



# Relationships Between Perceived Health and Objective Health Status of Rural Appalachian Adults

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## Background

An underlying theme in most of the major behavior change models is that a person needs to have a realistic perception of the behavioral issue (in this case health behavior) in order to initiate a successful behavioral change (1). If people perceive themselves to be healthy or do not perceive their behaviors to be a health risk, then interventions targeting health behavior change for these people are going to be ineffective. On the other hand, if people perceive themselves as being unhealthy, or perceive their behaviors to be a health risk, then health behavior interventions are more likely to be successful for them. A recent study of 1,576 Appalachian adults revealed that their perception of their own health status was incongruent with objective measures of their health and their current health behaviors (2). Between 57% and 66% of the respondents who considered themselves healthy were characterized by at least two disease conditions or poor health behaviors (Table 1). The purpose of this study was to see if perceptions of health, health status, and health behaviors have improved in rural Appalachia over the past several years.

Table 1: Health Status & Health Perceptions of Rural Appalachians, 2007

Symptom or Behavior															
Healthy Self-rating	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sedentary	X									X				X	X
Fast Food Consumer		X								X				X	X
Soda Drinker			X							X				X	X
Smoker				X											
Hypertensive					X					X	X	X			X
B P Medication						X				X	X	X			X
Obese							X				X	X	X	X	
Overweight or Obese								X							
High Cholesterol									X			X			
% of Respondents	65	72	67	65	64	65	58	66	79	66	65	57	63	64	65

## Methods

- Self-rated health status, objective health status, and health behaviors were evaluated in Appalachian adults to determine if ratings of perceived health were consistent with objective health status and health behaviors.
- 623 Appalachian adults completed a 40-item survey.
- A classification of normal weight (NW), overweight (OW), and obese (OB) were assigned based on BMI stratification (NW  $\geq 18.5$  and  $< 25.0$ , OW  $\geq 25.0$  and  $< 30.0$ , OB  $\geq 30.0$ ).
- Blood pressure was measured manually, through auscultation.
- Dietary and physical activity behaviors were measured by self report.
- Ratings of personal health, healthy weight status, and access to recreation or physical activity were scored on a scale of 0-100.

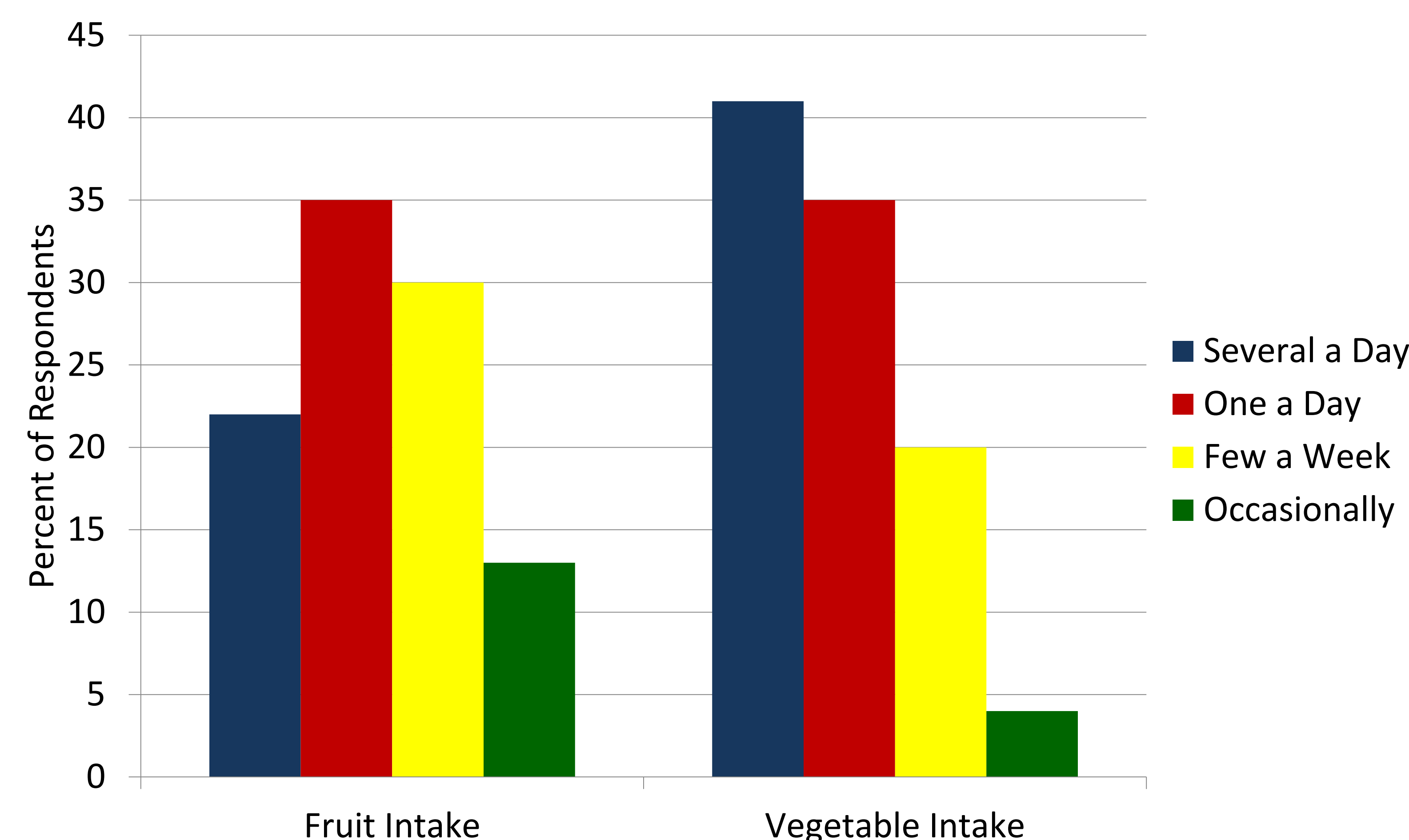
## Results

Table 2: Participant Demographics

Demographic	Men (n=275)	Women (n=341)	All (n=616)
Age	56 $\pm$ 1	54 $\pm$ 1	55 $\pm$ 1
Height (cm)	177 $\pm$ 1	163 $\pm$ 1	169 $\pm$ 1
Weight (kg)	93.5 $\pm$ 1.1	76.7 $\pm$ 1.0	84.3 $\pm$ 0.8
BMI	29.8 $\pm$ 0.4	29.0 $\pm$ 0.4	29.4 $\pm$ 0.3
Characteristic, Rating, or Behavior			
Health Rating	65 $\pm$ 1	65 $\pm$ 1	65 $\pm$ 1
Recreation Rating	78 $\pm$ 1	77 $\pm$ 1	77 $\pm$ 1
Healthy Weight	51%	41%	45%
Sedentary	15%	24%	21%
Obese	40%	36%	38%
Overweight	80%	67%	74%

There was only a weak correlation between ratings of health and ratings of weight ( $r = 0.25$ ) and between ratings of health and access to physical activity and recreation ( $r = 0.28$ ).

Figure 1: Frequency of Fruit and Vegetable Intake



## Results (continued)

Figure 2: Frequency of Moderate Physical Activity

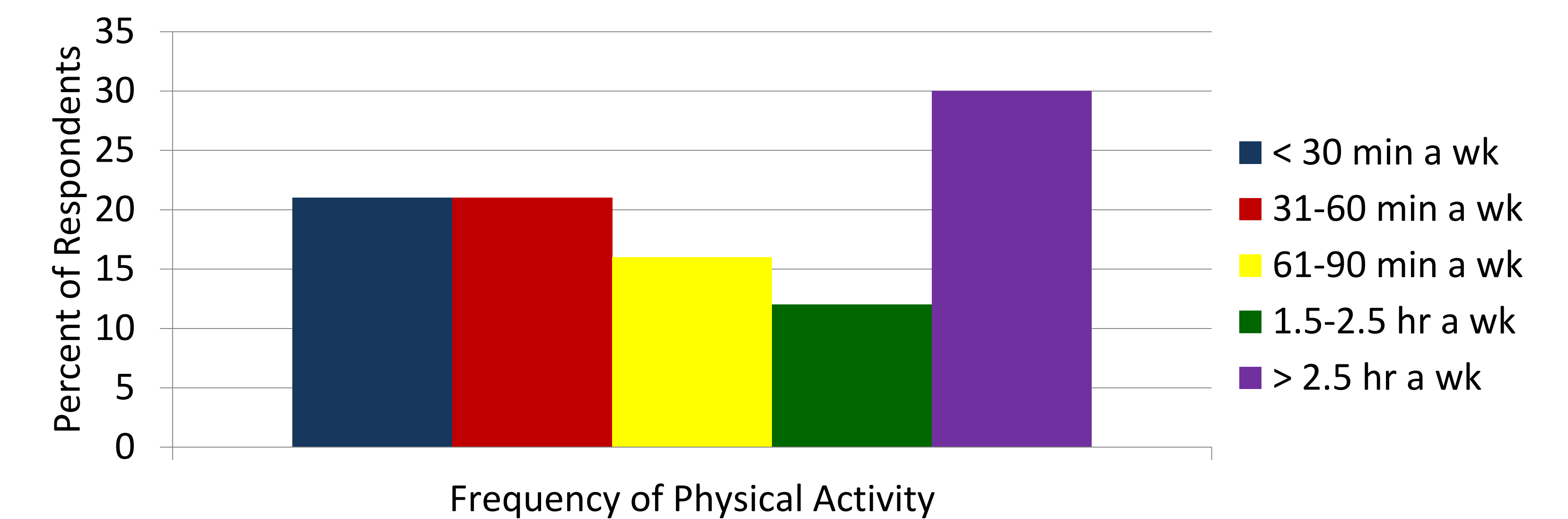


Table 3: Health Status & Health Perceptions of Rural Appalachians, 2011

Symptom or Behavior															
Healthy Self-rating	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sedentary	X									X				X	X
Fast Food Consumer		X								X				X	X
Soda Drinker			X							X				X	X
Smoker				X											
Hypertensive					X						X	X	X		X
B P Medication						X					X	X	X		X
Obese							X					X	X	X	X
Overweight or Obese								X							
High Cholesterol									X				X		
% of Respondents	56	69	66	63	84	64	66	69	67	99	92	94	94	42	55

## Conclusions

The association between self-rated health and poor health indicators in Appalachian adults remains distorted. The public health challenge is to formulate messages and programs about health and health needs which take into account the current distortion about health in Appalachia and the cultural context in which this distortion was shaped.

## References

- Baronowski T, Cullen KW, Nicklas T, Thompson D, Baronowski J. Are current health behavioral change models helpful in guiding prevention of weight gain efforts? *Obesity Res* 2003, 11 Suppl: 23S-43S.
- Griffith BN, Lovett GD, Pyle DN II, Miller WC. Self-rated health in rural Appalachia: health perceptions are incongruent with health status and health behaviors. *BMC Public Health* 2011;11:229.