

How to score PANES

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We recommend using the following two approaches to scoring PANES:

1. Dichotomize the items and create a summary activity-friendly score, as done in the 11-country study (Sallis et al., 2009).

a. Dichotomize item 1 as 0 = single family housing and 1 = all other responses (excluding don't know).

b. Dichotomize items 2 through 7 as 0 = strongly or somewhat disagree and 1 = strongly or somewhat agree. You can use the individual items for some analyses.

c. Sum the dichotomized items 1 through 6 to create a score that ranges from 0 to 6, with higher number indicating greater environmental support for physical activity. Note that item 7 (fear of crime) is not included because the goal was to create a built environment index.

- Sallis JF, Bowles HR, Bauman A, et al. Neighborhood environment attributes related to walking and physical activity among adults in 11 countries. *Am J Prev Med.* 2009;36(6):484-490.

2. With the full scale, you can create a more extensive summary score for activity-friendliness.

a. Group responses 4 and 5 for item 1.

b. Reverse score items 1, 7, 8, 15 and 16.

c. Take a mean of items 1 through 17 (excluding item 11). This new overall PANES score should have a range of 1 to 4, with higher values indicating greater environmental support for physical activity. PANES subscales can also be created using the item grouping approach outlined below and in Sallis et al. 2010.

-Sallis JF, Kerr J, Carlson JA, et al. Evaluating a brief self-report measure of neighborhood environments for physical activity research and surveillance: Physical Activity Neighborhood Environment Scale (PANES). *J Physical Activity & Health.* 2010;7:533-540.

-This paper presents reliability and validity information for the PANES.

-This paper also categorizes the items into different constructs in case researchers want to look at the constructs separately.

Residential Density: item 1 (typically dichotomized as single family = 0 and all other = 1)

Land Use Mix: items 2 and 17

Transit Access: item 3

Pedestrian Infrastructure: items 4 and 13

Bicycling Infrastructure: items 5 and 14

Recreation Facilities: item 6

Street Connectivity: item 12

Crime Safety: items 7rev and 16rev

Traffic Safety: items 8rev and 15rev

Pedestrian Safety: item 9

Aesthetics: item 10

Item 11 (vehicles in household) is often used as a covariate in analyses