

Identifying neighborhood and individual resilience profiles for cardiovascular health: a cross-sectional study of blacks living in the Atlanta metropolitan area

Supplemental Materials

Life Simple's 7 Scoring Algorithm

This algorithm displayed in Table S1 is based on the criteria provided by the AHA MyLifeCheck website (<http://tools.bigbeelabs.com/aha/tools/mlc/>). The total LS7 composite score is calculated as the sum of the scores for the seven metrics. Healthy diet includes 6 components: fruit, vegetables, fish, whole grains, sugar, and salt. The diet metric is defined by how many components that are not ideal. Table S2 shows the definition of "not ideal" for each component.

Table S1. Scoring algorithm for each metric of Life Simple's 7

LS7 Metric	Assigned value to the LS7 metric		
	Poor (0)	Intermediate (1)	Ideal (2)
Blood Pressure (mmHg)	<p>No HTN Treatment: SBP\geq140 or DBP\geq90</p> <p>With HTN Treatment: SBP\geq120 or DBP\geq80</p>	<p>No HTN Treatment: SBP between 120 and 139 or DBP between 80 and 89</p> <p>With HTN Treatment: SBP$<$120 and DBP$<$80</p>	SBP $<$ 120 and DBP $<$ 80 and without HTN treatment
Fasting Glucose (mg/dL)	<p>No DM Treatment: Glucose$>$125</p> <p>With DM Treatment: Glucose\geq100</p>	<p>No DM Treatment: Glucose between 100 and 125 mg/dL</p> <p>With DM Treatment: Glucose$<$100</p>	Glucose $<$ 100 and without DM treatment
Cholesterol (mg/dL)	Total Cholesterol \geq 240	Total Cholesterol between 200 and $<$ 240 or (with lipid treatment and Total Cholesterol $<$ 200)	Total Cholesterol $<$ 200 and without lipid treatment
Smoking	Current smoker	Quit smoking ($<$ 12 months ago)	Never or Quit smoking ($>$ 12 months ago)
BMI (kg/m ²)	\geq 30	Between 25 and $<$ 30	$<$ 25

Physical Activity	0 minutes of exercise	1-149 minutes of moderate-intensity exercise	≥150 minutes of moderate-intensity aerobic activity (or 75 minutes of vigorous activity*)
Diet**	5-6 components that are not ideal	2-4 components that are not ideal	0-1 components that are not ideal

HTN=hypertension, DM=diabetes mellitus, SBP=systolic blood pressure, DBP=diastolic blood pressure

*1 minute of vigorous exercise is equivalent to 2 minutes of moderate exercise.

**See Table S2.

Table S2. Components for scoring the diet metric in Life Simple's 7

Diet component	Not ideal if
Fruit (cups/day)	≤ 2
Vegetables (cups/day)	≤ 2
Fish (servings/week)	≤ 2
Whole Grains (servings/week)	≤ 3
Sugared Beverage (how many per week)	≥ 7
Salt	0-1 items checked*

*The salt component has three questions: (1) I avoid eating prepackaged and processed foods, (2) I rarely eat out, but when I do, I seek out lower sodium options, and (3) I avoid salt when I'm cooking at home.

Neighborhood and Psychosocial Variables

A total of 5 neighborhood perception and 6 psychosocial variables were considered in the analysis. Table S3 lists the questions related to perceptions of neighborhood characteristics assessed by the Neighborhood Health Questionnaire. All the neighborhood perception questions (except activities with neighbors) use a 5-point Likert-response format, with response categories ranging from 1 to 5 (1 = strongly agree, 2 = agree, 3 = neutral (neither agree nor disagree), 4 = disagree, and 5 = strongly disagree). Responses for the scales on activities with neighbors range from 1 to 4 (1 = often, 2 = sometimes, 3 = rarely, and 4 = never). Table S4 provides a summary of the scales used to assess the psychosocial resilience metrics. The score for each scale was estimated by taking the average across all items within the scale. Overall, items within each neighborhood dimension and individual psychosocial characteristic demonstrate good internal consistency (measured by Cronbach's alpha, α).

Table S3. Perceptions of neighborhood characteristics assessed by the Neighborhood Health Questionnaire

<p>Aesthetic quality¹ ($\alpha=0.80$)</p> <ol style="list-style-type: none"> 1. There is a lot of trash and litter on the street in my neighborhood.* 2. There is a lot of noise in my neighborhood.* 3. In my neighborhood the buildings and homes are well-maintained. 4. The buildings and houses in my neighborhood are interesting. 5. My neighborhood is attractive.
<p>Walking environment¹ ($\alpha=0.79$)</p> <ol style="list-style-type: none"> 1. My neighborhood offers many opportunities to be physically active. 2. Local sports clubs and other facilities in my neighborhood offer many opportunities to get exercise. 3. It is pleasant to walk in my neighborhood. 4. The trees in my neighborhood provide enough shade. 5. In my neighborhood it is easy to walk places. 6. I often see other people walking in my neighborhood. 7. I often see other people exercising (for example, jogging, bicycling, playing sports) in my neighborhood. 8. There are stores within walking distance of my home.
<p>Safety¹ ($\alpha=0.80$)</p> <ol style="list-style-type: none"> 1. I feel safe walking in my neighborhood, day or night. 2. Violence is not a problem in my neighborhood. 3. My neighborhood is safe from crime.
<p>Social cohesion² ($\alpha=0.88$)</p> <ol style="list-style-type: none"> 1. People around here are willing to help their neighbors. 2. People in my neighborhood generally get along with each other. 3. People in my neighborhood can be trusted. 4. People in my neighborhood share the same values.
<p>Activities with neighbors³ ($\alpha=0.80$)</p> <ol style="list-style-type: none"> 1. About how often do you and people in your neighborhood do favors for each other? By favors, we mean such things as watching each other's children, helping with shopping, lending garden or house tools, and other small acts of kindness. 2. When a neighbor is not at home or on vacation, how often do you and other neighbors watch over their property? 3. How often do you and other people in the neighborhood ask each other for advice about personal things such as child-rearing or job openings? 4. How often do you and people in your neighborhood have parties or other get togethers where other people in the neighborhood are invited? 5. How often do you and other people in your neighborhood visit in each other's homes or speak with each other on the street?

*Reverse coding was applied to standardize the direction of all items.

Table S4. Survey instruments used to assess individual-level psychosocial resilience

	Assessed with...	Number of items	Score range (each item)	α (internal consistency)
Everyday discrimination ^{3,4,5}	Everyday Discrimination Scale (EDS)	10	1-4	0.88
Environmental mastery ⁶	(Validated) Subscale of Ryff's Psychological Well-Being Scale	14	1-6	0.82
Purpose in life ⁶	(Validated) Subscale of Ryff's Psychological Well-Being scale	14	1-6	0.80
Optimism ⁷	Life Orientation Test Revised (LOT-R)	6	1-5	0.63
Resilient coping ⁸	Connor Davidson Resilience Scale (CD-RISC)	10	0-4	0.92
Depression ^{9,10}	Beck Depression Inventory (BDI)	21	0-3	0.89

References:

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