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Correlates of Rural, Appalachian, and Community Identity in the CITIES Cohort

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Abstract

Purpose: To determine correlates of rural, Appalachian, and community identity amongst a cohort of participants in the Community Initiative Towards Improving Equity and Health Status (CITIES) project.

Methods: Mixed linear and logistic regression effects models were utilized to determine correlates of 3 outcomes: 1) community identity, 2) rural identity, and 3) Appalachian identity amongst participants in the Ohio CITIES project.

Findings: Distinct demographic characteristics were found to be associated with each of the outcomes. For community identity while no differences were found for rural or urban participants, those who were single or never married ($P < .0001$) as well as those who graduated from college ($P = .0005$) reported significantly lower community identity scores than married individuals with less than a college education. Those who resided in an Appalachian county reported higher community identity scores ($P = .0009$) than non-Appalachian residents. For rural identity, those who did not identify as Christian ($P = .018$) as well as those who identified as Democrat ($P = .027$)

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Supplementary Information

Appendix: Measures of Rural and Community Identity

reported significantly lower rural identity scores than others. Lastly, for Appalachian identity, county-level percentage of families in poverty ($P = .06$), as well as gender ($P = .05$), were associated with self-reported Appalachian identity, but these effects were only marginally significant.

Conclusions: Although community, rural, and Appalachian identity may be viewed as similar due to their measure of attachment to a place, results from this study suggest that there are distinct individual and area-level correlates associated with community, rural, and Appalachian identity.

Keywords

Appalachian identity; community identity; correlates of identity; rural identity

“Place” can be quantified in many ways, through firm geographic boundaries as well as through individual perceptions of a “sense of place.” The concept of sense of place is less rigid, consisting of human-place bonding, attachments, and personal meaning ascribed to places by inhabitants and visitors.¹ Some research suggests that people often hold multiple, nested identities that vary depending how strongly they identify with various geographic areas.²

As an example of multiple nested identities, it is possible for one to identify as both Appalachian and rural according to their geographic location, but not to identify closely with their immediate geographic community. Moreover, people may identify as Appalachian but not as rural. Thus, constructs of social identity, such as Appalachian, rural, and community identity are potentially measuring separate aspects of social identity. Research suggests that individuals who have lived in a region for a large percentage of their lives are likely to identify with that place. In Appalachia, research has found that individuals who have lived there for a long time, as well as those living in less affluent counties, with lower incomes, and those who belonged to a church or religious group, were more likely to identify as Appalachian.^{3–5} Previous research suggests that individual factors are associated with place or community attachment. For example, studies examining rural identity found similar results as those studying Appalachia, such as that religion, ties to the land, hard work, and closeness of family were key themes in the lives of older rural women.⁶ Region was also found to be an independent predictor of perceived sense of community, with stronger perceived sense of community found in rural participants compared to their urban counterparts.⁷ Similarly, other research suggests that community size and population density are determinants of the strength of local bonds and community attachment (therefore, those residing in smaller communities experience more community attachment).^{4,8,9}

Social identity, or a sense of belonging to a place is relevant to health, as it is known to be associated with health outcomes, such as intention to perform breast screening and progression of disease, such as HIV.^{10–12} Moreover, research amongst older adults found that collective self-esteem (an individual’s self-evaluation as a member of social groups) is a protective factor against chronic conditions.¹³ However, perceived self-identity and community attachment is an understudied area of health research in rural and Appalachian communities. In the present study, we aim to identify correlates of Appalachian, rural, and community identity amongst a cohort of Ohioans.

Materials and Methods

This study was part of a National Cancer Institute (NCI)-funded initiative, Population Health Assessments (Cancer Centers Support Grant [CCSG] Supplement– CA016058–38), in which 15 Centers were funded to work collectively to develop core survey items and implement population surveys in their respective catchment areas. Our site conducted all aspects of this study, including survey development, sampling, administration, and statistical analysis. This study has been described previously,¹⁴ and it is briefly summarized below.

Overview

The overall goal of the CITIES project was to collect local data to better define and describe the Ohio State University Comprehensive Cancer Center (OSUCCC) catchment area. We identified survey items including core constructs that were used in concert with the NCI and other funded NCI-designated cancer centers¹⁵ through the use of existing validated items from national surveys such as the Health Information National Trends Survey (HINTS),¹⁶ National Health Interview Survey (NHIS),¹⁷ and the Behavioral Risk Factor Surveillance System (BRFSS).¹⁸ In addition, we utilized constructs from prior surveys developed and conducted by the OSU Center for Population Health and Health Disparities.¹⁹ This project was approved by the OSU Institutional Review Board in February 2017.

Sample Selection

Eligibility included Ohio residents aged 21–74 years. To ensure that the sample included underrepresented populations, recruitment targeted substantive percentages of racial/ethnic minorities and rural and Appalachian Ohio residents which were further categorized by age group (21–40; 41–50; 51–65; and 66–74 years).

We had 2 tailored simultaneous recruitment strategies. First, to recruit mainly white urban, rural and Appalachian participants, Ohio residents were randomly selected from a customized, randomly ordered list provided by Marketing Systems Group (white pages, commercial and United States Postal Service lists).²⁰ Second, to reach goals of minority participation, especially non-English speakers, we worked with community partners to identify community events and venues to recruit participants. As a result, participants represented various population groups in Ohio: white (urban and rural), Appalachian, African American, Hispanic, Somali, and Asian.

Interview/Data Collection

Potential participants were contacted via phone or approached in person. Once contact was made, the project was explained, eligibility was determined for those interested in participating, and informed verbal consent was obtained. We used several data collection techniques (phone-based, in-person interviews, web surveys), with translation as needed, to accommodate needs of catchment area populations. If participants preferred completing a web survey, a link to the survey was sent via email to the participant. For the phone interviews, respondents received an introductory letter introducing the study, followed 1 week later by a telephone call from a trained interviewer. For in-person interviews, potential

participants were approached individually or in a group setting where the study was explained and individual consent was obtained. Study data were collected and managed using REDCap (Research Electronic Data Capture), a secure, web-based application designed to support electronic data capture, hosted at the Ohio State University.²¹

Outcomes (measures of identity)

Participants who self-reported residing in 1 of the 32 counties in Ohio classified as Appalachian were asked the question pertaining to Appalachian self-identity. *Appalachian self-identity* was measured within the survey with the question “Do you consider yourself to be Appalachian?” with response options of “No,” “Yes,” or “Don’t know.” For analyses, these responses were dichotomized into “Yes” or “No” with “Don’t know” responses coded as “No.” *Community identity*, a composite score based on 6 items measured within the survey (see Appendix, available online only), was asked of all respondents—urban, rural, and Appalachian. For community identity, participants responded to each of 6 items measured on a scale from 0 (completely disagree) to 6 (completely agree). These 6 items included 1) I want to live in my community for a long time; 2) I feel at home in my community; 3) I feel a sense of loyalty to my community; 4) I know most of the people who live around me; 5) Most of the people in my community know me; and 6) I feel a sense of connection with other people in my community. Scores for each item were summed, with higher scores indicating higher community identity with a possible range of scores from 0–36.²² Lastly, rural identity was a composite score based on 6 items measured within the survey (see Appendix, available online only) and was asked of respondents residing in rural counties. For rural identity, participants responded to each of the items measured on a scale from 0 (not at all) to 6 (extremely). These 6 items included 1) How much do you see yourself belonging to a rural community; 2) How much is being from a rural community a part of who you are; 3) How much do you identify with people who live in rural communities; 4) To what extent do you feel your general attitudes and opinions are similar to people who live in rural communities; 5) To what extent do you feel that you are typical of people who live in rural communities; and 6) To what extent do you consider yourself a “city” person. Scores for each item were summed, with higher scores indicating greater rural identity, with a possible range of scores from 0–36.²²

Analysis

Mixed effects linear regression was used to model the community and rural identity outcomes, and mixed effects logistic regression was used for Appalachian identity. A random intercept, blocked by county, was included in all models that retained a county-level predictor. Degrees of freedom were calculated using the Kenward-Roger method.²³ Univariable models were fit for each predictor of interest and a backwards selection process was used to build multivariable models, initially including all predictors significant at the 0.2 level individually. For the community identity outcome, the criterion for retention was significance at the 0.05 level. For rural and Appalachian identity, this criterion was relaxed to 0.1 due to the comparatively smaller sample sizes for these outcomes. All analyses were conducted in SAS v9.4 (SAS Institute, Cary, NC).

Results

Descriptive characteristics of the sample population are presented in Table 1, stratified by each subset of participants who answered the community, rural, and Appalachian identity questions. Out of 211 participants residing in an Appalachian county, 109 (51.7%) self-identified as Appalachian. The average community identity score was 26.67 (range 0–36), while the average rural identity score was 23.22 (range 2–36). Briefly, nearly two-thirds of the population were female and almost half were white. Approximately 30% of the population had a high school education or less and 84% had some sort of health insurance.

Table 2 presents univariable and multivariable mixed effects linear regression estimates for the community identity scores. From the multivariable model estimates, participants who were single or never married had significantly lower community identity scores than those who were either divorced/widowed/separated or currently married ($P < .0001$). Those who reported graduating from college had significantly lower community identity scores than those who reported some college or high school education ($P = .0005$). Those who reported greater financial security had higher community identity scores ($P = .0003$), as did those who resided in an Appalachian county ($P = .0009$). Participants who reported Muslim as their religion also had higher community identity than other religious groups ($P < .0001$). There were no differences in community identity scores by residence, urban vs. rural.

Table 3 presents univariable and multivariable mixed effects linear regression estimates for rural identity scores. From the multivariable model estimates, participants who did not identify as Christian had significantly lower rural identity scores than participants who did identify as Christian ($P = .018$). Further, participants who identified as Democrat had significantly lower rural identity than those who identified as independent or other ($P = .027$). Lastly, participants who lived in counties where a higher proportion of children resided in female headed households had significantly lower rural identity scores ($P = .002$).

Lastly, Table 4 presents univariable and multivariable mixed effects logistic regression estimates for the Appalachian identity outcome. In multivariable analyses, males were more likely to identify as Appalachian ($P = .05$), while participants residing in counties with a higher percentage of families in poverty were marginally more likely to identify as Appalachian ($P = .06$).

Discussion

In this study we identified correlates of community, rural, and Appalachian identity amongst a cohort of participants from urban, rural, and Appalachian counties in the Ohio CITIES project. Out of 211 participants who resided in an Appalachian county, just over half (51.7%) identified themselves as Appalachian. Community and rural identity were measured on a scale of 0–36, with an average score of 23.22 and 26.67 for rural and community identity, respectively. Overall, we found distinct differences in the demographic correlates that were significantly associated with each outcome. For example, for community identity we found that education, financial security, residing in an Appalachian county, religion, and marital status were all significantly associated with community identity score in

multivariable models, with no difference by rural or urban residence. However, not all of these predictors were significant for the other outcomes of identity.

Overall, results from this study suggest that those who did not graduate from high school, who are married, and living comfortably on their present income have higher community identity scores than other individuals. Perhaps individuals who stayed in their hometowns and did not move away to attend college feel more attachment to their communities due to the length of time they have lived in the area. However, we were not able to investigate this as we did not ask about length of residence in the community. Moreover, participants residing in an Appalachian county had higher community identity than participants in non-Appalachian counties. These results are somewhat expected, as Appalachian residents tend to live in the same region for a long period of time and have strong ties to religion, both aspects found to be strongly associated with community attachment in prior research.²⁴

Additionally, these results support that identifying as Christian was significantly associated with a higher rural identity score. This result is expected, as prior research has suggested that religiosity is associated with community attachment.²⁵ Having a higher proportion of children living in female-headed households as well as politically identifying as Democrat were significantly inversely associated with rural identity. These results are not surprising as rural communities tend to be characterized by adherence to traditional norms and conservative values, which may not align with more liberal political beliefs or single female-headed households.²⁶

Unlike prior studies, there was no significant association between education, income, and religion with Appalachian self-identity. However, our findings may be limited by the small sample of participants who answered these questions, which may not be representative of the general population of Appalachian adults.

Conclusion

In summary, amongst a cohort of residents of Ohio from urban, rural, and Appalachian counties, measures of community, rural, and Appalachian identity were found to be associated with unique demographic characteristics. Ratings of community identity did not differ between rural and urban residents; thus, this measure may be useful in both populations. Appalachian identity, as measured in this study by a simple Yes/No response, was only identified by 51.7% of the sample. Thus, among all respondents who were asked this question, not all identify as Appalachian, as was reported in previous work by our group.³ This information can be used in the future to direct efforts at developing interventions and messages for conveying health information to residents of all areas.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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Table 1.

Demographic Characteristics of CITIES Participants

Variable	Community Identity subset (n=921) N (%)	Rural Identity subset (n=246) N (%)	Appalachian Identity subset (n=211) N (%)
Age Category			
21–40 years	247 (26.8)	51 (20.7)	58 (27.5)
41–50 years	202 (21.9)	57 (23.2)	42 (19.9)
51–65 years	298 (32.4)	86 (35.0)	65 (30.8)
66–74 years	174 (18.9)	52 (21.1)	46 (21.8)
Gender			
Male	335 (36.4)	82 (33.3)	76 (36.0)
Female	585 (63.6)	164 (66.7)	135 (64.0)
Race			
Hispanic	105 (11.4)	3 (1.2)	1 (0.5)
Somali	64 (6.9)	--	2 (0.9)
Asian	67 (7.3)	1 (0.4)	2 (0.9)
African American	226 (24.5)	12 (4.9)	5 (2.4)
White	459 (49.8)	230 (93.5)	203 (96.2)
Marital Status			
Married/living as married	564 (62.3)	189 (76.8)	143 (67.8)
Divorced/Widowed/Separated	181 (20.0)	42 (17.1)	42 (19.9)
Single/Never married	160 (17.7)	15 (6.1)	26 (12.3)
Education			
High school or less	266 (29.3)	64 (26.0)	53 (25.1)
Tech school/some college	251 (27.6)	69 (28.0)	57 (27.0)
College grad	392 (43.1)	113 (45.9)	101 (47.9)
Total Household Income			
<35k	285 (30.9)	41 (16.7)	41 (19.4)
35–74,999k	270 (29.3)	86 (35.0)	70 (33.2)
\$75k+	278 (30.2)	108 (43.9)	89 (42.2)
Don't know/refused/skipped	88 (9.6)	11 (4.5)	11 (5.2)
Financial Security			
Living comfortably on present income	347 (39.1)	112 (45.5)	97 (46.4)
Getting by on present income	361 (40.7)	94 (38.2)	81 (38.8)
Finding it difficult/very difficult on present income	179 (20.2)	40 (16.3)	31 (14.8)
Insurance Status			
None	115 (13.1)	8 (3.3)	6 (2.8)
Private	492 (56.0)	164 (66.7)	138 (65.4)
Public	271 (30.9)	74 (30.1)	67 (31.8)

Variable	Community Identity subset (n=921) N (%)	Rural Identity subset (n=246) N (%)	Appalachian Identity subset (n=211) N (%)
Religious affiliation			
Non-Christian	220 (25.0)	48 (20.0)	43 (20.8)
Christian	659 (75.0)	192 (80.0)	164 (79.2)
Political affiliation			
Republican	196 (21.3)	92 (37.4)	80 (37.9)
Democrat	338 (36.7)	74 (30.1)	65 (30.8)
Independent/Other	218 (23.7)	64 (26.0)	57 (27.0)
Don't know/Refused/Skipped	169 (18.3)	16 (6.5)	9 (4.3)
Metropolitan			
Yes	663 (72.0)	0	108 (51.2)
No	258 (28.0)	246 (100)	103 (48.8)
Reside in an Appalachian County			
Yes	212 (23.0)	96 (39.0)	211 (100)
No	709 (77.0)	150 (61.0)	0(0)
County high school grad percent (mean, SD)	89.4 (2.7)	88.2 (3.6)	86.3 (3.4)
County percent of children living in female-headed households, no husband present (mean, SD)	26.8 (5.8)	21.6 (4.8)	23.9 (5.0)
County per capita income in last 12 mos. (mean, SD)	27424 (3991)	23928 (2873)	22304 (2069)
County percent of families in poverty (mean, SD)	12.1 (2.6)	11.3 (3.4)	14.0 (2.6)

Table 2.

Univariable and Multivariable Mixed Effects Linear Regression Models for Community Identity. Estimated Mean Difference from the Referent and 95% Confidence Limits Presented.

Variable	Univariable	Multivariable
Age Category		
21–40 years	–2.79 (–4.26, –1.31)	
41–50 years	0.17 (–1.37, 1.71)	
51–65 years	–0.49 (–1.91, 0.93)	
66–74 years	REFERENT	
<i>p-value</i>	<i><0.0001</i>	
Gender		
Male	0.33 (–0.70, 1.37)	
Female	REFERENT	
<i>p-value</i>	<i>0.52</i>	
Race		
Hispanic	–1.30 (–2.89, 0.30)	
Somali	2.41 (0.44, 4.38)	
Asian	–3.18 (–5.11, –1.26)	
African American	–2.81 (–4.01, –1.61)	
White	REFERENT	
<i>p-value</i>	<i><0.0001</i>	
Marital Status		
Married/living as married	3.44 (2.11, 4.76)	3.36 (1.94, 4.78)
Divorced/Widowed/Separated	2.61 (1.00, 4.22)	2.59 (0.93, 4.26)
Single/Never married	REFERENT	REFERENT
<i>p-value</i>	<i><0.0001</i>	<i><0.0001</i>
Education		
High school or less	2.19 (1.01, 3.38)	2.37 (1.10, 3.63)
Tech school/some college	1.04 (–0.17, 2.24)	1.73 (0.50, 2.96)
College grad	REFERENT	REFERENT
<i>p-value</i>	<i>0.0014</i>	<i>0.0005</i>
Total Household Income		
<35k	–1.44 (–2.70, –0.17)	
35–74,999k	–1.19 (–2.47, 0.09)	
\$75k+	REFERENT	
Don't know/refused/skipped	–2.30 (–4.13, –0.46)	
<i>p-value</i>	<i>0.039</i>	
Financial Security		
Living comfortably on present income	3.00 (1.62, 4.38)	2.63 (1.18, 4.07)

Variable	Univariable	Multivariable
Getting by on present income	0.76 (−0.61, 2.13)	0.69 (−0.69, 2.07)
Finding it difficult/very difficult on present income	REFERENT	REFERENT
<i>p-value</i>	<0.0001	0.0003
Insurance Status		
None	−0.91 (−2.60, 0.78)	
Private	−0.67 (−1.82, 0.48)	
Public	REFERENT	
<i>p-value</i>	0.43	
Religious affiliation		
None	1.65 (−1.35, 4.64)	−0.15 (−3.10, 2.80)
Christian	2.68 (−0.08, 5.43)	1.40 (−1.29, 4.10)
Muslim	6.15 (2.83, 9.48)	5.83 (2.43, 9.23)
Other	REFERENT	REFERENT
<i>p-value</i>	0.0004	<0.0001
Political affiliation		
Don't know/refused/skipped	−1.60 (−3.13, −0.07)	
Republican	1.48 (0.01, 2.95)	
Democrat	−0.93 (−2.22, 0.37)	
Independent/Other	REFERENT	
<i>p-value</i>	0.0004	
Metropolitan		
Yes	REFERENT	
No	0.32 (−1.17, 1.81)	
<i>p-value</i>	0.67	
Reside in an Appalachian County		
Yes	REFERENT	REFERENT
No	−2.44 (−3.91, −0.97)	−2.46 (−3.86, −1.06)
<i>p-value</i>	0.0018	0.0009
County high school grad percent (5 percent increase)	−0.96 (−2.04, 0.11)	
<i>p-value</i>	0.077	
County percent of children living in female-headed households, no husband present (5 percent increase)	−0.44 (−0.99, 0.11)	
<i>p-value</i>	0.11	
County per capita income in last 12 mos. (\$5000 increase)	−0.72 (−1.58, 0.14)	
<i>p-value</i>	0.098	
County percent of families in poverty (5 percent increase)	−0.04 (−1.13, 1.05)	
<i>p-value</i>	0.94	

*
n=840 complete cases

Table 3.

Univariable and Multivariable Mixed Effects Linear Regression Models for Rural Identity. Estimated Mean Difference from the Referent and 95% Confidence Limits Presented.

Variable	Univariable	Multivariable
Age Category		
21–40 years	–0.66 (–3.71, 2.38)	
41–50 years	1.85 (–1.12, 4.81)	
51–65 years	–0.59 (–3.30, 2.13)	
66–74 years	REFERENT	
<i>p-value</i>	<i>0.27</i>	
Gender		
Male	–0.42 (–2.52, 1.68)	
Female	REFERENT	
<i>p-value</i>	<i>0.69</i>	
Race		
White	REFERENT	
Non-White	–1.37 (–5.38, 2.64)	
<i>p-value</i>	<i>0.50</i>	
Marital Status		
Married/living as married	4.08 (–0.06, 8.22)	
Divorced/Widowed/Separated	3.60 (–1.04, 8.25)	
Single/Never married	REFERENT	
<i>p-value</i>	<i>0.15</i>	
Education		
High school or less	1.12 (–1.31, 3.54)	
Tech school/some college	1.17 (–1.20, 3.54)	
College grad	REFERENT	
<i>p-value</i>	<i>0.53</i>	
Total Household Income		
<35k	–1.62 (–4.47, 1.22)	
35–74,999k	0.58 (–1.66, 2.82)	
\$75k+	REFERENT	
Don't know/refused/skipped	–0.40 (–5.31, 4.51)	
<i>p-value</i>	<i>0.53</i>	
Financial Security		
Living comfortably on present income	1.32 (–1.54, 4.18)	
Getting by on present income	0.05 (–2.88, 2.98)	
Finding it difficult/very difficult on present income	REFERENT	
<i>p-value</i>	<i>0.44</i>	

Variable	Univariable	Multivariable
Insurance Status		
None	-0.74 (-6.48, 5.01)	
Private	1.89 (-0.28, 4.05)	
Public	REFERENT	
<i>p-value</i>	<i>0.18</i>	
Religious affiliation		
None-Christian	-3.49 (-5.97, -1.02)	-3.00 (-5.47, -0.53)
Christian	REFERENT	REFERENT
<i>p-value</i>	<i>0.006</i>	<i>0.018</i>
Political affiliation		
Don't know/refused/skipped	-1.88 (-6.11, 2.36)	-1.70 (-6.20, 2.81)
Republican	0.74 (-1.72, 3.21)	0.36 (-2.12, 2.84)
Democrat	-3.53 (-6.12, -0.94)	-3.05 (-5.64, -0.45)
Independent/Other	REFERENT	REFERENT
<i>p-value</i>	<i>0.004</i>	<i>0.027</i>
Reside in an Appalachian County		
Yes	REFERENT	
No	-0.91 (-3.36, 1.54)	
<i>p-value</i>	<i>0.46</i>	
County high school grad percent (5 percent increase)	-1.01 (-2.51, 0.48)	
<i>p-value</i>	<i>0.18</i>	
County percent of children living in female-headed households, no husband present (5 percent increase)	-1.80 (-2.88, -0.72)	-1.58 (-2.59, -0.58)
<i>p-value</i>	<i>0.0016</i>	<i>0.002</i>
County per capita income in last 12 mos. (\$5000 increase)	-1.12 (-3.25, 1.02)	
<i>p-value</i>	<i>0.30</i>	
County percent of families in poverty (5 percent increase)	-0.03 (-1.76, 1.71)	
<i>p-value</i>	<i>0.97</i>	

*
n=240 complete cases

Table 4.

Univariable and Multivariable Logistic Regression Models for Appalachian Identity. Odds Ratios and 95% Confidence Limits Presented.

Variable	Univariable	Multivariable
Age Category		
21–40 years	1.88 (0.85, 4.13)	
14–50 years	1.72 (0.74, 4.02)	
51–65 years	1.56 (0.72, 3.36)	
66–74 years	REFERENT	
<i>p-value</i>	<i>0.43</i>	
Gender		
Male	1.61 (0.91, 2.85)	2.06 (1.00, 4.25)
Female	REFERENT	REFERENT
<i>p-value</i>	<i>0.10</i>	<i>0.05</i>
Marital Status		
Married/living as married	2.00 (0.85, 4.68)	
Divorced/Widowed/Separated	0.61 (0.22, 1.70)	
Single/Never married	REFERENT	
<i>p-value</i>	<i>0.005</i>	
Education		
High school or less	0.70 (0.36, 1.38)	0.53 (0.22, 1.26)
Tech school/some college	0.31 (0.16, 0.62)	0.37 (0.15, 0.89)
College grad	REFERENT	REFERENT
<i>p-value</i>	<i>0.005</i>	<i>0.07</i>
Total Household Income		
<35k	0.36 (0.17, 0.77)	
35–74,999k	0.62 (0.33, 1.17)	
\$75k+	REFERENT	
Don't know/refused/skipped	0.35 (0.10, 1.31)	
<i>p-value</i>	<i>0.043</i>	
Financial Security		
Living comfortably on present income	1.00 (0.44, 2.25)	
Getting by on present income	1.06 (0.46, 2.44)	
Finding it difficult/very difficult on present income	1.0	
<i>p-value</i>	<i>0.98</i>	
Insurance Status		
None	1.48 (0.28, 7.97)	
Private	1.98 (1.09, 3.60)	
Public	REFERENT	

Variable	Univariable	Multivariable
<i>p-value</i>	<i>0.079</i>	
Religious affiliation		
Non-Christian	1.12 (0.57, 2.21)	
Christian	REFERENT	
<i>p-value</i>	<i>0.74</i>	
Political affiliation		
Don't know/refused/skipped	0.83 (0.20, 3.43)	
Republican	1.40 (0.71, 2.78)	
Democrat	0.94 (0.46, 1.93)	
Independent/Other	REFERENT	
<i>p-value</i>	<i>0.61</i>	
Metropolitan		
Yes	REFERENT	REFERENT
No	4.84 (1.17, 20.03)	3.74 (0.79, 17.61)
<i>p-value</i>	<i>0.031</i>	<i>0.09</i>
County high school grad percent (5 percent increase)	0.74 (0.37, 1.50)	
<i>p-value</i>	<i>0.40</i>	
County percent of children living in female-headed households, no husband present (5 percent increase)	0.69 (0.36, 1.33)	
<i>p-value</i>	<i>0.26</i>	
County per capita income in last 12 mos. (\$5000 increase)	0.12 (0.02, 0.58)	
<i>p-value</i>	<i>0.010</i>	
County percent of families in poverty (5 percent increase)	4.44 (1.37, 14.37)	3.42 (0.95, 12.29)
<i>p-value</i>	<i>0.015</i>	<i>0.06</i>

*
n=211 complete cases