Scoring procedures and preliminary psychometrics for the
Neighborhood Environment Walkability Scale (NEWS)

Updated: October 18, 2002

Preliminary psychometrics for scale reported in *Saelens BE, Sallis JF, Black J, & Chen D. (2002) Measuring perceived neighborhood environment factors related to walking/cycling. Annals of Behavioral Medicine, 24, S139* and based on a pilot study (n=106) conducted within two neighborhoods in San Diego, CA. Test-retest reliability coefficients are single measure one-way random effect model intra-class correlations. As more psychometric data for NEWS become available, information will be updated.

A. <u>Residential density</u> ("Types of residences in your neighborhood")

Scoring
Response range (assigned score): None(1)   A few (2)   Some (3)   Most (4)   All (5)

Reverse coding items: None

Subscale scoring: Single-family detached + (12 * row houses/townhouses 1-3 stories) + (10 * apts/condos 1-3 stories) + (25 * apts/condos 4-6 stories) + (50 * apts/condos 7-12 stories) + (75 * apts/condos 13+ stories)

These weighting values are based on approximate density of households per unit area relative to a single-family detached residence.

Psychometrics
Subscale test-retest reliability: .63

B. <u>Land use mix-diversity</u> ("Stores, facilities, and other things in your neighborhood")

Scoring
Responses (scores): 1-5 min(5), 6-10 min(4), 11-20 min(3), 21-30 min(2), 31+ min(1), don't know (1)

Note: A don't know response is coded as a "1" because if it is not known whether the facility is within walking distance, the actual walk is likely more than 31 minutes.

Reverse coding items: None

Subscale scoring: Mean of items

Alternative scoring: For some purposes it may be useful to tally the number of stores or facilities within a 5, 10, or 20-minute walk.

Psychometrics
Subscale test-retest reliability: .78

C.   Land use mix-access ("Access to services")

Scoring
Responses (scores): Strongly disagree(1) Somewhat disagree(2) Somewhat agree(3) Strongly agree(4)

Reverse coding items: #6 ('hilly streets') and #7 ('canyons/hillsides')

Subscale scoring: Mean of items

Psychometrics
Subscale test-retest reliability: .79

D.   Street connectivity ("Streets in my neighborhood")

Scoring
Responses (scores): Strongly disagree(1) Somewhat disagree(2) Somewhat agree(3) Strongly agree(4)

Reverse coding items: None

Subscale scoring: Mean of items

Psychometrics
Subscale test-retest reliability: .63 (due to the skewed distribution of responses to the item regarding "walkways connecting cul-de-sacs to streets and trails" and corresponding low test-retest reliability of that item in this sample, that item was eliminated from subscale analyses in the pilot study)

E.   Walking/cycling facilities ("Places for walking and cycling")

Scoring
Responses (scores): Strongly disagree(1) Somewhat disagree(2) Somewhat agree(3) Strongly agree(4)

Reverse coding items: None

Subscale scoring: Mean of items

Psychometrics
Subscale test-retest reliability: .58

F.   __Aesthetics ("Neighborhood surroundings")__

Scoring
Responses (scores): Strongly disagree(1) Somewhat disagree(2) Somewhat agree(3) Strongly agree(4)

Reverse coding items: None

Subscale scoring: Mean of items

Psychometrics
Subscale test-retest reliability: .79

G.   __Pedestrian/traffic safety ("Safety from traffic")__

Scoring
Responses (scores): Strongly disagree(1) Somewhat disagree(2) Somewhat agree(3) Strongly agree(4)

Reverse coding items: #1 ('traffic on my street'), #2 ('traffic on nearby streets'), #5 ('exceed speed limits'), #8 ('exhaust fumes')

Subscale scoring: Mean of items

Psychometrics
Subscale test-retest reliability: .77

H.   __Crime safety ("Safety from crime")__

Scoring
Responses (scores): Strongly disagree(1) Somewhat disagree(2) Somewhat agree(3) Strongly agree(4)

Reverse coding items: #4 ('high crime rate'), #5 ('unsafe during day'), #6 ('unsafe at night')

Subscale scoring: Mean of items

Psychometrics
Subscale test-retest reliability: .80

I. **General neighborhood satisfaction ("Neighborhood satisfaction")**

Scoring
Responses (scores): Strongly dissatisfied(1) Somewhat dissatisfied(2)
Neither satisfied nor dissatisfied (3) Slightly satisfied(4) Strongly satisfied(5)

Reverse coding items: None

Subscale scoring: Mean of items

Psychometrics
Subscale test-retest reliability: .80   [this subscale reliability coefficient is based on the original ten items (#1-8, 16,17) of the subscale using a 7-point Likert scale; the modified response scale and final 5 items were added to the subscale after it was used in the pilot study]