

The Impact of Geological Location on Health Care Services Utilization Seen in Teens Residing in Rural Versus Urban Communities

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Abstract

Teens who reside in rural and urban communities experience mental and physical health challenges. Urban communities have a long history of having many physical and mental health resources for their residents. In contrast, rural communities have limited resources of healthcare services. The present study aimed to examine the differences in healthcare utilization between rural and urban areas of California among teens. The results implicate no significant differences seen in utilization of health care services seen among teens living in rural or urban communities.

Introduction

Significance of Study

- According to the U.S. Census Bureau in 2018, 18.8 % of teens in the United States lived in rural areas, and 4.4% of teens in California lived in rural areas (Children in Rural and Urban Areas (California & U.S. Only), 2018).
- Some critical factors that affect teens in rural communities include poverty, limited transportation, the stigma of seeking services, and lack of health services (Heflinger & Christens, 2006).
- Lack of access to essential resources due to various reasons results in a decreased mental and physical health utilization seen in teens. As a result, teens may experience a decrease in their quality of life.

Purpose

- To examine the differences in healthcare utilization between rural and urban areas of California among teens.

Research Question

- Is there a difference in teen's health care service utilization between rural and urban areas of California?

Hypothesis

- Teens in urban areas of California will show higher levels of health care service utilization compared with teens in rural areas.

Literature Review

- The United States public health community has continued to raise awareness of the alarming concern over the disparities in rural health versus urban health (Ziller & Milkowski, 2020).
- Barriers include lower education and health literacy, transportation barriers, socioeconomic barriers, and higher uninsured and underinsured rates; research also emphasizes the insufficient amount of available health care professionals (Ziller & Milkowski, 2020).
- Research has indicated that the smaller number of occupants in a community has resulted in higher numbers of depressive symptoms that are seen (Heflinger & Christens, 2006).

Research and Knowledge Gap

- Unfortunately, there is more data seen concerning adults and not teens.
- There is a lack of teen-focused groups in rural areas due to a higher demand for services for adults (Heflinger & Christens, 2006).

Methods

Research Design and Data Collection Procedures

- The current study is a secondary analysis of the 2019 and 2020 California Health Interview Survey (CHIS) Teen Data File data.
- The data and results CHIS 2019 and 2020 collected are available to federal and state agencies such as local public health agencies and organizations, advocacy and community organizations, other local agencies, community clinics, health plans, hospitals, foundations, and researchers.
- CHIS 2019 and 2020 used web and telephone as a data collection method

Sample and Sampling Method

- The CHIS 2019 sample included teens from the ages of 12-17 ($n = 847$) who reside in California. In addition, the CHIS 2020 included teens from the ages of 12-17 ($n = 1,365$) who reside in California.
- The sample group was from 58 counties in California, and they were grouped into 44 geographic sampling strata.
- The sample was recruited by randomly selecting one teen in each sampled household that was determined by geological location.

Measures

Independent Variable: Rural and Urban areas in California

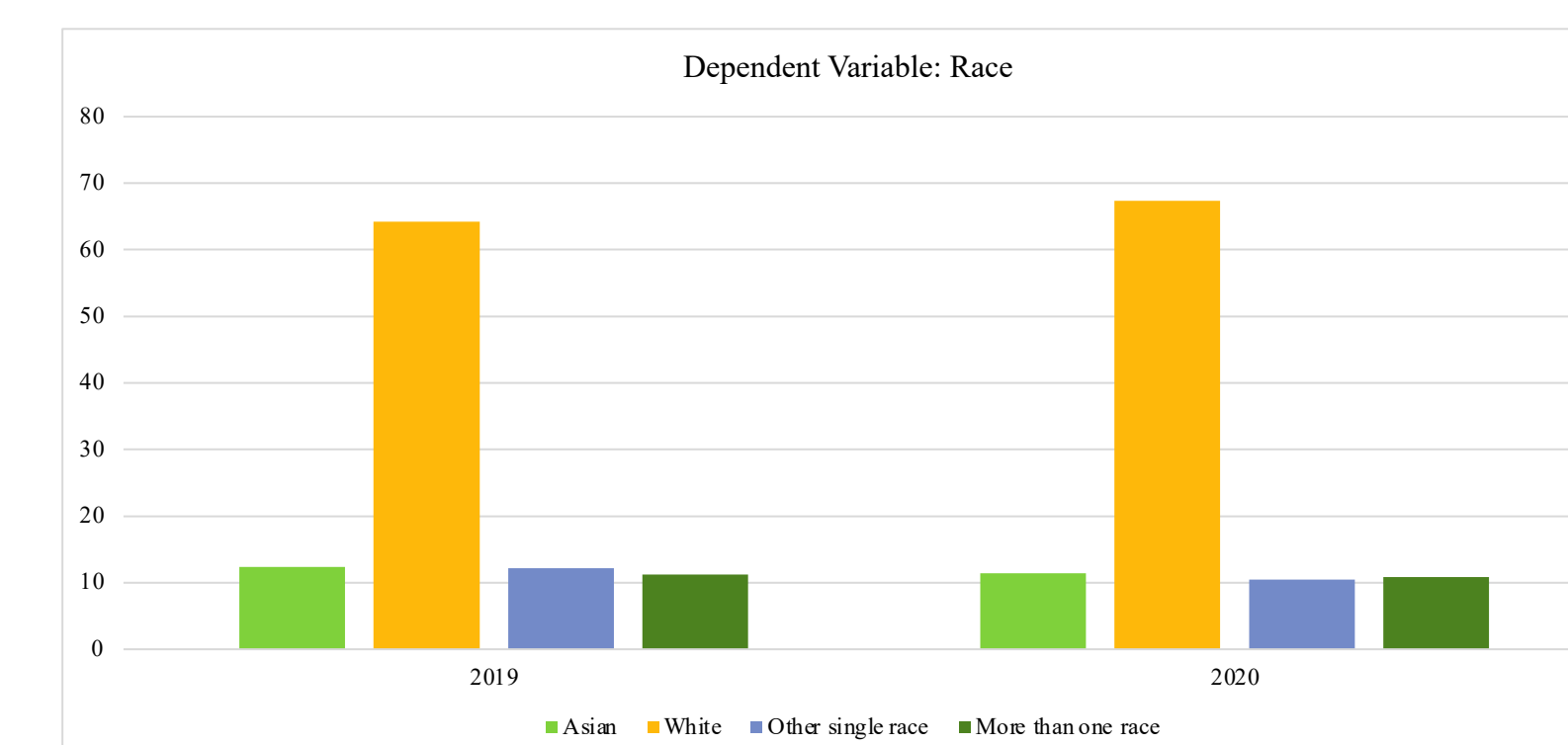
- The survey asked respondents to check off (1) = urban and (2) = rural to reflect their geological location.

Dependent Variable: Health Services Utilization

- Number of doctor visits in the past year (12 answer choices of -9 = not ascertained, -8 = don't know, -7 = inapplicable, -1 = 1 time, 0 = 0 times, 1 = 1 time, 2 = 2 times, 3 = 3 times, 4 = 4 times, 5 = 5 times, 6 = 6-12 times, and 9 = 13 + times)
- Visited a doctor during the past 12 months (Y/N)
- Emergency visits during the past 12 months (Y/N)
- Quality of services (4 Point Likert)

Descriptive Analysis: Sociodemographic Characteristics (N=847) (N=1,365)

Characteristics	2019		2020	
	n	%	n	%
Latino/Hispanic Origin				
Yes	209	24.7	334	24.5
No	578	68.2	931	68.2
Gender				
Male	448	52.9	673	49.3
Female	399	47.1	692	50.7
Gender of Adult				
Male	270	31.9	500	36.6
Female	517	61.0	865	63.4
Race				
Asian	105	12.4	115	11.4
White	544	64.2	920	67.4
Other single race	103	12.2	143	10.5
More than one race	95	11.2	147	10.8
Poverty Level				
0-99% FPL	77	9.1	110	8.1
100-199% FPL	121	14.3	147	10.8
200-299% FPL	110	13.0	139	10.2
300% FPL and Above	539	63.6	969	71.0
Language Spoken at Home				
English	75	8.9	56	4.1
Spanish or other one language only	5	0.6	13	1.0
English & Spanish	652	77.0	1,140	83.5
English & one other language	14	1.7	5	0.4
Other languages (2+)	101	11.9	151	11.1



Results



Chi-Square Results

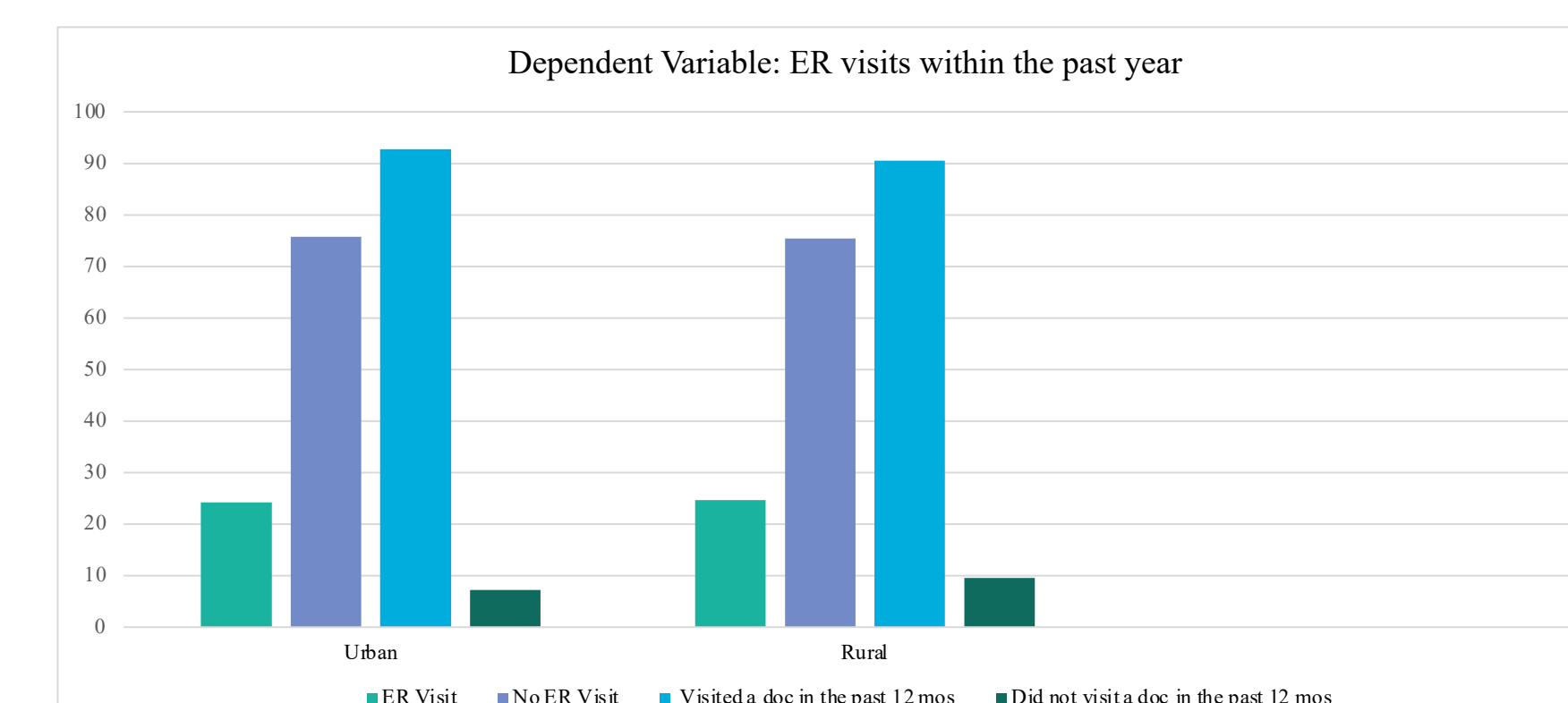
- The frequency of emergency room visits within the past year in rural and urban areas was found to have an **insignificant** relationship.
- The frequency of visiting a doctor during the past 12 months in rural and urban areas was found to have an **insignificant** relationship.

Mann-Whitney U Results

- The difference in the number of doctor visits between rural and urban communities was found to have an **insignificant** relationship.
- The differences in quality of services between rural and urban communities was found to have an **insignificant** relationship.

Differences in Mental and Physical Health Utilization Seen in Rural and Urban Areas (2019)

Variables	Mean rank	U	p
2019			
# of doctor visits past year		87675.000	.770
Rural	426.90		
Urban	422.00		
Quality of Services		66358.500	.821
Rural	370.57		
Urban	367.04		
2020			
# of doctor visits past year		145649.000	.458
Rural	667.63		
Urban	686.88		
Quality of Services		112639.000	.126
Rural	577.37		
Urban	614.65		



Conclusion

Major Findings

- It was predicted to see a higher number of teens visiting the doctor in urban communities.
- The result indicated that there was no differences in health care services utilization between rural and urban areas.
- Additionally, it does not indicate that there is equal access to care. Existing research does not indicate whether parents are making efforts to insure their children are utilizing health care services.
- However, the current study's results may be affected by how rural and urban areas are defined.

Implications and Future Research

- The findings imply that more research need to understand the health care utilization among children and youth.
- Additionally, the current research findings do not reflect the consistent evidence of residents living in rural communities experiencing a limited amount of health services.
- The major findings inform future research to set a default criterion or what classifies an urban or rural community.

Strengths and Weaknesses

- The current study's limitations include its limited and incohesive with other research's criterion on what communities classify under urban and rural.
- The current study's strength is the sample size is decent for 2019 ($N = 847$) and 2020 ($N = 1,365$)

References (SELECTED)

- Children in Rural and Urban Areas (California & U.S. Only). (2018). Kidsdata.org. <https://www.kidsdata.org/topic/557/children-rural-urban/table#fmt=745&loc=1>
- Heflinger, C. A., & Christens, B. (2006). Rural behavioral health services for children and adolescents: An ecological and community psychology analysis. *Journal of Community Psychology*, 34(4), 379-400. <https://doi.org/10.1002/jcop.20105>
- Ziller, E., & Milkowski, C. (2020). A Century Later: Rural Public Health's Enduring Challenges and Opportunities. *American Journal of Public Health*, e1-e9. <https://doi.org/10.2105/ajph.2020.305868>

