



Appalachian Misconceptions about the Relationships Between Health and Health Behaviors



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Background

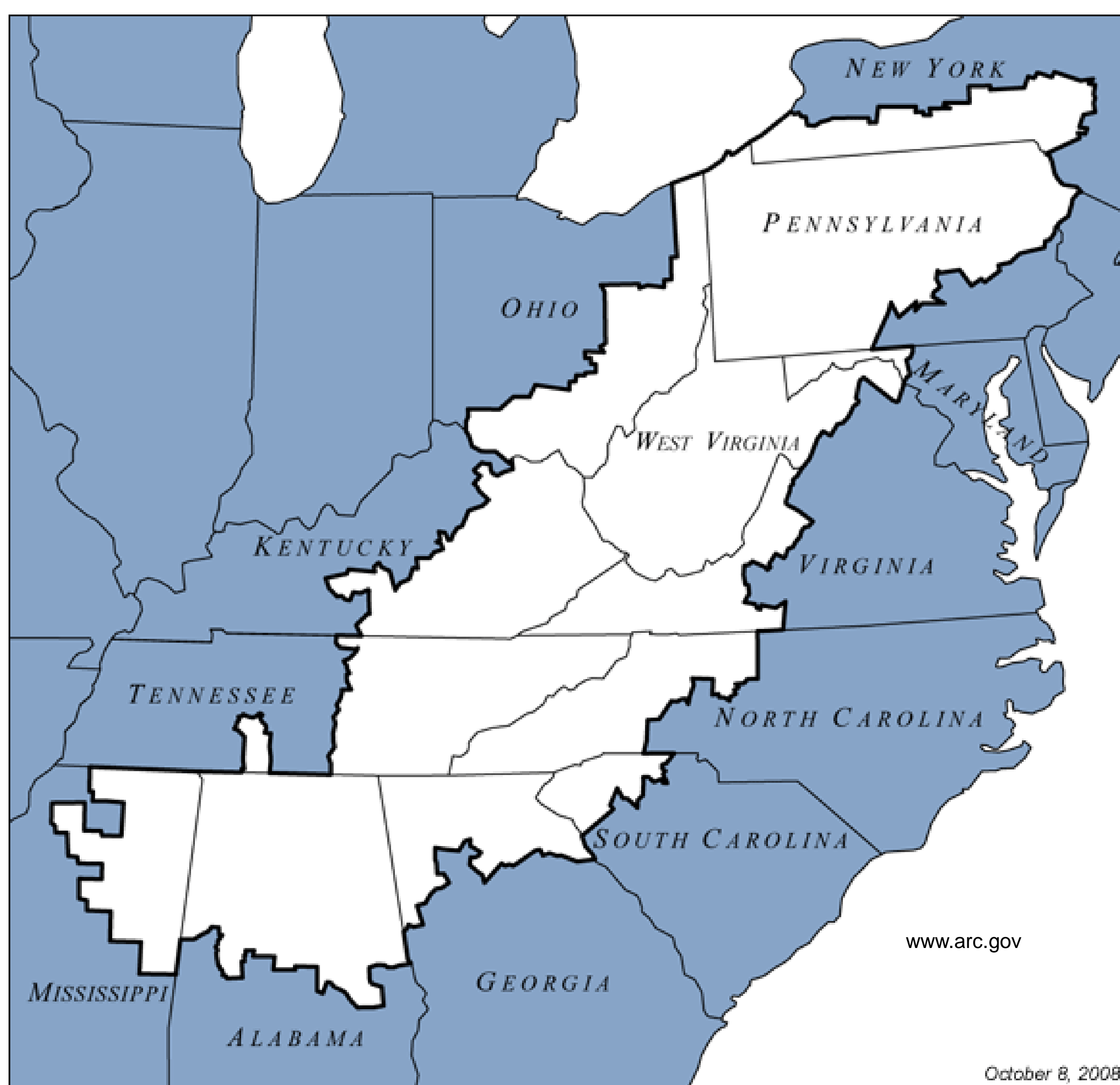
The region known as Appalachia is characterized as one of the unhealthiest regions in the United States, and ranks among the worst in overall health and health behaviors such as diet and physical inactivity.

Previous studies have shown that the self-perception of Appalachian adult's health is incongruent with their actual health status. Since the perception of one's health is crucial to behavioral change, the purpose of this project was to evaluate if the way Appalachian adults perceived their own health reflected their participation in disease preventative measures. In order to better understand this relationship and the health needs of these individuals, rural Appalachian adults were surveyed about their health and their disease prevention behaviors.

TABLE 1: Self-reported Health Status

RURAL APPALACHIANS	
Low Health Rating: n=115 (26%)	High Health Rating: n=316 (74%)
Low Weight Rating: n=125 (29%)	High Weight Rating: n=301 (71%)
Unhealthy Body Weight: n=236 (56%)	Healthy Body Weight: n=191 (44%)
High BP: n=162 (37%)	Healthy BP: n=264 (63%)

IMAGE 1: The Appalachian Region



Methods

Rural Appalachian adults (n = 437) were surveyed regarding their self-perceived health status and their disease prevention behaviors. The definition of disease prevention behaviors was determined to be activities or habits that have been either shown as preventive against certain diseases or have been shown to be consistent with a healthy lifestyle.

Healthy ratings for disease prevention behaviors include: moderate physical activity (≥ 91 minutes per week), vigorous physical activity (≥ 46 minutes per week), frequency of sugared drink consumption (≤ 1 sugared drink per day), frequency of smoking (non-smoker), frequency of alcohol consumption (≤ 1 drink per day), blood pressure ($\leq 120/80$), and frequency of fast food consumption (≤ 1 time per week).

The participants were divided into groups based on self-reported level of overall health (healthy = self health rating ≥ 5 on a 0-10 scale), body weight (healthy = BMI ≤ 25), and blood pressure (healthy = BP $\leq 120/80$). Jaccard Binary Dichotomy Coefficients and Russel and Rao Dichotomy Coefficients were used to determine the association between health perceptions and disease prevention behaviors. The t-test was used to determine group differences in the number of disease prevention behaviors for participants with healthy versus unhealthy self-perceptions.

Results

TABLE 2: S3 (Jaccard) Binary Dichotomy Coefficients

	HEALTHY PERCEPTION
HEALTHY PERCEPTION	1
HEALTHY BODY WEIGHT PERCEPTION	0.555
PREVENTION VIA SUGAR DRINKS	0.552
PREVENTION VIA VIGOROUS PHYSICAL ACTIVITY	0.256
PREVENTION VIA MODERATE PHYSICAL ACTIVITY	0.321
PREVENTION VIA NOT SMOKING	0.704
PREVENTION VIA APPROPRIATE ALCOHOL CONSUMPTION	0.742
PERCEPTION OF HIGH BLOOD PRESSURE	0.270
PREVENTION VIA FAST FOOD CONSUMPTION	0.481

- There was a strong correlation between those individuals who self reported as being healthy and having a healthy self-reported weight, a healthy sugared drink consumption, not smoking, a healthy alcohol consumption, and a healthy frequency of fast food consumption. This suggests that these preventative behaviors could be what Appalachian adults think are required to be healthy.
- The strongest correlations were with a good health perception and not smoking, and a good health perception and having a healthy alcohol consumption. Also a noteworthy finding was a very high correlation between these two variables ($r=0.87$), signifying that those who did not smoke also did not consume unhealthy amounts of alcohol.
- The worst correlations were seen between health perception and physical activity along with health perception and high blood pressure. This suggests that physical activity and high blood pressure are least associated with having a perception of being in good health.
- An S2 (Russell and Rao) Dichotomy Coefficient analysis produced similar findings as the Jaccard Binary Dichotomy Coefficients (data not shown).

Results Continued

TABLE 3: Number of Preventative Measures for Each Group

AVERAGE PREVENTIVE MEASURES (6 possible, mean \pm SD)		
Good Health Perception: 2.841 \pm 1.123	Poor Health Perception: 2.192 \pm 1.079	P=0.000
Healthy Wt Perception: 2.619 \pm 1.123	Unhealthy Wt Perception: 2.803 \pm 1.211	P=0.143
Yes Healthy BW: 2.889 \pm 1.156	No Healthy BW: 2.514 \pm 1.111	P=0.001
No Think High BP: 2.803 \pm 1.181	Yes Think High BP: 2.445 \pm 1.046	P=0.002

- Individuals that had a good health perception were more likely to participate in healthy preventative measure than individuals with a poor health perception.
- There was no statistically significant relationship between a healthy weight perception and average disease prevention measures taken.
- Individuals who answered yes to having a healthy body weight were more likely to participate in a higher average number of preventative measures than individuals who answered no to this question.
- Respondents who answered no to having high blood pressure were more likely to participate in a higher average number of preventative measures than those who answered yes to this question.

Conclusions

Although it has been shown that a disparity exists between Rural Appalachians' perceived health and their actual health, this study demonstrates an excellent correlation between their perceived health and certain disease prevention behaviors. Disease prevention behaviors such as smoking and drinking habits are regarded by Appalachians as very important for one's health while other preventive behaviors are less important.

- The idea that Appalachians are indifferent about their health is untrue.
- Appalachians do not understand how certain disease prevention behaviors relate to their health and well-being.
- Appalachians need more understanding of what it truly takes to be healthy.

Acknowledgments

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