately.

Characteristics and Behaviors	Total			Urban			Rural			p-value
	Unweighted Count	Unweighted Percent (%)	Weighted Percent (%)	Unweighted Count	Unweighted Percent (%)	Weighted Percent (%)	Unweighted Count	Unweighted Percent (%)	Weighted Percent (%)	
Sex (Female)	13,010	47.8	48.9	10,520	47.8	48.8	2,490	48.2	50.0	0.914
Overweight/Obesity (≥85 th BMI percentile)	5,533	30.5	33.8	4,342	29.5	33.2	1,191	34.7	38.5	0.005
24-hour movement behavior guidelines										
Met PA guideline	5,838	21.7	21.1	4,447	20.4	20.1	1,391	23.8	27.7	<0.001
Met Sleep guideline	18,497	69.1	66.8	15,119	69.7	67.3	3,378	66.2	63.5	0.014
Met Screen time guideline	12,428	46.5	47.0	9,828	45.4	46.2	2,600	51.1	52.3	<0.001
Met PA + Sleep guideline	4,235	15.9	15.1	3,291	15.2	14.6	944	18.6	18.6	0.002
Met PA + Screen time guideline	3,661	13.8	13.2	2,753	12.8	12.5	908	17.9	18.5	<0.001
Met Sleep + Screen time guideline	9,036	33.9	32.9	7,224	33.5	32.7	1,812	35.7	34.2	0.552
Met all three guidelines	2,787	10.5	9.8	2,137	9.9	9.4	650	12.9	12.8	<0.001
Participation in structured activities										
None	7,388	27.4	32.5	5,981	27.4	32.5	1,407	27.5	32.5	0.983
One or more	19,535	72.6	67.5	15,830	72.6	67.5	3,705	72.5	67.5	
Neighborhood Amenities										
None	3,043	11.6	10.7	1,951	9.2	8.6	1,092	21.9	25.4	
1 amenity	2,943	11.2	11.9	2,259	10.7	11.3	684	13.7	16.0	<0.001
2 amenities	4,744	18.1	18.4	3,913	18.5	18.6	831	16.7	17.6	
3 amenities	6,074	23.2	23.5	4,951	23.4	23.7	1,123	22.6	21.9	
All 4 amenities	9,367	35.8	35.4	8,120	38.3	37.8	1,247	25.1	19.0	
Neighborhood Safety										
Definitely agree	18,604	70.5	67.2	14,852	69.5	66.2	3,752	74.6	73.7	<0.001
Somewhat agree	6,864	26.0	28.0	5,710	26.7	28.7	1,154	23.0	23.0	
Disagree	914	3.5	4.8	793	3.7	5.1	121	2.4	3.2	
Neighborhood Support										
No	10,176	38.9	42.0	8,429	39.8	43.1	1,747	35.0	34.9	<0.001
Yes	16,006	61.1	58.0	12,763	60.2	56.9	3,243	65.0	65.1	
Detracting Neighborhood Elements										
None	20,359	77.4	74.9	16,609	78.0	75.3	3,750	74.8	72.6	
1 detracting element	3,745	14.2	15.8	2,984	14.0	15.7	761	15.2	16.8	0.386
2 detracting elements	1,263	4.8	5.2	952	4.5	5.1	311	6.2	6.1	
3 detracting elements	925	3.5	4.0	735	3.5	4.0	190	3.8	4.3	
Race/Ethnicity										
Hispanic	3,844	14.1	26.5	3,326	15.1	28.3	518	10.0	14.2	
White, non-Hispanic	17,738	65.2	49.9	13,734	62.3	46.9	4,004	77.5	70.4	<0.001
Black, non-Hispanic	1,922	7.1	13.4	1,706	7.7	14.1	216	4.2	9.0	
Other/Multi-racial, non-Hispanic	3,691	13.6	10.1	3,264	14.8	10.7	427	8.3	6.4	
Federal Poverty Level Status										
0-99% FPL	3,708	13.6	19.3	2,826	12.8	18.9	882	17.1	22.6	
100-199% FPL	4,576	16.8	20.9	3,482	15.8	20.2	1,094	21.2	25.4	<0.001
200-399% FPL	8,240	30.3	29.0	6,445	29.3	28.6	1,795	34.8	31.8	
400% FPL or greater	10,671	39.2	30.8	9,277	42.1	32.4	1,394	27.0	20.2	

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Percent of rural children meeting sleep guidelines is significantly lower than the percent of urban children meeting sleep guidelines.

Pfledderer CD, Hunt ET, Prochnow T, Brown DMY, Salvo D, Springer AE. Urban-rural differences in overweight and obesity, 24-hour movement guideline adherence, and neighborhood characteristics among children in the United States: Evidence from a national survey. *In Progress*

Obesity-related outcomes



RESEARCH
Review

Diet and Physical Activity in Rural vs Urban Children and Adolescents in the United States: A Narrative Review

Lacey Arneson McCormack, PhD, MPH, RD; Jessica Meendering, PhD



ARTICLE INFORMATION

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Physical activity
Child
Adolescent

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<http://dx.doi.org/10.1016/j.jand.2015.10.024>

ABSTRACT

Current research suggests that the prevalence of obesity is higher among rural youth than urban youth. Due to the health implications that are associated with child and adolescent obesity, it is critical to understand systematic differences in diet and physical activity (PA) behaviors that may be contributing to this disparity in weight. However, varying definitions of rural and inconsistencies in study tools and methodologies may limit the generalizability of findings from research in this area. The objective of this narrative review was to synthesize and critically evaluate existing literature comparing diet and PA behaviors between rural and urban children and adolescents, providing recommendations for future research. Only five studies were found that reported on measures of diet in rural vs urban youth, whereas 16 were found that reported on measures of PA. Dietary assessment tools were generally standard and acceptable; however, differences existed in how dietary outcomes were defined. Few studies used assessment tools that objectively measured PA, and definitions for meeting PA recommendations varied among studies. Very few studies defined rural using the same criteria. Future research on the rural youth obesity disparity should focus on including a high-quality assessment of both diet and PA (as opposed to one or the other) and on using an appropriate and consistent definition of rural.
J Acad Nutr Diet. 2016;116:467-480.



McCormack LA, Meendering J. Diet and physical activity in rural vs urban children and adolescents in the United States: a narrative review. *J Acad Nutrition Dietetics.* 116(3):467-80.

Obesity-related outcomes



RESEARCH Review

Diet and Physical Activity in Rural vs Urban Children and Adolescents in the United States: A Narrative Review



Lacey Arneson McCormack, PhD, MPH, RD; Jessica Meendering, PhD

ARTICLE INFORMATION

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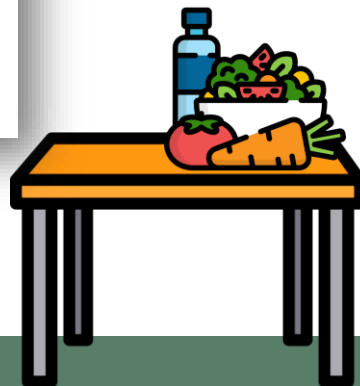
Rural
Diet
Physical activity
Child
Adolescent

2212-2672/Copyright © 2016 by the Academy of Nutrition and Dietetics.
<http://dx.doi.org/10.1016/j.jand.2015.10.024>

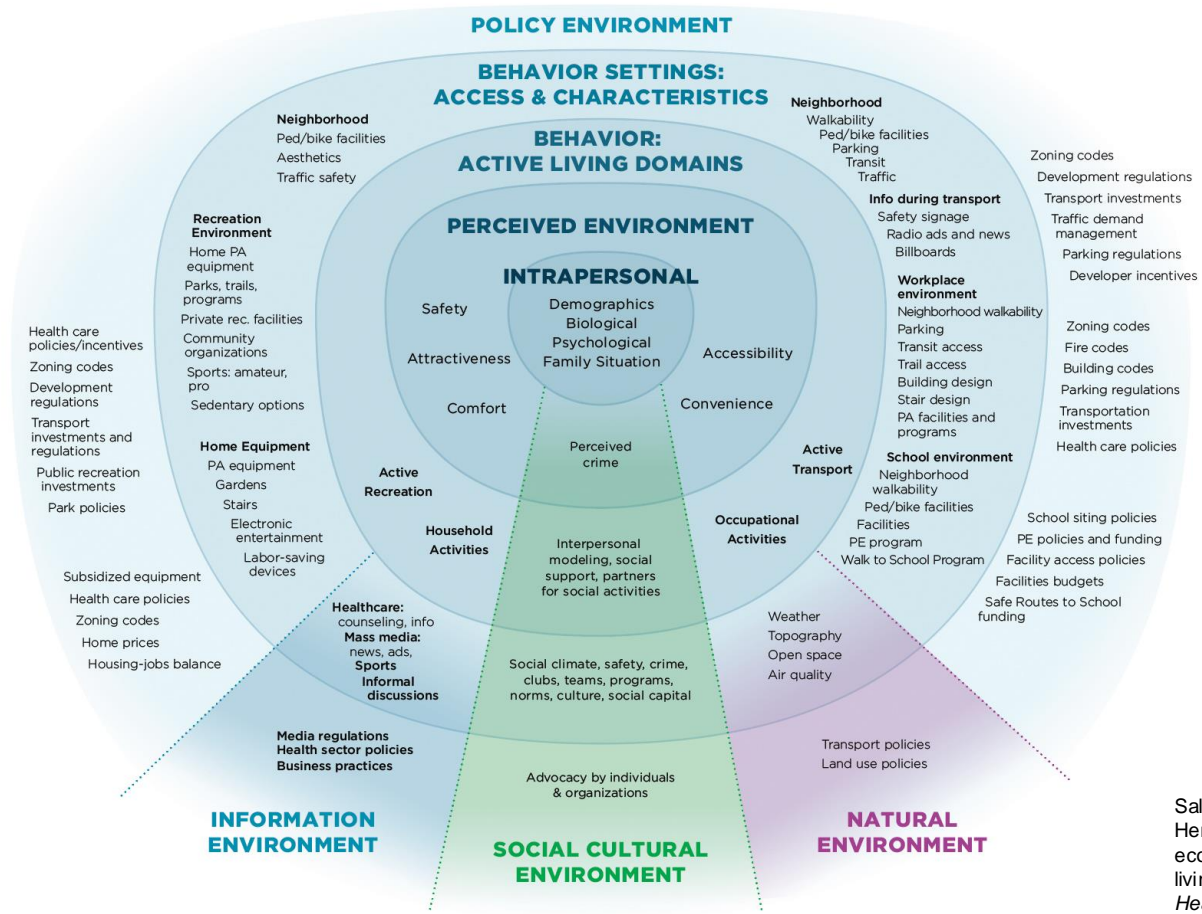
ABSTRACT

Current research suggests that the prevalence of obesity is higher among rural youth than urban youth. Due to the health implications that are associated with child and adolescent obesity, it is critical to understand systematic differences in diet and physical activity (PA) behaviors that may be contributing to this disparity in weight. However, varying definitions of rural and inconsistencies in study tools and methodologies may limit the generalizability of findings from research in this area. The objective of this narrative review was to synthesize and critically evaluate existing literature comparing diet and PA behaviors between rural and urban children and adolescents, providing recommendations for future research. Only five studies were found that reported on measures of diet in rural vs urban youth, whereas 16 were found that reported on measures of PA. Dietary assessment tools were generally standard and acceptable; however, differences existed in how dietary outcomes were defined. Few studies used assessment tools that objectively measured PA, and definitions for meeting PA recommendations varied among studies. Very few studies defined rural using the same criteria. Future research on the rural youth obesity disparity should focus on including a high-quality assessment of both diet and PA (as opposed to one or the other) and on using an appropriate and consistent definition of rural.
J Acad Nutr Diet. 2016;116:467-480.

Among the studies assessing diet, two showed no difference in intake between rural and urban youth. One study showed rural children consumed more calories than urban children. In terms of fruit and vegetable consumption, one study showed that urban children consumed vegetables more frequently. Another showed fewer rural adolescents consumed 2 cups fruit than urban and that more rural children consumed 2 to 3 cups dairy than urban. One study found racial differences in frequency of fatty snack food consumption between nonmetropolitan and metropolitan youth.

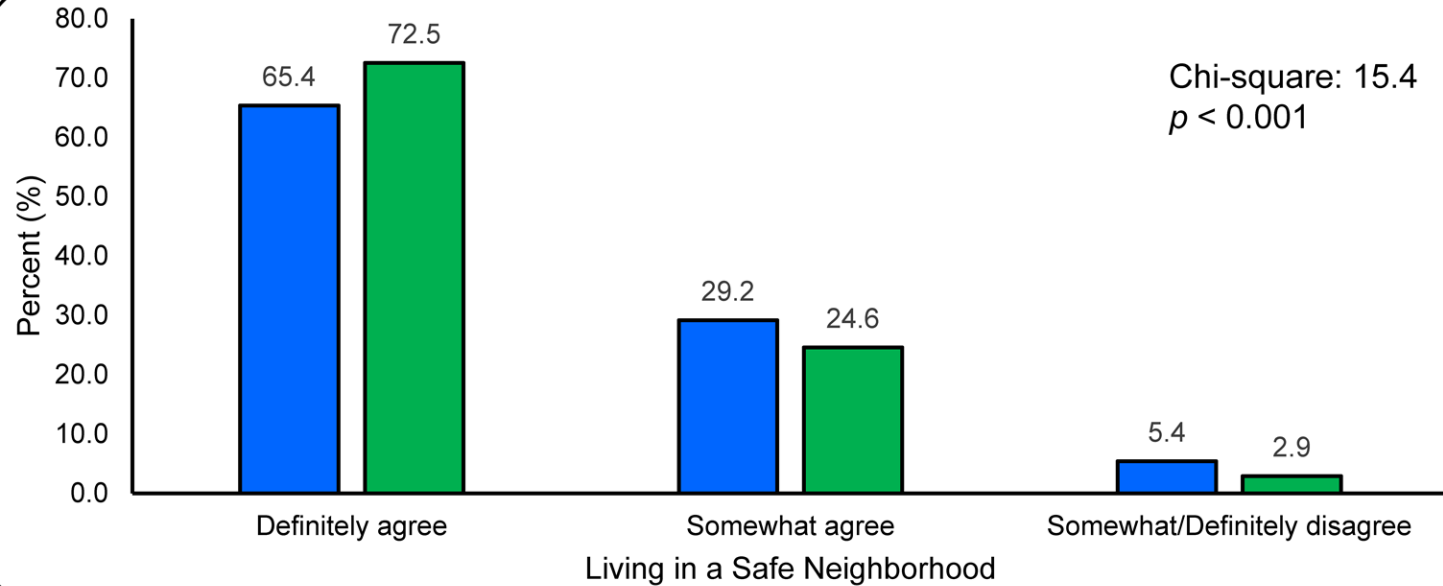


McCormack LA, Meendering J. Diet and physical activity in rural vs urban children and adolescents in the United States: a narrative review. *J Acad Nutrition Dietetics.* 116(3):467-80.

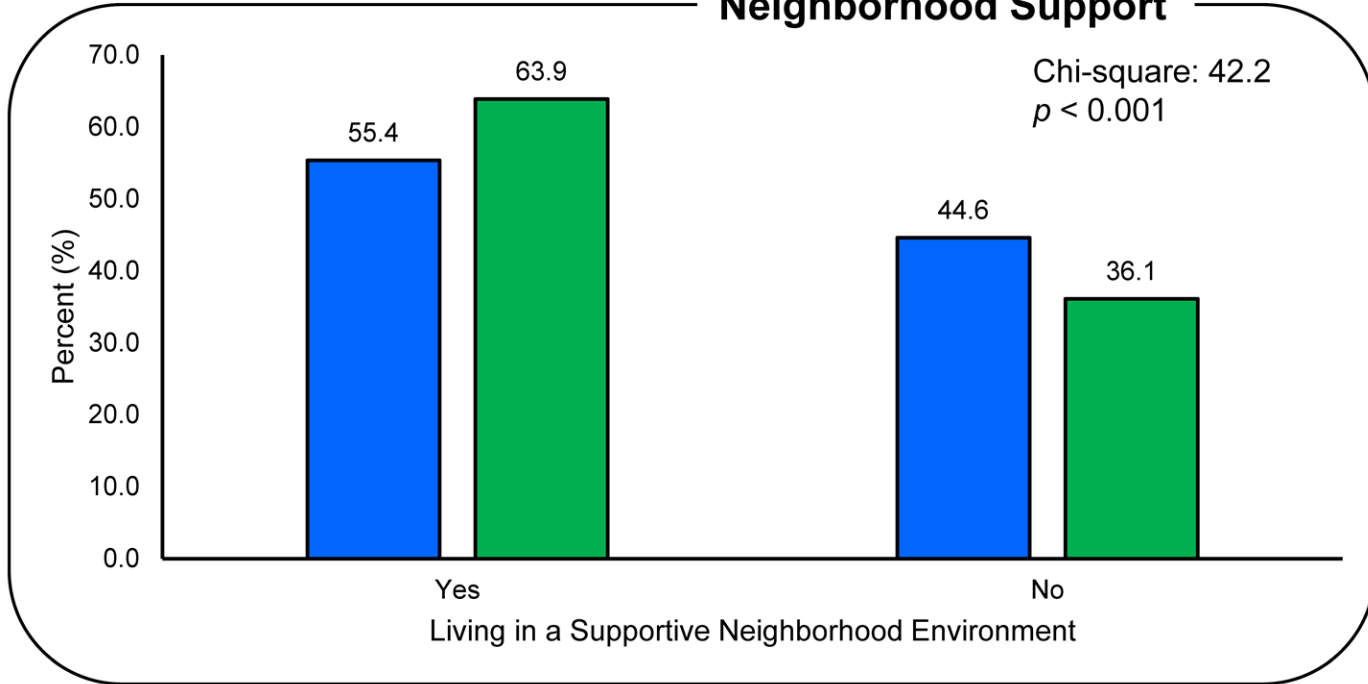


Sallis JF, Certero RB, Ascher W, Henderson KA, Kraft MK, Kerr J. An ecological approach to creating active living communities. *Annu Rev Public Health*. 2006;27:297-322.

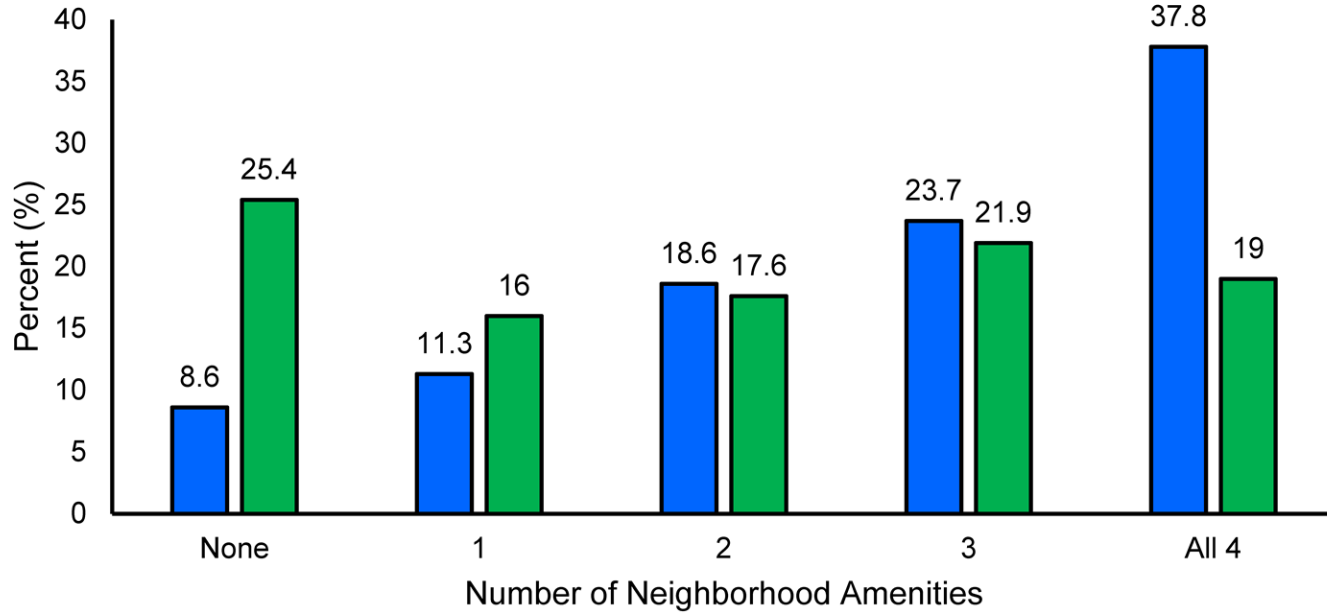
Neighborhood Safety



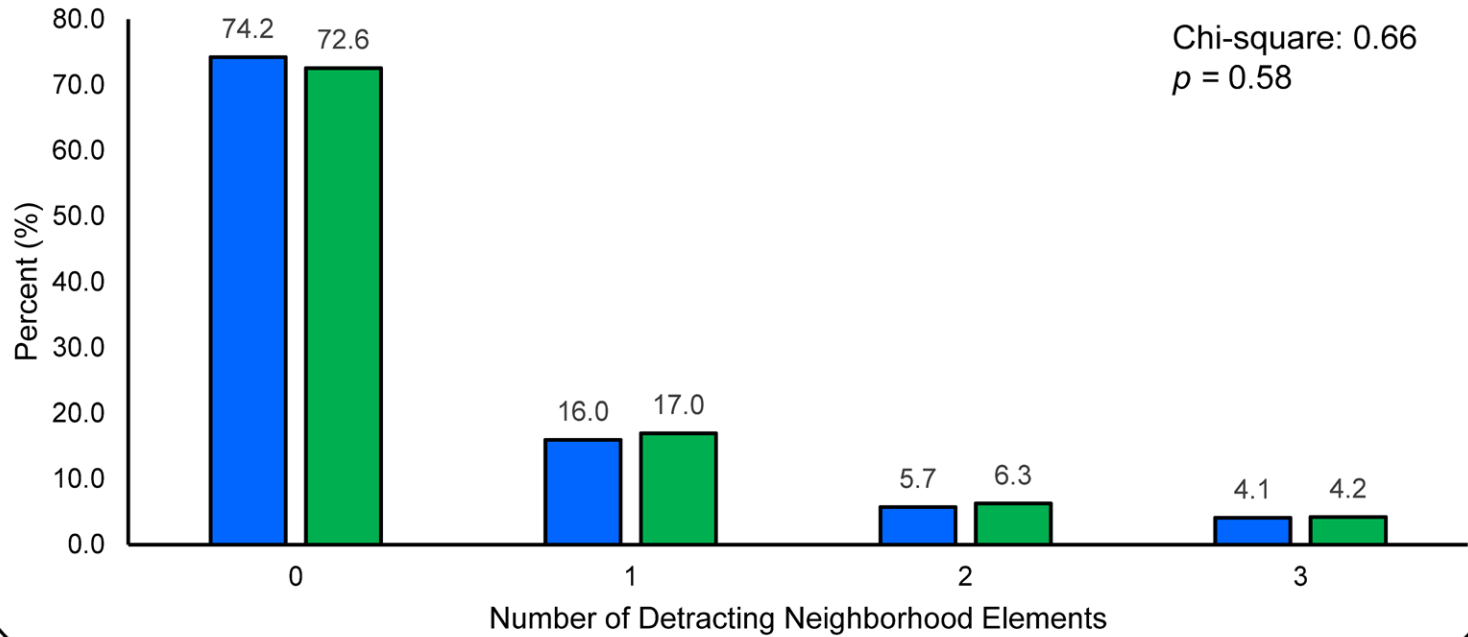
Neighborhood Support



Neighborhood Amenities

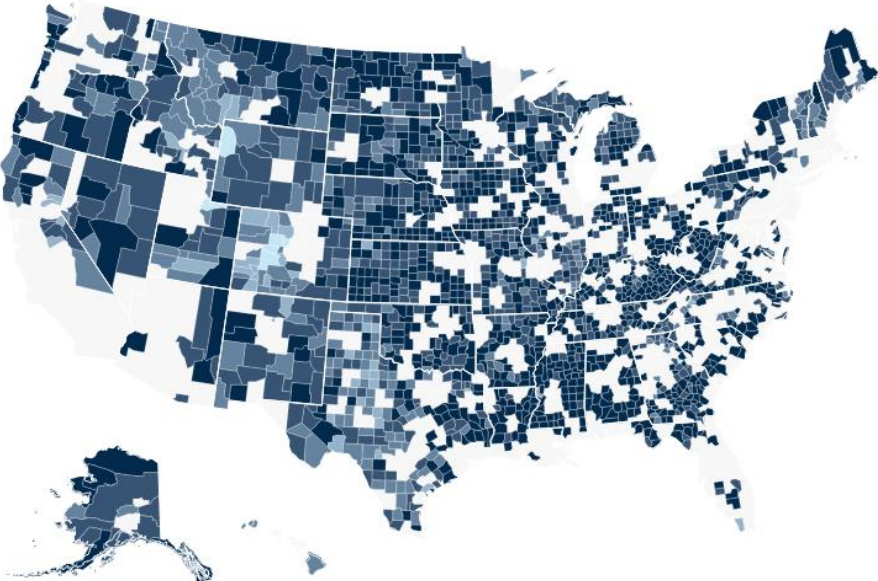


Detracting Neighborhood Elements



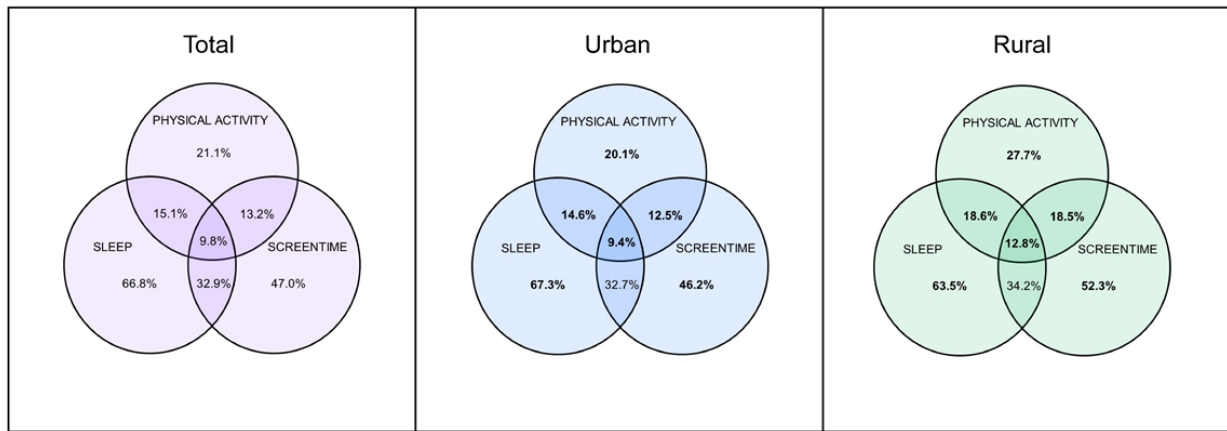
Despite limited evidence that shows youth in rural environments may be more physically active/less sedentary than youth in urban environments, we still lack effective, evidence-based interventions delivered in rural communities.

Obesity prevalence in NON- METRO counties

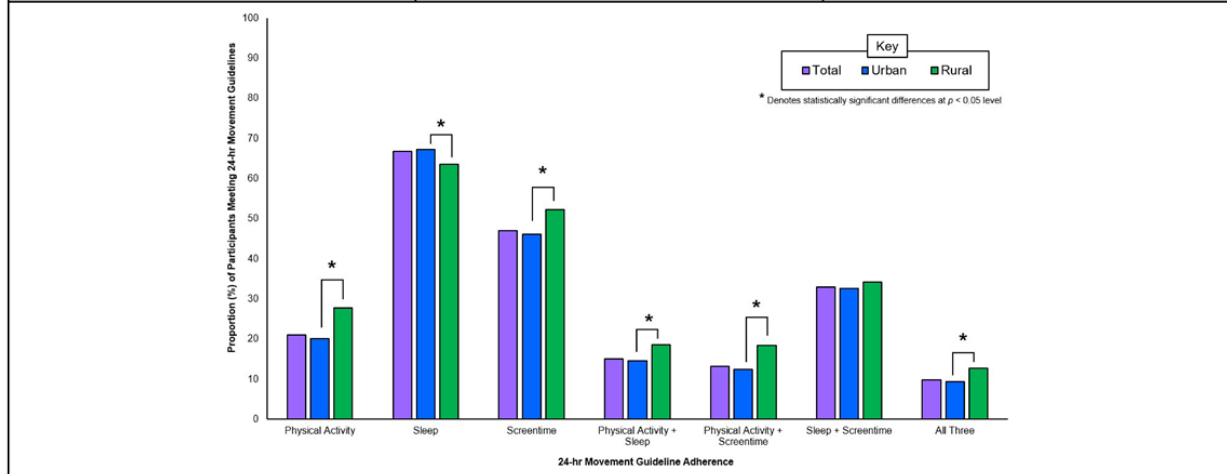


36.3%

United States Diabetes Surveillance System, 2023; Rural Health Information Hub, 2023



Pfledderer CD, Hunt ET, Prochnow T, Brown DMY, Salvo D, Springer AE. Urban-rural differences in overweight and obesity, 24-hour movement guideline adherence, and neighborhood characteristics among children in the United States: Evidence from a national survey. *In Progress*



Despite limited evidence that shows youth in rural environments may be more physically active/less sedentary than youth in urban environments, we still lack effective, evidence-based interventions delivered in rural communities.

Rural Studies
 Low quantity
 Limited reach
 Fewer components

PEDIATRIC BEHAVIOUR

OBESITY WILEY

School-based physical activity interventions in rural and urban/suburban communities: A systematic review and meta-analysis

Christopher D. Pfledderer¹ | Ryan D. Burns¹ | Wonwoo Byun¹ |
 Russell L. Carson² | Gregory J. Welk³ | Timothy A. Brusseau¹

SCHOOL-BASED PHYSICAL ACTIVITY INTERVENTIONS IN RURAL and URBAN COMMUNITIES

A SYSTEMATIC REVIEW and META-ANALYSIS



33 STUDIES INCLUDED

- ✓ PA component in intervention
- ✓ Total PA as an outcome
- ✓ Experimental manipulation/control group
- ✓ K-12 population
- ✓ ID urban/rural status
- ✓ School-based



URBAN INTERVENTIONS (n=28)



RURAL INTERVENTIONS (n=5)



MEAN BASELINE SAMPLE SIZE = 1,605 ± 4,993



MEAN AGE (YEARS) = 11.4 ± 2.8

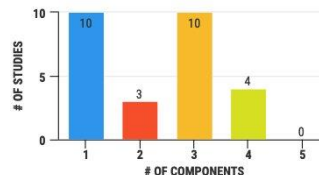


MEAN BASELINE SAMPLE SIZE = 283 ± 186

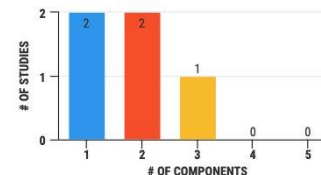


MEAN AGE (YEARS) = 12.3 ± 2.1

COMPONENTS UTILIZED IN INTERVENTIONS



COMPONENTS UTILIZED IN INTERVENTIONS



PHYSICAL EDUCATION WAS THE MOST COMMON INTERVENTION COMPONENT (20 STUDIES)



THE CLASSROOM WAS THE MOST COMMON INTERVENTION COMPONENT (4 STUDIES)

Hedge's g = 0.12
p < 0.01

Conclusion

School-based interventions can increase total PA in youth, but higher quality programs are needed, specifically in rural areas.

Hedge's g = 0.06
p = 0.84

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Christopher D. Pfledderer

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Why Focus on Rural Active Living?

Rural residents are disproportionately affected by chronic diseases and conditions (e.g., diabetes, obesity) associated with insufficient PA.¹³ Rural adults^{5,14} are less active than their urban counterparts. While research on youth is more equivocal, findings suggest lower PA in rural adolescents.^{15,16} Rural-urban PA disparities are not unknown to active living researchers. However, a conceptual fallacy often emerges as investigator derived “rural strategies” to target PA behavior treat rural communities merely as small urban ones, transposing what is known from urban literature to rural settings. The result of these conceptual fallacies is often wasted human and fiscal resources, which ultimately leads to frustration and fatigue. Although urban-derived strategies can be a helpful starting point for conceptualization, it is important to consider rural America as a distinct type of setting that offers unique opportunities and challenges for active living.^{6,17-19} As such, theoretically supported, methodologically rigorous, and empirically tested “rural strategies” for intervention are a necessity. Unfortunately, the studies that currently exist often lack a theoretical foundation, employ a non-rigorous research design, contain methodological flaws, or all three. For example, it is not uncommon to see an a theoretical study that employs a quasi-experimental design and self-reported physical activity. As such, the limited quantity and quality of rural active living research prohibits a comprehensive understanding of solutions for rural America.

Umstatted Meyer et al. (2016)

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Impact of risk of generalizability biases in adult obesity interventions: A meta-epidemiological review and meta-analysis

Michael W. Beets¹ | Lauren von Klingraeff¹ | Sarah Burkart¹ | Alexis Jones¹ | John P. A. Ioannidis² | R. Glenn Weaver¹ | Anthony D. Okely³ | David Lubans¹ | Esther van Sluijs⁵ | Russell Jago⁶ | Gabrielle Turner-McGrievy⁷ | James Thrasher⁷ | Xiaoming Li⁷

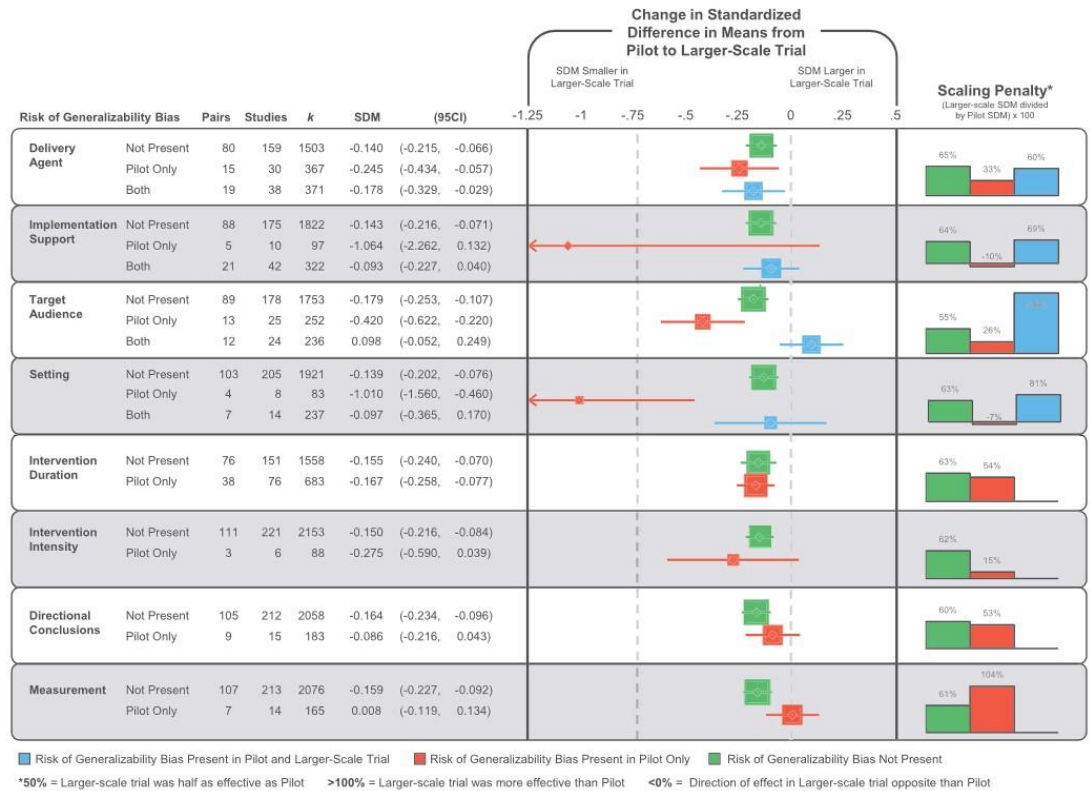


FIGURE 4 Forest plot of the change in the standardized difference in means (SDM) of the presence, absence, or carry forward of risk of generalizability biases from a pilot/feasibility study to a larger scale trial. No pairs contained directional conclusion bias in both the pilot and larger scale trial. Intervention duration, intervention intensity, and measurement describe differences between smaller and larger scale studies, so they cannot be present in both studies

When you change the setting, you see voltage drop


Impact of risk of generalizability biases in adult obesity interventions: A meta-epidemiological review and meta-analysis

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**Parent Preferences for Physical Activity in Before
and After School Programs in Rural and Suburban Communities:
A Discrete Choice Experiment**

Christopher D. Pfledderer, Ryan D. Burns, Wonwoo Byun, Russell L. Carson,
Gregory J. Welk, and Timothy A. Brusseau

Table 1 Attributes and Levels for Determining Parent Preferences of a Before and After School Physical Activity Program Using a Discrete Choice Experiment

Attribute	Levels
Number 1—time of day	a. Before school only b. After school only c. Offered before and after school
Number 2—main focus	a. Mainly focused on physical activity with some time for academics b. Mainly focused on academics with some time for physical activities c. Balanced mix of academic and physical activities
Number 3—leader	a. Physical education teachers b. Classroom teachers c. Parent volunteers d. Community volunteers (not parents)
Number 4—goals	a. Development of skills (running, jumping, throwing, kicking, etc) b. Improving fitness c. Learning sports (basketball, hockey, soccer, baseball, etc) d. Interpersonal skills (teamwork, fair play, etc) e. Free play (think recess)
Number 5—length	a. 30 min b. 1 h c. 90 min

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Time of day	Before and after school	After school
Main focus	Mainly focused on academics with some time for physical activities	Mainly focused on physical activity with some time for academics
Leader	PE teachers	Community volunteers (not parents)
Goals	Learning sports (basketball, hockey, soccer, baseball, etc)	Improving fitness
Length	90 min	1 h
	Select	Select
NONE: I wouldn't choose any of these.		
Select		

Figure 1 — Example of a binary choice task set. *Note.* Before each choice set, the respondent was prompted with a statement that read, “As a parent, which physical activity program would you prefer for your child?” PE indicates physical education.

The time-of-day a before/after school program was offered influenced rural parents' choices more than suburban parents' choices.

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Rural parents wanted the main focus of the program to be physical activity, while suburban parents preferred a program that was an equal mix of physical activity and academics.

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Human Kinetics
 ORIGINAL RESEARCH

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Rural Active Living Measurement Tools

The Rural Active Living Assessment (RALA) Tools and the Rural Active Living Perceived Environmental Support Scale (RALPESS) were designed to help researchers and community members collect data on the existence and perception of physical environment features and amenities, town characteristics, community programs, and policies that could potentially influence levels of physical activity among residents living in rural communities. These tools allow for the assessment of the “friendliness” of a rural community for walking, biking, and playing.

The development of the RALA tools and RALPESS were supported through funding provided by the Robert Wood Johnson Foundation through Active Living Research (2006, 2007).

Rural Active Living Assessment (RALA) Tools

The RALA tools were designed by researchers at the Maine Rural Health Research Center, University of Southern Maine, led by Dr. David Hartley and Anush Hansen, and was tested and refined by researchers at the University of Southern Maine, Tufts University (Drs. Christina D. Economos, Raymond R. Hyatt, & Erin Hennessy), University of Alabama (Dr. M. Renée Umstatt Meyer), and University of Mississippi (Dr. Jeffrey S. Hallam).

The RALA consists of three separate assessments and a codebook with scoring:

1. [The Town-wide Assessment](#)
2. [The Program and Policy Assessment](#)
3. [The Street Segment Assessment](#)
4. [The RALA Codebook with Scoring](#)

These three assessment instruments are designed to be used together and provide a tool to conduct a comprehensive active living audit of your rural town.

Suggested Citations:

Hartley, D., Yousefian, A., Umstatt, M. R., Hallam, J., Economos, C., Hyatt, R., & Hennessy, E. (2009). Rural active living assessment (RALA) toolkit: Codebook and assessment tools. Portland, ME: University of Southern Maine, Maine Rural Health Research Center .

Rural Active Living Perceived Environmental Support Scale (RALPESS)

The RALPESS was designed by researchers at the Universities of Alabama and Mississippi, led by Drs. M. Renée Umstatt Meyer and Jeffrey S. Hallam, and was tested and refined by researchers at the University of Alabama, University of Mississippi, University of Southern Maine (Dr. David Hartley and Anush Hansen), and Tufts University (Drs. Christina D. Economos, Raymond R. Hyatt, & Erin Hennessy)

The RALPESS has been found to be a valid (face, content, and construct validity), internally consistent, and practically useful instrument to measure perceptions of rural environments in the context of physical activity. The RALPESS consists of 33 items with 7 sub-scales (factors): indoor areas, outdoor areas, town center connectivity, town center physical activity resources, school grounds, church/fait-based facilities, and areas around the home or neighborhood. As stated in the paper, “Research suggests that objective measurement only conveys partial contextual understanding of factors influencing physical activity and that perceptions could mediate relationships between objective measurement and health outcomes.” Thus, the RALPESS fills an important gap in understanding “activity-friendly” environments and communities by measuring perceptions. We recommend that both the RALA and RALPESS be used to better understand the full context of environmental influences of physical activity in rural communities.

RALPESS INSTRUMENT

Suggested Citation:

Umstatt M. R., Baller S. L., Hennessy E., Hartley D., Economos C. D., Hyatt R. R., Yousefian A., & Hallam J. S. (2012). [Development of the Rural Active Living Perceived Environmental Support Scale \(RALPESS\)](#). *Journal of Physical Activity and Health*, 9(5): 724-730. PMID 21946157 doi: <https://doi.org/10.1123/jpah.9.5.724>

<https://publichealth.robins.baylor.edu/impact/rural-active-living-measurement-tools>

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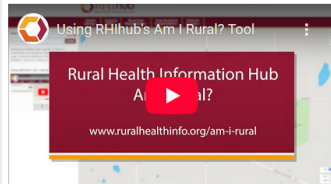
Am I Rural? – Tool

Help ⓘ

Locate

Determine whether your specific location is considered rural based on [various definitions of rural](#), including definitions that are used as eligibility criteria for federal programs.

Using RHIhub's Am I Rural? Tool





Assela, Ethiopia



Addis Ababa, Ethiopia



Michigan, United States



Zuunmod, Mongolia



Indiana, United States

Chris Pfladderer, PhD

Assistant Professor

Health Promotion and Behavioral Sciences

Michael & Susan Dell Center for Healthy Living

UTHealth Houston, School of Public Health in Austin

Contact:

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Childs EM, Boyas JF, Blackburn JR. Off the beaten path: A scoping review of how 'rural' is defined by the US government for rural health promotion. *Health Promotion Perspectives*. 2022;12(1):10.

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Partners for Rural Transformation. Where we call home. <https://storiesofruralamerica.com/where-we-call-home/>

Rural Health Information Hub. Am I rural? <https://www.ruralhealthinfo.org/am-i-rural>

Rural Health Information Hub. Obesity and Weight Control. <https://www.ruralhealthinfo.org/charts/topics/obesity-and-weight-control>

U.S. Department of Agriculture, Economic Research Service. Rural-Urban Continuum Codes. <https://www.ers.usda.gov/data-products/rural-urban-continuum-codes/>

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Q&A session**

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