

DOCUMENTATION

for

Psychosocial Constructs

and

Composite Variables

in

MIDUS 3

Biomarker Project

University of Wisconsin ♦ Institute on Aging

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INTRODUCTION

This document is intended as a basic reference for psychosocial constructs and other composite variables in the MIDUS 3 Biomarker (Project 4) data. The document provides comprehensive information regarding construction and usage of these variables.

For each construct (scales) or composite variable, items used to create the scale, coding, and methods of scale construction are described. Also described is how missing data are dealt with for each scale. In addition, information regarding psychometric properties, source articles, published studies that use the scale, and other important notes are also included.

The variable name of a scale is presented in brackets with uppercase letters (e.g., [C4QPS_PS] for perceived stress). Scale name and description is followed by individual items and by the description of how the scale score is constructed. Unless otherwise noted, psychosocial constructs are created as described in the source article and the mean value of completed items was imputed for an item with a missing value. When more than one item is missing, the scale is not calculated for the case, and is coded as 'missing.' If a scale score is not created due to missing data it is coded as "98" for "NOT CALCULATED (Due to missing data)." If a scale score is not created because the items did not apply to the respondent (e.g. not married or not working) it is coded as "99" for NOT CALCULATED (Due to INAPP data)".

Cronbach's alpha reliability coefficient is reported for most scales. Alpha reliability coefficients are reported for four different samples: The total sample, Main RDD sample, Twin sample, and African American samples. Along with alpha, mean and standard deviation of the scale score are reported for each sample.

"Sources" refer to articles, or other published studies that originally discussed the scale. There are a few scales for which sources could not be identified. Additional information regarding the scales has been added in the "Notes" sections, as appropriate.

This document will be periodically revised and updated as more information is gathered and as researchers continue to work with the MIDUS 3 Biomarker data. If there are suggestions or comments, please submit a message through the MIDUS HelpDesk (<http://midus.wisc.edu/helpdesk.php>).

Moreover, if additional scales are constructed using these data, please contact us, so the work can be shared.

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PITTSBURGH SLEEP QUALITY (PSQ)

Note1: The PSQ measures 7 components of sleep. These are constructed using the 19 self-rated items. Some of the items comprising these components have different response formats, thus, coding and scaling information is provided separately for each component.

Note2: At MIDUS 3, PSQ is part of the **Self-Administered Questionnaire**.

Sleep Components/Items:

Subjective Sleep Quality [C4SSQ_S1]:

Item: Self-Administered Questionnaire, Sleep Habit, Question 5.

During the past month, how would you rate your sleep quality overall?

Coding: 1 Very good; 2 Fairly good; 3 Fairly bad; 4 Very bad

Scaling: This sleep component is constructed by re-coding responses to Q5 such that 1=0, 2=1, 3=2, 4=3.

Sleep Latency [C4SSQ_S2]:

Items: Self-Administered Questionnaire, Sleep Habit, Question 2 and 9a.

Q2. During the past month, how long (in minutes has it taken you to fall asleep at night?.

Q9a. During the past month, how often have you had trouble sleeping because you could not get to sleep within 30 minutes?

Coding: Responses to Q2 are reported in minutes. Q9a is coded as follows: 1 Not during the past month; 2 Less than once a week; 3 Once or twice a week; 4 Three or more times per week.

Scaling: This sleep component is constructed by converting minutes reported in Q2 to the following categories: 0 \leq 15 minutes; 1 16-30 minutes; 2 31-60 minutes; 4 > 60 minutes. Responses to Q9a are recoded such that: 1=0, 2=1, 3=2, 4=3. These categorical values are then summed and assigned to the following categories: 0 0; 1 1-2; 2 3-4; 3 5-6.

Sleep Duration [C4SSQ_S3]:

Item: Self-Administered Questionnaire, Sleep Habit, Question 4.

Q4. During the past month, how many hours of actual sleep did you get at night (This may be different than the number of hours you spend in bed).

Coding: Responses to Q4 are reported in hours.

Scaling: This sleep component is constructed by converting hours reported in Q4 to the following categories: 0 > 7 hours; 1 6-7 hours; 2 5-6 hours; 4 < 5 hours.

Habitual Sleep Efficiency [C4SSQ_S4]:

Items: Self-Administered Questionnaire, Sleep Habit, Question 1, 3, and 4.

Q1. During the past month, when have you usually gone to bed at night?

Q3. During the past month, when have you usually gotten up in the morning?

Q4. During the past month, how many hours of actual sleep did you get at night (This may be different than the number of hours you spend in bed).

Coding: Responses to Q1 and 3 are reported as time of day. Responses to Q4 are reported in hours.

Scaling: This sleep component is constructed using the following algorithm: $\left\{ \frac{Q4}{(Q1-Q3)} \right\} \times 100$. The percentages are then converted to categories as follows: 0 > 85%; 1 75-84%; 2 65-74%; 3 < 65%; 4 > 100%. Percentages above 100% are possible due to inconsistencies between the time to bed, time to rise, and the number of hours of actual sleep reported by some participants.

Sleep Disturbance [C4SSQ_S5]:

Items: Self-Administered Questionnaire, Sleep Habit, Question 9b-j.

During the past month, how often have you had trouble sleeping because you...

- b. Woke up in the middle of the night or early in the morning.
- c. Had to get up to use the bathroom.
- d. Could not breathe comfortably.
- e. Coughed and snored.
- f. Felt too cold.

- g. Felt too hot.
- h. Had bad dreams.
- i. Had pain.
- j. Other reason(s).

Coding: 1 Not during the past month; 2 Less than once a week; 3 Once or twice a week; 4 Three or more times per week.

Scaling: This sleep component is constructed by recoding responses to 9b-j, as follows: 1=0, 2=1, 3=2, 4=3. These items were summed for all cases with no missing data on these items. Mean substitution was used to create a score for cases with only one missing value. The scores were then converted to the following categories: 0 0; 1 1-9; 2 10-18; 3 19-27.

Use of Sleeping Medication [C4SSQ_S6]:

Item: Self-Administered Questionnaire, Sleep Habit, Question 7.

During the past month, how often have you taken medicine (prescribed or “over the counter”) to help you sleep?

Coding: 1 Not During the Past Month; 2 Less than once a week; 3 Once or twice a week; 4 Three or more times a week.

Scaling: This sleep component is constructed by re-coding responses to Q7 such that 1=0, 2=1, 3=2, 4=3.

Daytime Dysfunction [C4SSQ_S7]:

Items: Self-Administered Questionnaire, Sleep Habit, Question 6, 8.

Q6. During the past month, how much of a problem has it been for you to keep up enough enthusiasm to get things done?

Q8. During the past month, how often have you had trouble staying awake while driving, eating meals, or engaging in social activity?

Coding: Responses to Q6 are coded as follows: 1 No problem at all; 2 Only a very slight problem; 3 Somewhat of a problem; 4 A very big problem. Responses to Q8 are coded as

follows: 1 Not During the Past Month; 2 Less than once a week; 3 Once or twice a week; 4 Three or more times a week.

Scaling: This sleep component is constructed by re-coding responses to Q6 & 8 such that 1=0, 2=1, 3=2, 4=3. These responses are then summed and converted to the following categories: 0 0; 1 1-2; 2 3-4; 3 5-6.

Global Sleep Scale [C4SSQ_GS]:

Items: - Sleep Components S1-S7 as described above.

Coding: Each sleep component is a 4 category item with values ranging from 0-3. The category descriptions vary across the components as described above.

Scaling: The Global Sleep score is constructed by summing the 7 sleep components for each case with complete data. Global Sleep scores are not computed for cases with a Habitual Sleep Efficiency greater than 100%.

Psychometrics:

SUBJECTIVE SLEEP QUALITY (Sleep Component 1)

Sample (N)	Alpha	Mean	Std. dev
M3 Total Sample (747)	-----	1.02	.635
M3 Main RDD Sample (360)	-----	0.99	.623705
M3 Twin Sample (284)	-----	0.99	.621
M3 African American Sample (103)	-----	1.24	.677

SLEEP LATENCY (Sleep Component 2)

Sample (N)	Alpha	Mean	Std. dev
M3 Total Sample (747)	-----	1.01	.907
M3 Main RDD Sample (360)	-----	0.94	.904
M3 Twin Sample (284)	-----	1.01	.913
M3 African American Sample (103)	-----	1.29	.851

SLEEP DURATION (Sleep Component 3)

Sample (N)	Alpha	Mean	Std. dev
M3 Total Sample (747)	-----	0.80	.808
M3 Main RDD Sample (360)	-----	0.75	.763
M3 Twin Sample (284)	-----	0.67	.724
M3 African American Sample (103)	-----	1.33	.964

HABITUAL SLEEP EFFICIENCY (Sleep Component 4)

Sample (N)	Alpha	Mean	Std. dev
M3 Total Sample (747)	-----	0.81	1.180
M3 Main RDD Sample (360)	-----	0.78	1.159
M3 Twin Sample (284)	-----	0.59	.967
M3 African American Sample (103)	-----	1.54	1.480

SLEEP DISTURBANCE (Sleep Component 5)

Sample (N)	Alpha	Mean	Std. dev
M3 Total Sample (747)	.663	1.29	.561
M3 Main RDD Sample (360)	.583	1.24	.521
M3 Twin Sample (284)	.638	1.28	.524
M3 African American Sample (103)	.808	1.46	.740

USE OF SLEEPING MEDICATION (Sleep Component 6)

Sample (N)	Alpha	Mean	Std. dev
M3 Total Sample (747)	-----	0.70	1.164
M3 Main RDD Sample (360)	-----	0.67	1.143
M3 Twin Sample (284)	-----	0.75	1.205
M3 African American Sample (103)	-----	0.70	1.128

DAYTIME DYSFUNCTION (Sleep Component 7)

Sample (N)	Alpha	Mean	Std. dev
M3 Total Sample (747)	-----	0.83	.637
M3 Main RDD Sample (360)	-----	0.84	.590
M3 Twin Sample (284)	-----	0.78	.635
M3 African American Sample (103)	-----	0.94	.777

GLOBAL SLEEP SCORE

Sample (N)	Alpha	Mean	Std. dev
M3 Total Sample (747)	-----	6.30	3.485
M3 Main RDD Sample (360)	-----	6.04	3.286
M3 Twin Sample (284)	-----	6.06	3.482
M3 African American Sample (103)	-----	8.13	3.751

Source(s):

Buysse, Daniel J., Reynolds, Charles F., Monk, Timothy H., Berman, Susan R., and Kupfer, David J. 1988. "The Pittsburgh Sleep Quality Index: A New Instrument for Psychiatric Practice and Research." *Psychiatry Research*, 28, p. 193-213.

MOOD AND SYMPTOM QUESTIONNAIRE (MASQ)

Scales/Items:

General Distress-Depressive Symptoms [C4QMA_D]:

Items: 12 items – Self-Administered Questionnaire, Question 1 (a, e, i, l, u, w, cc, ee, hh, jj, ll, ss)

(How much have you felt or experienced things this way during the past week, including today)

- a. "Felt sad."
- e. "Felt discouraged."
- i. "Felt worthless."
- l. "Felt depressed."
- u. "Felt like a failure."
- w. "Blamed myself for a lot of things."
- cc. "Felt inferior to others."
- ee. "Felt like crying."
- hh. "Was disappointed in myself."
- jj. "Felt hopeless."
- ll. "Felt sluggish or tired."
- ss. "Felt pessimistic about the future."

General Distress-Anxious Symptoms [C4QMA_A]:

Items: 11 items – Self-Administered Questionnaire, Question 1 (d, h, k, n, p, t, z, ff, ii, ccc, ggg)

(How much have you felt or experienced things this way during the past week, including today)

- d. "Felt Afraid."
- h. "Had diarrhea."
- k. "Felt nervous."
- n. "Felt uneasy."
- p. "Had a lump in my throat."
- t. "Had an upset stomach."
- z. "Felt keyed up, on edge."
- ff. "Was unable to relax."
- ii. "Felt nauseous."

ccc. "Felt tense or high-strung."
ggg. "Muscles were tense or sore."

Loss Of Interest [C4QMA_LI]:

Items: 8 items – Self-Administered Questionnaire, Question 1 (r, y, gg, oo, xx, yy, eee, iii)
(How much have you felt or experienced things this way during the past week, including today)
r. "Felt unattractive."
y. "Felt withdrawn from other people."
gg. "Felt really slowed down."
oo. "Felt really bored."
xx. "Felt took extra effort get started."
yy. "Felt nothing was very enjoyable."
eee. "Felt nothing fun/interesting to do."
iii. "Thought about death or suicide."

Anxious Arousal [C4QMA_AA]:

Items: 17 items – Self-Administered Questionnaire, Question 1 (b, f, m, q, s, x, bb, dd, kk, nn, pp, rr, tt, vv, zz, bbb, jjj)
(How much have you felt or experienced things this way during the past week, including today)
b. "Startled easily."
f. "Hands were shaky."
m. "Was short of breath."
q. "Felt faint."
s. "Had hot or cold spells."
x. "Hands were cold or sweaty."
bb. "Was trembling or shaking."
dd. "Had trouble swallowing."
kk. "Felt dizzy or lightheaded."
nn. "Had pain in my chest."
pp. "Felt like I was choking."
rr. "Muscles twitched or trembled."
tt. "Had a very dry mouth."
vv. "Was afraid I was going to die."

zz. "Heart was racing or pounding."
bbb. "Felt numbness or tingling in body."
jjj. "Had to urinate frequently."

High Positive Affect [C4QMA_PA]:

Items: 14 items – Self-Administered Questionnaire, Question 1 (c, g, j, o, v, aa, mm, qq, uu, ww, aaa, ddd, fff, hhh)

(How much have you felt or experienced things this way during the past week, including today)

c. "Felt cheerful."
g. "Felt optimistic."
j. "Felt really happy."
o. "Was proud of myself."
v. "Felt like I was having a lot of fun."
aa. "Felt like I had a lot of energy."
mm. "Felt really up or lively."
qq. "Looked forward with enjoyment."
uu. "Had a lot of interesting things to do."
ww. "Felt like I had accomplished a lot."
aaa. "Felt had a lot to look forward to."
ddd. "Felt hopeful about the future."
fff. "Seemed to move quickly and easily."
hhh. "Felt really good about myself."

Coding: 1 Not at all; 2 A little bit; 3 Moderately; 4 Quite a bit; 5 Extremely.

Scaling: The five scales were constructed by summing across all items for which there was no missing data. Mean substitution was used in cases with only one missing value.

Note: There are two additional items (b4q1kkk and b4q1lll) in the MIDUS version of the instrument. They are not included in the above scale construction.

Psychometrics:**GENERAL DISTRESS-DEPRESSIVE SYMPTOMS**

Sample (N)	Alpha	Mean	Std. dev
M3 Total Sample (747)	.901	18.78	6.816
M3 Main RDD Sample (360)	.858	18.32	5.451
M3 Twin Sample (284)	.910	18.84	7.075
M3 African American Sample (103)	.945	20.21	9.661

GENERAL DISTRESS-ANXIOUS SYMPTOMS

Sample (N)	Alpha	Mean	Std. dev
M3 Total Sample (747)	.820	16.84	5.204
M3 Main RDD Sample (360)	.760	16.58	4.406
M3 Twin Sample (284)	.803	16.80	4.941
M3 African American Sample (103)	.916	17.86	7.787

LOSS OF INTEREST

Sample (N)	Alpha	Mean	Std. dev
M3 Total Sample (747)	.824	12.26	4.236
M3 Main RDD Sample (360)	.771	12.11	3.674
M3 Twin Sample (284)	.817	11.97	4.025
M3 African American Sample (103)	.897	13.59	6.054

ANXIOUS AROUSAL

Sample (N)	Alpha	Mean	Std. dev
M3 Total Sample (747)	.808	23.15	6.258
M3 Main RDD Sample (360)	.795	22.76	5.831
M3 Twin Sample (284)	.744	22.59	5.185
M3 African American Sample (103)	.875	26.12	9.074

POSITIVE AFFECT

Sample (N)	Alpha	Mean	Std. dev
M3 Total Sample (747)	.929	44.42	10.440
M3 Main RDD Sample (360)	.935	44.78	10.291
M3 Twin Sample (284)	.928	45.09	9.880
M3 African American Sample (103)	.917	41.26	11.944

Source(s):

- Clark, L.A., and Watson, D. 1991. "Tripartite Model of Anxiety and Depression: Psychometric Evidence and Taxonomic Implications." *Journal of Abnormal Psychology*, 100(3), p. 316-336.
- Watson, D., Clark, L.A., Weber, K., Assenheimer, J.S., Strauss, M.E., and McCormich, R.A. 1995. "Testing a Tripartite Model: I. Evaluation the Convergent and Discriminant Validity of Anxiety and Depression Symptom Scales." *Journal of Abnormal Psychology*, 104(1), p.3-14.
- Watson, D., Clark, L.A., Weber, K., Assenheimer, J.S., Strauss, M.E., and McCormick, R.A. 1995. "Testing a Tripartite Model: II. Exploring the Symptom Structure of Anxiety and Depression in Student, Adult, and Patient Samples." *Journal of Abnormal Psychology*, 104(1), p. 15-25.

CENTER FOR EPIDEMIOLOGICAL STUDIES DEPRESSION INVENTORY (CES-D)

Note: Throughout the following “R” indicates item is reverse coded before constructing the scale score.

Scales/Items:

CES-D DEPRESSION SCALE [C4QCESD] :

Items: 20 items – Self-Administered Questionnaire, Question 3 (a - t)

“During the past week...?”

- a.” I was bothered by things that usually don’t bother me.”
- b.” I did not feel like eating; my appetite was poor.”
- c.” I felt that I could not shake off the blues even with the help of my family and friends.”
- d.” I felt that I was just as good as other people.”(R)
- e.” I had trouble keeping my mind on what I was doing.”
- f.” I felt depressed.”
- g.” I felt that everything I did was an effort.”
- h.” I felt hopeful about the future.”(R)
- i.” I thought my life had been a failure.”
- j.” I felt fearful.”
- k.” My sleep was restless.”
- l.” I was happy.”(R)
- m.” I talked less than usual.”
- n.” I felt lonely.”
- o.” People were unfriendly.”
- p.” I enjoyed life.”(R)
- q.” I had crying spells.”
- r.” I felt sad.”
- s.” I felt that people dislike me.”
- t.” I could not get “going”.

CES-D Depressive Affect Subscale [C4QCESDDA]:

Items: 7 items – Self-Administered Questionnaire, Question 3 (c, f, l, j, n, q, r) above.

CES_D Positive Affect Subscale [C4QCESDPA] :

Items: 4 items – Self-Administered Questionnaire, Question 3 (d, h, l, p) above.

CES-D Somatic Complaints Subscale [C4QCESDSC] :

Items: 7 items – Self-Administered Questionnaire, Question 3 (a, b, e, g, k, m, t) above.

CES-D Interpersonal Subscale [C4QCESDI] :

Items: 2 items – Self-Administered Questionnaire, Question 3 (o, s) above.

Coding: 1 Rarely or none of the time; 2 Some or a little of the time; 3 Occasionally or moderate amount of the time; 4 Most or all of the time.

Scaling: To maintain consistency with the literature, all items were recoded to a 0-3 scale (1=0, 2=1, 3=2, 4=3). Items marked with (R) were then reverse-coded so that high scores reflect higher standing in the scale. Unless otherwise indicated above, scale scores were computed by summing across all items for which there was no missing data. Mean substitution was used in cases with only one missing value.

Note: Previously, only the score for the full CES-D scale was computed. Based on user feedback we are now computing subscales described in the original source article (Radloff, 1977).

Psychometrics:**CES-D Depression Scale**

Sample (N)	Alpha	Mean	Std. dev
M3 Total Sample (747)	.885	9.06	8.069
M3 Main RDD Sample (360)	.858	8.45	7.012
M3 Twin Sample (284)	.886	8.18	7.571
M3 African American Sample (103)	.909	13.60	10.93

CES-D Depressive Affect Subscale

Sample (N)	Alpha	Mean	Std. dev
M3 Total Sample (747)	.864	1.92	3.099
M3 Main RDD Sample (360)	.821	1.67	2.622
M3 Twin Sample (284)	.844	1.76	2.799
M3 African American Sample (103)	.921	3.26	4.709

CES-D Positive Affect Subscale

Sample (N)	Alpha	Mean	Std. dev
M3 Total Sample (747)	.775	9.15	2.790
M3 Main RDD Sample (360)	.759	9.39	2.609
M3 Twin Sample (284)	.819	9.33	2.793
M3 African American Sample (103)	.674	7.82	3.038

CES-D Somatic Complaints Subscale

Sample (N)	Alpha	Mean	Std. dev
M3 Total Sample (747)	.736	3.81	3.245
M3 Main RDD Sample (360)	.668	3.76	2.898
M3 Twin Sample (284)	.742	3.42	3.124
M3 African American Sample (103)	.824	5.02	4.292

CES-D Interpersonal Subscale

Sample (N)	Alpha	Mean	Std. dev
M3 Total Sample (747)	.618	.48	.960
M3 Main RDD Sample (360)	.530	.41	.847
M3 Twin Sample (284)	.395	.33	.706
M3 African American Sample (103)	.764	1.13	1.526

Source(s):

- Devins, G.M., and Orme, C.M. 1985. "Center for Epidemiologic Studies Depression Scale." *Test Critiques*, 21(3), 267-283.
- Radloff, L.S. 1977. "The CES-D Scale: A self-report depression scale for research in the general population." *Applied Psychology Measurement*, 1(3), 385-401.
- Roberts, R.E., and Vernon, S.W. 1983. "The center for epidemiologic studies depression scale: Its use in a community sample." *American Journal of Psychiatry*, 140(1), 41-46.
- Turner, R.J., and Avison, W.R. 1992. "Innovations in the measurement of life stress: Crisis theory and the significance of event resolution." *Journal of Health and Social Behavior*, 33, 36-50.

PERCEIVED STRESS SCALE-10 ITEM VERSION (PSS)

Note: Throughout the following “R” indicates item is reverse coded before constructing the scale score.

Scales/Items:

Perceived Stress [C4QPS_PS]:

Items: 10 items – Self-Administered Questionnaire, Question 4 (a – j)

In the last month, how often have you...

- a. “been upset because of something that happened unexpectedly? “
- b. “felt that you were unable to control the important things in your life?”
- c. “felt nervous and “stressed”?”
- d. “felt confident about your ability to handle your personal problems?” (R)
- e. “felt that things were going your way?” (R)
- f. “found that you could not cope with all the things that you had to do? “
- g. “been able to control irritations in your life?” (R)
- h. “felt that you were on top of things?” (R)
- i. “been angered because of things that were outside of your control?”
- j. “felt difficulties were piling up so high that you couldn’t overcome them?”

Coding: 1 Never; 2 Almost never; 3 Sometimes; 4 Fairly often; 5 Very often

Scaling: Items marked with (R) were reverse-coded so that high scores reflect higher standing in the scale. Unless otherwise indicated above, scale scores were computed by summing across all items for which there was no missing data. Mean substitution was used in cases with only one missing value.

Psychometrics:

PERCEIVED STRESS SCALE

Sample (N)	Alpha	Mean	Std. dev
M3 Total Sample (747)	.859	21.47	6.308
M3 Main RDD Sample (360)	.852	21.29	5.833
M3 Twin Sample (284)	.861	20.86	6.175
M3 African American Sample (103)	.862	23.79	7.680

Source(s):

Cohen, S., Kamarck, T., Mermelstein, R. (1983). A global measure of perceived stress. *Journal of Health and Social Behavior*, 24, 385-396.

Cohen, S., & Williamson, G. (1988). Perceived stress in a probability sample of the United States. In S. Spacapan & S. Oskamp (Eds.), *The social psychology of health: Claremont Symposium on applied social psychology*. Newbury Park, CA: Sage.

SPIELBERGER ANGER EXPRESSION INVENTORY

Scales/Items:

Anger Expression- Anger/In (8 ITEMS) [C4QAE_AI]

Items: 8 items – Self-Administered Questionnaire, Question 5 (a-h).

In general when I feel angry or furious

- a. "I withdraw from people. "
- b. "I pout or sulk. "
- c. "I am angrier than I'm willing to admit. "
- d. "I am secretly critical of others. "
- e. "I boil inside, but don't show it. "
- f. "I harbor grudges. "
- g. "I keep things in. "
- h. "I am irritated more than others are aware. "

Anger Expression- Anger/Out (8 ITEMS) [C4QAE_AO]

Items: 8 items – Self-Administered Questionnaire, Question 5 (i-p).

In general when I feel angry or furious

- i. "I slam doors. "
- j. "I say nasty things. "
- k. "I make sarcastic remarks. "
- l. "I argue with others. "
- m. "I lose my temper. "
- n. "I strike out at whatever infuriates me. "
- o. "I express my anger. "
- p. "If someone annoys me I tell them how I feel. "

Anger Expression – Anger/Control (4 ITEMS) [C4QAE_AC]

Items: 4 items – Self-Administered Questionnaire, Question 5 (q-t).

In general when I feel angry or furious

- q. "I control my temper."
- r. "I keep my cool."
- s. "I calm down faster."
- t. "I make threats."

Coding: 1 Almost never; 2 Sometimes; 3 Often; 4 Almost always.

Scaling: Scale scores were computed by summing across all items for which there were no, or only one missing value. Mean substitution was used in cases with only one missing value.

Psychometrics:

SPIELBERGER TRAIT ANGER- ANGER/IN

Sample (N)	Alpha	Mean	Std. dev
M3 Total Sample (747)	.801	14.22	3.948
M3 Main RDD Sample (360)	.768	14.31	3.679
M3 Twin Sample (284)	.817	14.28	4.085
M3 African American Sample (103)	.843	13.75	4.444

SPIELBERGER TRAIT ANGER- ANGER/OUT

Sample (N)	Alpha	Mean	Std. dev
M3 Total Sample (747)	.807	12.31	3.429
M3 Main RDD Sample (360)	.807	12.45	3.512
M3 Twin Sample (284)	.781	12.14	3.115
M3 African American Sample (103)	.860	12.29	3.943

SPIELBERGER TRAIT ANGER – ANGER/CONTROL

Sample (N)	Alpha	Mean	Std. dev
M3 Total Sample (747)	.692	9.97	2.269
M3 Main RDD Sample (360)	.671	10.12	3.512
M3 Twin Sample (284)	.683	10.07	2.153
M3 African American Sample (103)	.745	9.14	2.686

Source(s):

Spielberger, C. D. (1996). State-Trait Anger Expression Inventory: Professional manual. Odessa, FL.

ANGER EXPRESSION – ADJUSTMENT

Scales/Items:

Anger Expression- Adjustment (2 ITEMS) [C4QAE_AA]

Items: 2 items – Self-Administered Questionnaire, Question 5 (u, v).

In general when I feel angry or furious

u: "I do nothing. "

v: "Ignore the situation or person who angers me. "

Coding: 1 Almost never; 2 Sometimes; 3 Often; 4 Almost always.

Scaling: Scale scores were computed by finding the **mean** across all items.

Missing Values: Scale scores were not constructed cases having more than 1 missing value.

For cases having a single valid response, that response is used as the scale score.

Psychometrics:

SPIELBERGER ANGER ADJUSTMENT

Sample (N)	Alpha	Mean	Std. dev
M3 Total Sample (744)	.585	2.08	.704
M3 Main RDD Sample (360)	.557	2.13	.683
M3 Twin Sample (284)	.585	2.07	.695
M3 African American Sample (103)	.640	1.94	.788

Source(s):

Markus, H. R., & Kitayama, S. (2004). Models of agency: Sociocultural diversity in the construction of action. In V. Murphy-Berman & J. Berman (Eds.), The 49th Annual Nebraska Symposium for Motivation: Cross-Cultural Differences in Perspectives on Self. (pp. 1-57).

Kitayama, S., Karasawa, M., Curhan, K. B., Ryff, C., & Markus, H. R. (2006). Independence, Interdependence, and Well-Being: Divergent Patterns in the United States and Japan. Paper under review.

SPIELBERGER TRAIT ANGER

Scales/Items:

Trait Anger [C4QTA_AG]:

Items: 15 items – Self-Administered Questionnaire, Question 6 (a - o)

(Circle the number that best describes how you generally feel.)

- a. "I have a fiery temper."
- b. "I am quick tempered."
- c. "I am a hotheaded person."
- d. "I get annoyed when I am singled out for correction."
- e. "It makes me furious when I am criticized in front of others."
- f. "I get angry when I'm slowed down by others mistakes."
- g. "I feel infuriated when I do a good job and get a poor evaluation."
- h. "I fly off the handle."
- i. "I feel annoyed when I am not given recognition for doing good work."
- j. "People who think they are always right irritate me."
- k. "When I get mad, I say nasty things."
- l. "I feel irritated."
- m. "I feel angry."
- n. "When I get frustrated, I feel like hitting someone."
- o. "It makes my blood boil when I am under pressure."

Trait Anger/Angry Temperament [C4QTA_AT]:

Items: 4 items – Self-Administered Questionnaire, Question 6 (a, b, c, h) above.

Trait Anger/Angry Reaction [C4QTA_AR]

Items: 4 items – Self-Administered Questionnaire, Question 6 (e, f, g, i) above.

Coding: 1 Almost never; 2 Sometimes; 3 Often; 4 Almost always.

Scaling: Scale scores were computed by summing across all items for which there was no missing data. Mean substitution was used in cases with only one missing value.

Psychometrics:**TRAIT ANGER**

Sample (N)	Alpha	Mean	Std. dev
M3 Total Sample (747)	.873	23.23	5.871
M3 Main RDD Sample (360)	.853	23.40	5.372
M3 Twin Sample (284)	.854	22.97	5.513
M3 African American Sample (103)	.933	23.40	8.128

TRAIT ANGER/ANGRY TEMPERAMENT

Sample (N)	Alpha	Mean	Std. dev
M3 Total Sample (747)	.851	5.09	1.799
M3 Main RDD Sample (360)	.769	5.06	1.533
M3 Twin Sample (284)	.863	5.02	1.749
M3 African American Sample (103)	.934	5.43	2.608

TRAIT ANGER/ANGRY REACTION

Sample (N)	Alpha	Mean	Std. dev
M3 Total Sample (747)	.745	7.35	2.414
M3 Main RDD Sample (360)	.722	7.46	2.353
M3 Twin Sample (284)	.753	7.33	2.440
M3 African American Sample (103)	.793	7.05	2.546

Source(s):

Spielberger, C. D. (1996). State-Trait Anger Expression Inventory: Professional manual. Odessa, FL.

SPIELBERGER TRAIT ANXIETY INVENTORY

Note: Throughout the following “R” indicates item is reverse coded before constructing the scale score.

Scales/Items:

TRAIT ANXIETY [C4QTA_AX]:

Items: 20 items – Self-Administered Questionnaire, Question 7(a-t).

Circle the number that best describes how you *generally* feel.

- a. “I feel pleasant. “(R)
- b. “I tire quickly. “
- c. “I feel like crying. “
- d. “I wish I could be as happy as others seem to be. “
- e. “I am losing out on things because I can’t make up my mind soon enough. “
- f. “I feel rested. “(R)
- g. “I am “calm, cool, and collected”. (R)
- h. “I feel that difficulties are piling up so that I cannot overcome them. “
- i. “I worry too much over something that really doesn’t matter. “
- j. “I am happy. “(R)
- k. “I am inclined to take things hard. “
- l. “I lack self-confidence. “
- m. “I feel secure. “(R)
- n. “I try to avoid facing a crisis or difficulty. “
- o. “I feel blue. “
- p. “I am content. “(R)
- q. “Some unimportant thought runs through my mind and bothers me. “
- r. “I take disappointments so keenly that I can’t put them out of my mind. “
- s. “I am a steady person. “(R)
- t. “I get in a state of tension or turmoil as I think over my recent concerns and interests. “

Coding: 1 Almost never; 2 Sometimes; 3 Often; 4 Almost always.

Scaling: Items marked with (R) were reverse-coded so that high scores reflect higher standing in the scale. Unless otherwise indicated above, scale scores were computed by summing across all items for which there was no missing data. Mean substitution was used in cases with only one missing value.

Psychometrics:

ANXIETY TRAIT INVENTORY

Sample (N)	Alpha	Mean	Std. dev
M3 Total Sample (747)	.896	33.67	8.725
M3 Main RDD Sample (360)	.872	33.34	7.724
M3 Twin Sample (284)	.907	33.38	8.849
M3 African American Sample (103)	.918	37.16	10.878

Source(s):

Spielberger, C. D. (1983). Manual for the state–trait anxiety inventory (Form Y) ("Self-evaluation questionnaire"), Consulting Psychologists Press, Palo Alto, CA.

Spielberger, C. D. (1989). State–trait anxiety inventory: a comprehensive bibliography. Consulting Psychologists Press, Palo Alto, CA.

SOCIAL ANXIETY SCALE

Scales/Items:

Social Anxiety [C4QSA_SA]:

Items: 9 items – Self-Administered Questionnaire, Question 8 (a- i).

Please circle the number that best describes how much fear or anxiety you generally feel in the following situations.

- a. "Talking to people in authority. "
- b. "Going to a party."
- c. "Working while being observed."
- d. "Calling someone you don't know very well."
- e. "Talking with people you don't know very well."
- f. "Being the center of attention."
- g. "Expressing a disagreement or disapproval to people you don't know very well."
- h. "Returning goods to a store."
- i. "Resisting a high-pressure salesperson."

Coding: 1 None; 2 Mild; 3 Moderate; 4 Severe.

Scaling: The scale score was constructed by computing the mean across all items for cases having 0 or 1 missing value.

Psychometrics:

SOCIAL ANXIETY SCALE

Sample (N)	Alpha	Mean	Std. dev
M3 Total Sample (747)	.859	1.83	.558
M3 Main RDD Sample (360)	.836	1.80	.519
M3 Twin Sample (284)	.866	1.88	.565
M3 African American Sample (103)	.900	1.77	.654

Source(s):

Fresco, D., Coles, M., Heimberg, R., Liebowitz, M., Hami, S., Stein, M., & Goetz, D. (2001). The Liebowitz social anxiety scale: a comparison of the psychometric properties of self-report and clinician-administered formats. *Psychological Medicine*, 31, 1025-1035.

CHILDHOOD TRAUMA QUESTIONNAIRE (CTQ)

Note: Throughout the following “R” indicates item is reverse coded before constructing the scale score.

Scales/Items:

Emotional Abuse [C4QCT_EA]:

Items: 5 items – Self-Administered Questionnaire, Question 9 (c, h, n, r, y)

- c. “People in my family called me things like “stupid,” “lazy,” or “ugly.” “
- h. “I thought that my parents wished I had never been born.”
- n. “People in my family said hurtful or insulting things to me.”
- r. “I felt that someone in my family hated me.”
- y. “I believe that I was emotionally abused.”

Physical Abuse [C4QCT_PA]:

Items: 5 items – Self-Administered Questionnaire, Question 9 (i, k, l, o, q).

- i. “I got hit so hard by someone in my family that I had to see a doctor or go to the hospital.”
- k. “People in my family hit me so hard that it left me with bruises or marks.”
- l. “I was punished with a belt, a board, a cord, or some other hard object.”
- o. “I believe that I was physically abused.”
- q. “I got hit or beaten so badly that it was noticed by someone like a teacher, neighbor, or doctor.”

Sexual Abuse [C4QCT_SA]:

Items: 5 items – Self-Administered Questionnaire, Question 9 (t, u, w, x, aa)

- t. “Someone tried to touch me in a sexual way, or tried to make me touch them.”
- u. “Someone threatened to hurt me or tell lies about me unless I did something sexual with them.”
- w. “Someone tried to make me do sexual things or watch sexual things.”
- x. “Someone molested me.”
- aa. “I believe that I was sexually abused.”

Emotional Neglect [C4QCT_EN]:

Items: 5 items – Self-Administered Questionnaire, Question 9 (e, g, m, s, bb)

- e. “There was someone in my family who helped me feel that I was important or special.” (R)
- g. “I felt loved.” (R)
- m. “People in my family looked out for each other.” (R)

- s. "People in my family felt close to each other." (R)
- bb. "My family was a source of strength and support." (R)

Physical Neglect [C4QCT_PN]:

- Items: 5 items – Self-Administered Questionnaire, Question 9 (a, b, d, f, z)
- a. "I didn't have enough to eat."
 - b. "I knew that there was someone to take care of me and protect me." (R)
 - d. "My parents were too drunk or high to take care of me."
 - f. "I had to wear dirty clothes."
 - z. "There was someone to take me to the doctor if I needed it." (R)

Minimization/Denial [C4QCT_MD]

- Items: 3 items – Self-Administered Questionnaire, Question 9 (j, p, v)
- j. "There was nothing I wanted to change about my family."
 - p. "I had the perfect childhood."
 - v. "I had the best family in the world."

Coding: 1 Never true; 2 Rarely true; 3 Sometimes true; 4 Often true; 5 Very often true.

Scaling: For all subscales except Minimization/Denial, items marked with (R) were reverse-coded so that high scores reflect higher standing in the scale. Unless otherwise indicated above, scale scores were computed by summing across all items for which there was no missing data. Mean substitution was used in cases with only one missing value.

For Minimization/Denial, the responses are coded as follows:

- 5 is coded as 1
- 1-4 are coded as 0.

The new scores are then added to derive the Minimization/Denial Scale Total Score. This score reflects the tendency of the respondent to give exaggerated, desirable responses.

Psychometrics:

EMOTIONAL ABUSE

Sample (N)	Alpha	Mean	Std. dev
M3 Total Sample (747)	.881	7.95	4.258
M3 Main RDD Sample (360)	.873	7.89	4.116
M3 Twin Sample (284)	.903	7.73	4.264
M3 African American Sample (103)	.849	8.77	4.667

PHYSICAL ABUSE

Sample (N)	Alpha	Mean	Std. dev
M3 Total Sample (747)	.770	6.96	3.003
M3 Main RDD Sample (360)	.782	6.95	3.059
M3 Twin Sample (284)	.709	6.55	2.434
M3 African American Sample (103)	.787	8.13	3.865

SEXUAL ABUSE

Sample (N)	Alpha	Mean	Std. dev
M3 Total Sample (747)	.926	6.77	4.017
M3 Main RDD Sample (360)	.934	6.65	3.958
M3 Twin Sample (284)	.888	6.40	3.090
M3 African American Sample (103)	.939	8.18	5.857

EMOTIONAL NEGLECT

Sample (N)	Alpha	Mean	Std. dev
M3 Total Sample (747)	.890	9.63	4.591
M3 Main RDD Sample (360)	.897	9.75	4.656
M3 Twin Sample (284)	.877	9.18	4.190
M3 African American Sample (103)	.890	10.46	5.287

PHYSICAL NEGLECT

Sample (N)	Alpha	Mean	Std. dev
M3 Total Sample (747)	.670	6.95	2.884
M3 Main RDD Sample (360)	.701	6.87	2.906
M3 Twin Sample (284)	.677	6.61	2.626
M3 African American Sample (103)	.531	8.19	3.186

MINIMIZATION/DENIAL

Sample (N)	Alpha	Mean	Std. dev
M3 Total Sample (747)	.741	.68	1.015
M3 Main RDD Sample (360)	.739	.62	.982
M3 Twin Sample (284)	.755	.77	1.066
M3 African American Sample (103)	.702	.65	.974

Source(s):

Bernstein, D., & Fink, L. (1998). Manual for the Childhood Trauma Questionnaire, The Psychological Corporation, New York (1998).

POSITIVE EVENTS SCALE

Note: Scale scores have not been constructed for this scale as yet.

Scales/Items:

Positive Events Scale:

Items: 49 items - Question 10 (a-ww)

The following questions are about positive experiences you may have had over the past month. Please indicate how often you had each experience and whether it was pleasant, enjoyable or rewarding. Over the past month how often did you spend time.... (If at least once, how Pleasant, Enjoyable, or Rewarding was this?)

- a. Appreciating nature
- b. Meeting someone new
- c. Planning trips or vacations
- d. Reading stories, novels, poems, or plays
- e. Helping someone
- f. Breathing clean air
- g. Saying something clearly.
- h. Thinking about something good in the future.
- i. Laughing
- j. Being with animals
- k. Having a frank and open conversation
- l. Going to a party
- m. Giving thanks for daily life.
- n. Being with friends
- o. Being popular at a gathering
- p. Enjoying TV or movies
- q. Sitting in the sun
- r. Seeing good things happen to family & friends
- s. Planning or organizing something
- t. Having a lively talk
- u. Being with family
- v. Taking a relaxing bath
- w. Seeing beautiful scenery
- x. Eating good meals
- y. Having spare time

- z. Being noticed as sexually attractive
- aa. Learning to do something new
- bb. Complimenting or praising someone
- cc. Thinking about people I like
- dd. Kissing
- ee. Praying or meditating
- ff. Doing a project my way
- gg. Having peace and quiet
- hh. Being relaxed
- ii. Sleeping soundly at night
- jj. Having a good fitness workout
- kk. Amusing people
- ll. Being with someone I love
- mm. Having satisfying sexual relations with a partner.
- nn. Watching sports
- oo. Being with happy people
- pp. Smiling at people
- qq. Being with my spouse/partner
- rr. Teaching or advising someone
- ss. Being complimented or told that I have done well
- tt. Being told that I am loved
- uu. Seeing old friends
- vv. Shopping
- ww. Feeling no pain.

Coding:

How often? 1 Never; 2 1-6 times; 3 7+ times

How Pleasant, Enjoyable, or Rewarding was this? 1 Neutral or unpleasant; 2 Somewhat; 3 Very.

Scaling:

We are not currently constructing scale scores for these items.

Psychometrics: Not Applicable at this time

Source(s):

MacPhillamy, D.J., and Lewinsohn, P.M. (1982). The Pleasant Events Schedule: Studies on reliability, validity, and scale intercorrelation. *Journal of Consulting and Clinical Psychology*, 50, 363-380.

Note: The above items include a subset of items in the Pleasant Events Schedule. In addition some items were modified to be more inclusive, and others were created by the investigators.

SINGELIS SELF-CONSTRUAL SCALE

Scales/Items:

Independence [C4QSC_ID]:

Items: 7 items – Self-Administered Questionnaire, Question 11 (b, d, e, f, h, k, p)

The following questions are about the ways you generally interact with others, including your sense of obligation towards others. Please circle the number that corresponds to how much you agree or disagree with the following statements.

- b. "I'd rather say "NO" directly, than risk being misunderstood."
- d. "Speaking up is not a problem for me."
- e. "Having a lively imagination is important to me."
- f. "I am comfortable with being singled out for praise or rewards."
- h. "I am the same person at home that I am at work or in other social settings."
- k. "I prefer to be direct and forthright when dealing with people I've just met."
- *p. "It is important to have my own ideas."

*This item adds the dimension "idea generation" to the original interdependence self-construal subscale. It was recommended for inclusion in MIDUS by Hazel Markus based on personal communication with Ted Singelis.

Interdependence [C4QSC_IT]:

Items: 10 items – Self-Administered Questionnaire, Question 11 (a, c, g, i, j, l, m, n, o, q)

The following questions are about the ways you generally interact with others, including your sense of obligation towards others. Please circle the number that corresponds to how much you agree or disagree with the following statements.

- a. "I have respect for the authority figures with whom I interact."
- c. "It is important for me to maintain harmony or smooth relationships within my group."
- g. "I respect people who are modest about themselves."
- i. "I will sacrifice my self-interest for the benefit of the group I am in."
- j. "I should take into consideration others' advice when making work or family plans."
- l. "It is important to me to respect decisions made by the group."
- m. "I will stay in a group if they need me, even when I'm not happy with the group."
- n. "If people in my family fail, I feel responsible."
- o. "Even when I strongly disagree with group members, I avoid an argument."
- *q. "It is important to listen to others' opinions."

*This item adds the dimension “idea generation” to the original interdependence self-construal subscale. It was recommended for inclusion in MIDUS by Hazel Markus based on personal communication with Ted Singelis.

Coding: 1 Strongly disagree; 2 Disagree; 3 Slightly disagree; 4 Neutral; 5 Slightly Agree; 6 Agree; 7 Strongly Agree

Scaling: The scales were constructed by computing the mean across all items for cases having 0 or 1 missing value.

Psychometrics:

INDEPENDENCE

Sample (N)	Alpha	Mean	Std. dev
M3 Total Sample (747)	.684	5.24	.824
M3 Main RDD Sample (360)	.689	5.27	.810
M3 Twin Sample (284)	.648	5.17	.765
M3 African American Sample (103)	.736	5.34	1.014

INTERDEPENDENCE

Sample (N)	Alpha	Mean	Std. dev
M3 Total Sample (747)	.688	5.19	.658
M3 Main RDD Sample (360)	.654	5.22	.606
M3 Twin Sample (284)	.686	5.25	.625
M3 African American Sample (103)	.742	4.90	.843

Source(s):

Singelis, T. M. (1994). The measurement of independent and interdependent self-construals.

Personality and Social Psychology Bulletin, 20, 580-591.

SOCIAL OBLIGATION SCALE

Scales/Items:

Public Community [C4QSO_PC]:

Items: 3 items – Self-Administered Questionnaire, Question 11 (r, s, t)

The following questions are about the ways you generally interact with others, including your sense of obligation towards others. Please circle the number that corresponds to how much you agree or disagree with the following statements.

r. "I feel obligated to keep fully informed about national news and public issues."

s. "I feel obligated to vote in local and national elections."

t. "I feel obligated to volunteer time or money to social causes I support."

Private Family/Friends

3 ITEMS [C4QSO_PF]:

Items: 3 items – Self-Administered Questionnaire, Question 11 (u, v, w - below)

4 ITEMS [C4QSO_PX]:

Items: 4 items – Self-Administered Questionnaire, Question 11 (u, v, w, x)

u. "I feel obligated to drop plans when members of my family seem very troubled."

v. "I feel obligated to contact family members on a regular basis."

w. "I feel obligated to give money to a friend in need, even if this makes it hard to meet my own needs."

x. "I feel obligated to take my divorced or unemployed adult child back into my home."

Private/Ingroup Work [C4QSO_IW]:

Items: 3 items – Self-Administered Questionnaire, Question 11 (aa, bb, cc - below)

Good Work [C4QSO_GW]:

Items: 5 items – Self-Administered Questionnaire, Question 11 (y, z, aa, bb, cc)

The following questions are about the ways you generally interact with others, including your sense of obligation towards others. Please circle the number that corresponds to how much you agree or disagree with the following statements.

y. "My work makes the world a better place."

z. "I think about the harm my work might do to other people." ^c

aa. "I help out my colleagues/coworkers at work." ^c

bb. "I am the one to volunteer to do unwanted tasks at work." ^c

cc. "I am known for my honesty and integrity at work." ^c

Coding: 1 Strongly disagree; 2 Disagree; 3 Slightly disagree; 4 Neutral; 5 Slightly Agree; 6 Agree; 7 Strongly Agree

Scaling: The scales were constructed by computing the mean across all items for cases having 0 or 1 missing value.

Psychometrics:

PUBLIC COMMUNITY

Sample (N)	Alpha	Mean	Std. dev
M3 Total Sample (747)	.723	5.50	1.212
M3 Main RDD Sample (360)	.704	5.63	1.148
M3 Twin Sample (284)	.741	5.45	1.213
M3 African American Sample (103)	.725	5.16	1.365

PRIVATE FAMILY/FRIENDS

Sample (N)	Alpha	Mean	Std. dev
M3 Total Sample (747)	.626	4.85	1.139
M3 Main RDD Sample (360)	.620	4.92	1.077
M3 Twin Sample (284)	.659	4.86	1.158
M3 African American Sample (103)	.558	4.53	1.258

PRIVATE FAMILY/FRIENDS (EXTRA ITEM)

Sample (N)	Alpha	Mean	Std. dev
M3 Total Sample (747)	.665	4.64	1.097
M3 Main RDD Sample (360)	.664	4.71	1.049
M3 Twin Sample (284)	.667	4.67	1.095
M3 African American Sample (103)	.656	4.31	1.218

PRIVATE/INGROUP WORK

Sample (N)	Alpha	Mean	Std. dev
M3 Total Sample (747)	.675	5.35	.979
M3 Main RDD Sample (360)	.651	5.33	.918
M3 Twin Sample (284)	.701	5.52	.941
M3 African American Sample (103)	.634	4.97	1.172

GOOD WORK

Sample (N)	Alpha	Mean	Std. dev
M3 Total Sample (747)	.551	4.81	.834
M3 Main RDD Sample (360)	.518	4.80	.784
M3 Twin Sample (284)	.553	4.92	.810
M3 African American Sample (103)	.595	4.53	.997

Source(s):

- Gardner, H., Csikszentmihalyi, M., & Damon, W. (2001). Good work: When excellence and ethics meet. New York, NY: Basic Books.
- Rossi, A.S. (2001). Caring and doing for others: Social responsibility in the domains of family , work, and community. Chicago: University of Chicago Press.: Ch. 3 Domains and Dimensions of Social Responsibility: A sociodemographic profile.

RELATIONAL-INTERDEPENDENT SELF CONSTRUAL SCALE

Note: Throughout the following “R” indicates item is reverse coded before constructing the scale score.

Scales/Items:

Interdependence [C4QRISC]:

Items: 10 Items – Self-Administered Questionnaire, Question 12 (a-j).

The following questions are about how your views of yourself are linked to your relations with others. Please circle the number that corresponds to how much you agree or disagree with the following statements.

- a. “My close relationships are an important reflection of who I am.”
- b. “When I feel very close to someone, it often feels to me like that person is an important part of who I am.”
- c. “I usually feel a strong sense of pride when someone close to me has an important accomplishment.”
- d. “I think one of the most important parts of who I am can be captured by looking at my close friends and understanding who they are.”
- e. “When I think of myself, I often think of my close friends or family also.”
- f. “If a person hurts someone close to me, I feel personally hurt as well.”
- g. “Overall, my close relationships have very little to do with how I feel about myself.”(R)
- h. “My close relationships are unimportant to my sense of what kind of person I am.”(R)
- i. “My sense of pride comes from knowing whom I have as close friends.”
- j. “When I establish a close friendship with someone, I usually develop a strong sense of identification with that person.”

Note: Items k & l are new and not currently included in constructed scores.

Coding: 1 Strongly disagree; 2 Disagree; 3 Slightly disagree; 4 Neutral; 5 Slightly Agree; 6 Agree; 7 Strongly Agree

Scaling: Items marked with (R) were reverse-coded so that high scores reflect higher standing in the scale. The scales were constructed by computing the mean across all items for cases having 0 or 1 missing value.

Psychometrics:**RISC**

Sample (N)	Alpha	Mean	Std. dev
M3 Total Sample (747)	.845	4.99	.944
M3 Main RDD Sample (360)	.857	5.00	.951
M3 Twin Sample (284)	.844	5.12	.882
M3 African American Sample (103)	.797	4.64	1.011

Source(s):

Cross, S. E, Bacon, P. L., & Morris, M. L. (2000). The Relational-Interdependent Self-Construal and Relationships. *Journal of Personality and Social Psychology*, 78 (4), 791-808.

SYMPATHY SCALE (EXPANDED)

Note: Throughout the following “R” indicates item is reverse coded before constructing the scale score.

Scales/Items:

Sympathy (4 items) [C4QSYMP]:

Items: 4 items – Self-Administered Questionnaire, Question 12 (m,n,o,p).

The following questions are about how your views of yourself are linked to your relations with others. Please circle the number that corresponds to how much you agree or disagree with the following statements.

- m. “Even when things are going well for me, I can’t be happy if I have a friend who is in trouble.”
- n. “I am moved when I hear of another person’s hardship.”
- o. “I think nothing is more important than to be sympathetic to others.”
- p. “My sympathy has its limits.”(R)

Sympathy (10 items) [C4QSYMP2]*: New at Refresher

Items: 10 items – Self-Administered Questionnaire, the above 4 items plus Question 12 (v-aa)

The following questions are about how your views of yourself are linked to your relations with others. Please circle the number that corresponds to how much you agree or disagree with the following statements.

- v. “I felt like praying on behalf of someone who is going through hardship.”
- w. “When I see a person who is working hard, I feel like rooting for the person.”
- x. “If someone fails, the person is responsible for the failure, so there is no need to feel sympathy toward the person.” (R)
- y. “When I someone cry, I often start to cry.”
- z. “If the elder or people with disabilities are standing on a bus or train without any seats offered to them, I feel sad and sympathetic toward them”.
- aa. “When people with different opinions confront each other, it is inevitable that someone’s feelings get hurt.” (R)

Coding: 1 Strongly disagree; 2 Disagree; 3 Slightly disagree; 4 Neutral; 5 Slightly Agree; 6 Agree; 7 Strongly Agree

Scaling: Items marked with (R) were reverse-coded so that high scores reflect higher standing in the scale. The scales were constructed by computing the mean across all items for cases having 0 or 1 missing value.

Psychometrics:

SYMPATHY (4 items)

Sample (N)	Alpha	Mean	Std. dev
M3 Total Sample (747)	.512	4.42	.868
M3 Main RDD Sample (360)	.508	4.44	.839
M3 Twin Sample (284)	.570	4.41	.874
M3 African American Sample (103)	.439	4.49	.956

SYMPATHY2 (10 items)

Sample (N)	Alpha	Mean	Std. dev
M3 Total Sample (747)	.565	4.79	.627
M3 Main RDD Sample (360)	.573	4.77	.616
M3 Twin Sample (284)	.579	4.84	.623
M3 African American Sample (103)	.542	4.73	.672

Source(s):

Uchida, Y., & Kitayama, S. (2001). Development and validation of a sympathy scale. *Japanese Journal of Psychology*, 72 , 275-282.

Items included to facilitate comparison with parallel data collection in Japan (MIDJA: Midlife in Japan).

ADJUSTMENT SCALE

Scales/Items:

Adjustment [C4QADJ]:

Items: 5 items – Self-Administered Questionnaire, Question 12 (q-u).

The following questions are about how your views of yourself are linked to your relations with others. Please circle the number that corresponds to how much you agree or disagree with the following statements.

q. "I usually follow the opinions of people I can respect."

r. "When many people have an opinion different from mine, I can adjust mine to theirs."

s. "When values held by others sound more reasonable, I can adjust my values to theirs."

t. "Once something has happened, I try to adjust myself to it because it is difficult to change it myself."

u. "It is useless to try to change what is going to happen in life because it is impossible to predict it."

Coding: 1 Strongly disagree; 2 Disagree; 3 Slightly disagree; 4 Neutral; 5 Slightly Agree; 6 Agree; 7 Strongly Agree

Scaling: The scales were constructed by computing the mean across all items for cases having 0 or 1 missing value

Psychometrics:

Adjustment

Sample (N)	Alpha	Mean	Std. dev
M3 Total Sample (747)	.531	4.01	.867
M3 Main RDD Sample (360)	.539	3.98	.866
M3 Twin Sample (284)	.520	4.07	.805
M3 African American Sample (103)	.605	3.92	1.023

Source(s):

Markus, H. R., & Kitayama, S. (2004). Models of agency: Sociocultural diversity in the construction of action. In V. Murphy-Berman & J. Berman (Eds.), The 49th Annual Nebraska Symposium for Motivation: Cross-Cultural Differences in Perspectives on Self. (pp. 1-57).

SUPPORT & STRAIN GIVEN TO FRIENDS SCALE

Scales/Items:

Support Given to Friends [C4QSUGF]:

Items: 4 items – Self-Administered Questionnaire, 13 (a-d)

- a. “How much do you really care about your friends?”
- b. “How much do you understand the way your friends feel about things?”
- c. “How much can your friends rely on you for help if they have a serious problem?”
- d. “How much can your friends open up to you if they need to talk about their worries?”

Coding: 1 A lot; 2 Some; 3 A little; 4 Not at all.

Scaling: The scales were constructed by reverse coding all the items and then computing the mean across all items for cases having 0 or 1 missing value.

Strain Given to Friends [C4QSTGF]:

Items: 4 items – Self-Administered Questionnaire, 13 (e-h)

- e. “How often do you make too many demands on your friends?”
- f. “How often do you criticize your friends?”
- g. “How often do you let your friends down when they are counting on you?”
- h. “How often do you get on your friends’ nerves?”

Coding: 1 A lot; 2 Some; 3 A little; 4 Not at all.

Scaling: The scales were constructed by reverse coding all the items and then computing the mean across all items for cases having 0 or 1 missing value.

Affectual Solidarity Given to Friends [C4QSOGFD] :

Items: 8 item scale combining the four “support to friends” and four “strain to friends” items.

Scaling: The scale is constructed by calculating the **mean** of the values of the items. Items for the “support to friends” were recoded, so that a high score signifies high levels of friend affectual solidarity. The scale is computed for cases that had valid values for **at least one** item on the scale. For cases with only one missing value mean substitution is used.

Psychometrics:**SUPPORT GIVEN TO FRIENDS**

Sample (N)	Alpha	Mean	Std. dev
M3 Total Sample (747)	.730	3.63	.407
M3 Main RDD Sample (360)	.738	3.63	.412
M3 Twin Sample (284)	.692	3.65	.372
M3 African American Sample (103)	.773	3.58	.475

STRAIN GIVEN TO FRIENDS

Sample (N)	Alpha	Mean	Std. dev
M3 Total Sample (747)	.550	1.54	.420
M3 Main RDD Sample (360)	.553	1.55	.409
M3 Twin Sample (284)	.453	1.49	.358
M3 African American Sample (103)	.622	1.69	.566

AFFECTUAL SOLIDARITY GIVEN TO FRIENDS

Sample (N)	Alpha	Mean	Std. dev
M3 Total Sample (747)	.588	3.54	.303
M3 Main RDD Sample (360)	.569	3.54	.294
M3 Twin Sample (284)	.543	3.58	.267
M3 African American Sample (103)	.659	3.45	.398

Source(s):

MIDJA pilot items on the topic of social support *given* to friends based on the existing MIDUS social support *received* from friends items. The Support Given to Friends Scale should be constructed in a similar way to the corresponding MIDUS2 scale (in which friends are giving support to the respondent).

FRIENDSHIP SUPPORT

Scales/Items:

FRIENDSHIP SUPPORT [C4Q13H1]:

Items: 1 items- Self-Administered Questionnaire, Question 13h1

h1. "How many friends do you have?"

Coding: 1=0-5, 2=6-10, 3=11-20, 4=21-50, 5=51+

Source(s):

Adams, G., & Plaut, V. C. (2003). The cultural grounding of personal relationship: Friendship in North American and West African worlds. *Personal Relationships*, 10, 333–348.

SUPPORT GIVEN TO FAMILY SCALE

Scales/Items:

Support Given To Family [C4QSUGFA]:

Items: 2 items – Self-Administered Questionnaire, Question 13 (i, j)

With regard to your family (not including spouse/partner):

- i. “How much can your family (not including your spouse or partner) rely on you for help if they have a serious problem?”
- j. “How much can your family open up to you if they need to talk about their worries?”

Coding: 1 A lot; 2 Some; 3 A little; 4 Not at all.

Scaling: The scales were constructed by reversing the item codes first and then computing the mean across all items for cases having no, or only 1, missing value.

Strain Given To Family [C4QSTGFA]:

Items: 4 items – Self-Administered Questionnaire, Question 13 (k to n)

- k. “How often do you make too many demands on members of your family?”
- l. “How often do you criticize your family?”
- m. “How often do you let your family down when they are counting on you?”
- n. “How often do you get on your family’s nerves?”

Coding: 1 A lot; 2 Some; 3 A little; 4 Not at all.

Scaling: The scales were constructed by reversing the item codes first and then computing the mean across all items for cases having no, or only 1, missing value.

Affectual Solidarity Given to Family [C4QSOGFM] :

Items: 6 item scale combining the two “support to family” and four “strain to family” items.

Scaling: The scale is constructed by calculating the **mean** of the values of the items. Items for the “support to family” were recoded, so that a high score signifies high levels of family affectual solidarity. The scale is computed for cases that had valid values for **at least one** item on the scale. For cases with only one missing value mean substitution is used.

Psychometrics:**SUPPORT GIVEN TO FAMILY**

Sample (N)	Alpha	Mean	Std. dev
M3 Total Sample (747)	.602	3.78	.434
M3 Main RDD Sample (360)	.606	3.78	.427
M3 Twin Sample (284)	.617	3.78	.440
M3 African American Sample (103)	.604	3.75	.447

STRAIN GIVEN TO FAMILY

Sample (N)	Alpha	Mean	Std. dev
M3 Total Sample (747)	.638	1.68	.474
M3 Main RDD Sample (360)	.663	1.69	.476
M3 Twin Sample (284)	.587	1.66	.436
M3 African American Sample (103)	.657	1.74	.562

AFFECTUAL SOLIDARITY GIVEN TO FAMILY

Sample (N)	Alpha	Mean	Std. dev
M3 Total Sample (747)	.575	3.47	.358
M3 Main RDD Sample (360)	.594	3.47	.358
M3 Twin Sample (284)	.521	3.49	.332
M3 African American Sample (103)	.623	3.42	.424

Source(s):

None.

SUPPORT GIVEN TO SPOUSE SCALE

Note: Throughout the following “R” indicates item is reverse coded before constructing the scale score.

Scales/Items:

Support Given To Spouse/partner [C4QSUGS]:

Items: 6 items – Self-Administered Questionnaire, Question 13 (o-t)

With regard to your spouse/partner:

- o. “How much do you really care about your spouse/partner?”
- p. “How much do you understand the way your spouse/partner feels about things”
- q. “How much do you appreciate your spouse/partner?”
- r. “How much can your spouse/partner rely on you for help if he/she has a serious problem?”
- s. “How much can your spouse/partner open up to you if he/she needs talk about his/her worries?”
- t. “How much can your spouse/partner relax and be his/herself around you?”

Coding: 1 A lot; 2 Some; 3 A little; 4 Not at all.

Scaling: The scales were constructed by reversing the item codes first and then computing the mean across all items for cases having no, or only 1, missing value.

Strain Given To Spouse/partner [C4QSTGS]:

Items: 6 items – Self-Administered Questionnaire, Question 13 (u-z)

- u. “How often do you make too many demands on your spouse/partner?”
- v. “How often do you make your spouse/partner feel tense?”
- w. “How often do you argue with your spouse/partner?”
- x. “How often do you criticize you spouse/partner?”
- y. “How often do you let your spouse/partner down when he/she is counting on you?”
- z. “How often do you get on your spouse/partner nerves?”

Coding: 1 A lot; 2 Some; 3 A little; 4 Not at all.

Scaling: The scales were constructed by reversing the item codes first and then computing the mean across all items for cases having no, or only 1, missing value.

Affectual Solidarity Given to Spouse/partner [C4QSOLGS] :

Items: 12 item scale combining the six “support to spouse” and six “strain to spouse” items.

Scaling: The scale is constructed by calculating the **mean** of the values of the items. Items

for the “support to spouse” were recoded, so that a high score signifies high levels of spousal affectual solidarity. The scale is computed for cases that had valid values for **at least one** item on the scale. For cases with only one missing value mean substitution is used.

Psychometrics:

SUPPORT GIVEN TO SPOUSE

Sample (N)	Alpha	Mean	Std. dev
M3 Total Sample (747)	.713	3.85	.278
M3 Main RDD Sample (360)	.710	3.85	.284
M3 Twin Sample (284)	.687	3.87	.243
M3 African American Sample (103)	.764	3.76	.381

STRAIN GIVEN TO SPOUSE

Sample (N)	Alpha	Mean	Std. dev
M3 Total Sample (747)	.777	1.99	.532
M3 Main RDD Sample (360)	.749	1.99	.503
M3 Twin Sample (284)	.756	1.99	.505
M3 African American Sample (103)	.901	2.03	.794

AFFECTUAL SOLIDARITY GIVEN TO SPOUSE

Sample (N)	Alpha	Mean	Std. dev
M3 Total Sample (747)	.756	3.43	.325
M3 Main RDD Sample (360)	.763	3.43	.322
M3 Twin Sample (284)	.715	3.44	.295
M3 African American Sample (103)	.823	3.37	.463

Source(s):

None.

SELF-CONTROL SCALE

Note: Throughout the following “R” indicates item is reverse coded before constructing the scale score.

Scales/Items:

Self-Control Scale [C4QSC_SC]

Items: 19 items – Self-Administered Questionnaire, Question 14 (a-s).

The following questions are about your views of yourself. Please circle the number that corresponds to how much you agree or disagree with the following statements.

- a. “I can make myself do things I don’t want to do.”
- b. “When something bad happens to me, I think of all the others who are much worse off than I am.”
- c. “I can control my thoughts and desires if I need to.”
- d. “It is important to me to be able to think, feel, and act differently depending on the needs and demands of the situation.”
- e. “One can be a better person only through changing one’s thoughts and feelings.”
- f. “It is important for me to be strong in body and mind.”
- g. “I control my emotions by changing the way I think about the situation I’m in.”
- h. “I keep my emotions to myself.”
- i. “When I’m faced with a stressful situation, I make myself think about it in a way that helps me stay calm.”
- j. “When I am feeling negative emotions (such as sadness or anger), I make sure not to express them.”
- k. “I am known as an emotional person.”(R)
- l. “It is important to me that I not bother others.”
- m. “I try to behave so as not to cause trouble to others.”
- n. “I sometimes worry that I am a burden on others.”
- o. “I know my own limitations.”
- p. “I do my best to maintain a calm mind.”
- q. “A top priority in my life is to do well what I am supposed to do.”
- r. “I feel very tense when I am being evaluated by others.”
- s. “I am often concerned about how other people might respond to me.”

Cognition Control [C4QSC_CC]:

Items: 6 items – Self-Administered Questionnaire, Question 14 (a-f).

Emotion Control [C4QSC_EC]:

Items: 6 Items – Self-Administered Questionnaire, Question 14 (g-k, p).

Burden Consciousness [C4QSC_BC]:

Items: 7 Items – Self-Administered Questionnaire, Question 14 (l, m, n, o, q, r, s).

Coding: 1 Strongly disagree; 2 Disagree; 3 Slightly disagree; 4 Neutral; 5 Slightly Agree; 6 Agree; 7 Strongly Agree

Scaling: The scales were constructed by reverse coding the flagged items and computing the mean across all items for cases having 0, or only 1, missing value.

Psychometrics:**SELF-CONTROL**

Sample (N)	Alpha	Mean	Std. dev
M3 Total Sample (747)	.699	4.99	.539
M3 Main RDD Sample (360)	.694	5.00	.522
M3 Twin Sample (284)	.715	4.96	.540
M3 African American Sample (103)	.685	5.07	.588

COGNITION-CONTROL

Sample (N)	Alpha	Mean	Std. dev
M3 Total Sample (747)	.634	5.36	.769
M3 Main RDD Sample (360)	.602	5.38	.730
M3 Twin Sample (284)	.670	5.34	.763
M3 African American Sample (103)	.698	5.38	.914

EMOTION CONTROL

Sample (N)	Alpha	Mean	Std. dev
M3 Total Sample (747)	.562	4.79	.781
M3 Main RDD Sample (360)	.572	4.78	.772
M3 Twin Sample (284)	.570	4.71	.784
M3 African American Sample (103)	.437	5.05	.756

BURDEN CONSCIOUSNESS

Sample (N)	Alpha	Mean	Std. dev
M3 Total Sample (747)	.607	4.85	.762
M3 Main RDD Sample (360)	.631	4.86	.755
M3 Twin Sample (284)	.611	4.83	.756
M3 African American Sample (103)	.527	4.84	.810

Source(s):

Markus, H. R.& Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review*. 98(2), 224-253.

Gross, J.J., & John, O.P. (2003). Individual differences in two emotion regulation processes: Implications for affect, relationships, and well-being. *Journal of Personality and Social Psychology*, 85, 348-362.

MINIMALIST WELL-BEING

Scales/Items:

Gratitude [C4QMWBGR]

Items: 5 items – Self-Administered Questionnaire, Question 15 (b, d, f, g, j)

- b. “I am grateful that I was born.”
- d. “I appreciate life, because it is full of moments like this.”
- f. “I feel grateful that I am alive.”
- g. “To me, my existence here and now, by itself, has meanings.”
- j. “Other people can make me happy.”

Positive Disengagement [C4QMWBPDP]* : New at Refresher

Items: 5 items – Self-Administered Questionnaire, Question 15 (a, c, e, h, i)

- a. “I take things as they are.”
- c. “It feels good to do nothing and relax.”
- e. “I am satisfied when I have no obligations and nothing to do.”
- h. “I feel free when I spend all my time just for myself.”
- i. “I like to walk around by myself with no specific aim.”

Coding: 1 Strongly disagree; 2 Somewhat disagree; 3 A little disagree ; 4 Don’t know; 5 A little Agree; 6 Somewhat agree; 7 Strongly agree

Scaling: Gratitude and Positive Disengagement were constructed by calculating the **sum** of each set of items. Higher scores reflect greater levels of well-being.

Missing Values: For an item with a missing value, the mean value of completed items is imputed. The scales are computed for cases that have **at least one** item with valid value on the particular scale.

Psychometrics:

GRATITUDE

Sample (N)	Alpha	Mean	Std. dev
M3 Total Sample (747)	.671	29.70	3.854
M3 Main RDD Sample (360)	.688	29.60	3.814
M3 Twin Sample (284)	.674	29.97	3.666
M3 African American Sample (103)	.643	29.32	4.456

POSITIVE DISENGAGEMENT

Sample (N)	Alpha	Mean	Std. dev
M3 Total Sample (747)	.662	22.74	5.077
M3 Main RDD Sample (360)	.673	22.86	4.979
M3 Twin Sample (284)	.665	22.38	5.048
M3 African American Sample (103)	.623	23.37	5.460

Source(s):

Kan, C., Karasaw, M. & Kitayama, S. (2009). Minimalist in Style: Self, Identity and Well-being in Japan. *Self and Identity*, 8, 300-317.

SUBJECTIVE WELL-BEING SCALE

Scales/Items:

Subjective Happiness Scale¹:

Items: 1 item – Self-Administered Questionnaire, Question 16a.

The next questions are about your evaluations of your life overall. Please circle the number that corresponds to how much you agree or disagree with the following statements.

a. “Compared to most of my peers, I consider myself to be more happy.”

¹ Item is taken from Lyubomirsky & Ross (1997) below.

Satisfaction With Life Scale² [C4QSW_SL]

Items: 5 items – Self-Administered Questionnaire, Question 16 (b-f).

The next questions are about your evaluations of your life overall. Please circle the number that corresponds to how much you agree or disagree with the following statements.

b. “In most ways my life is close to my ideal.”

c. “The conditions of my life are excellent.”

d. “I am satisfied with my life.”

e. “So far I have gotten the important things I want in life.”

f. “If I could live my life over, I would change almost nothing.”

² From Pavot & Diener (1993) below.

Gratitude Scale³ [C4QSW_GR]

Items: 2 items – Self-Administered Questionnaire, Question 16 (g-h).

The next questions are about your evaluations of your life overall. Please circle the number that corresponds to how much you agree or disagree with the following statements.

g. “I have so much in life to be thankful for.”

h. “I am grateful to a wide variety of people.”

³ Items taken from McCullough, Emmons & Tsang (2002) below.

Coding: 1 Strongly disagree; 2 Disagree; 3 Slightly disagree; 4 Neutral; 5 Slightly Agree; 6 Agree; 7 Strongly Agree

Scaling: The scales were constructed by computing the mean across all items.

Psychometrics:**SUBJECTIVE HAPPINESS**

Sample (N)	Alpha	Mean	Std. dev
M3 Total Sample (747)	---	4.83	1.357
M3 Main RDD Sample (360)	---	4.85	1.249
M3 Twin Sample (284)	---	4.78	1.345
M3 African American Sample (103)	---	4.90	1.729

SATISFACTION WITH LIFE SCALE

Sample (N)	Alpha	Mean	Std. dev
M3 Total Sample (747)	.875	5.03	1.261
M3 Main RDD Sample (360)	.859	5.07	1.188
M3 Twin Sample (284)	.879	5.15	1.228
M3 African American Sample (103)	.893	4.56	1.498

GRATITUDE SCALE

Sample (N)	Alpha	Mean	Std. dev
M3 Total Sample (747)	.731	6.31	.833
M3 Main RDD Sample (360)	.734	6.32	.822
M3 Twin Sample (284)	.717	6.35	.744
M3 African American Sample (103)	.744	6.12	1.067

Source(s):

- 1) Lyubomirsky, S. & Ross, L. (1997). Hedonic consequences of social comparison: A contrast of happy and unhappy people. *Journal of Personality & Social Psychology*, 73, 1141-1157 (1 of 4 items)
- 2) Pavot, W., & Diener, E. (1993). Review of the Satisfaction with Life Scale. *Psychological Assessment*, 5, 164-172.
- 3) McCullough, M. E., Emmons, R. A., & Tsang, J. (2002). The grateful disposition: A conceptual and empirical topography. *Journal of Personality & Social Psychology*, 82, 112-127. (2 of 6 items).

UCLA LONELINESS SCALE

Scales/Items:

UCLA Loneliness Scale [C4QLONEL]*: New at Refresher

Items: 7 items – Self-Administered Questionnaire, Question 17(a-g)

- a. “There is no one I can turn to.”
- b. “No one really knows me well.”
- c. “I feel isolated from others.”
- d. “There are people who really understand me.” (R)
- e. “People are around me but not with me.”
- f. “There are people I can talk to.” (R)
- g. “There are people I can turn to.” (R)

Coding: 1 Never; 2 Rarely; 3 Sometimes; 4 Often.

Scaling: The scale is constructed by calculating the **sum** of the values of the items.

Missing Values: For an item with a missing value, the mean value of completed items is imputed. The scale is computed for cases that had have 0 or 1 missing item.

Psychometrics:

UCLA Loneliness Scale

Sample (N)	Alpha	Mean	Std. dev
M3 Total Sample (747)	.846	12.12	4.136
M3 Main RDD Sample (360)	.860	12.14	4.167
M3 Twin Sample (284)	.844	11.45	3.858
M3 African American Sample (103)	.765	13.93	4.269

Source(s):

Russell, Daniel W. 1996. “UCLA Loneliness Scale (Version 3): Reliability, Validity, and Factor Structure. Journal of Personality Assessment, 66(1), p. 20-40.

Kudo T, Nishikawa M. 1983. “A study of the feeling of loneliness (1): The reliability and validity of the revised UCLA Loneliness Scale.” The Japanese Journal of Experimental Social Psychology, 22(2):99–108.

SUBJECTIVE WELL-BEING: JAPANESE COMPARISON SCALE

Based on the MIDJA pilot and the Everyday Well-Being Study. The items are expected to be important components of a “good” life in Japan.

Scales/Items:

Subjective Well-Being: Japanese comparison Scale [C4QSW_JP]:

Items: 8 items – Self-Administered Questionnaire, Question 18(a-h).

How important do you think the following things are for having a good life? Please circle the appropriate number for each item. It is important to...

- a. “Be critical and reflect upon your actions.”
- b. “Be needed by others.”
- c. “Be in harmony with others and surrounding events.”
- d. “Have the ability to make a good effort at something and stick to it.”
- e. “Have a sense of peace and satisfaction.”
- f. “To receive sympathy from others.”
- g. “To receive respect from others.”
- h. “To give something back to society.”

Coding: 1 Not at all important; 2 Somewhat important; 3 Very important; 4 Extremely important.

Scaling: The scale was constructed by computing the mean across all items for cases having 0, or only 1, missing value.

Psychometrics:

Subjective Well-Being Japanese Comparison

Sample (N)	Alpha	Mean	Std. dev
M3 Total Sample (747)	.763	2.90	.462
M3 Main RDD Sample (360)	.769	2.89	.460
M3 Twin Sample (284)	.737	2.91	.437
M3 African American Sample (103)	.808	2.87	.532

Source(s):

This is a newly developed scale to assess well-being in a way that is more sensitive to the Japanese cultural context. Item selection was influenced by the following:

- Uchida, Y., Norasakkunkit, V., & Kitayama, S. (2004). Cultural constructions of happiness: theory and empirical evidence. *Journal of happiness studies* 5: 223-239.
- Kitayama, S. & Markus, H.R. (2000). The pursuit of happiness and the realization of sympathy: Cultural patterns of self, social relations, and well-being. In E. Diener & E. M. Suh (Eds.), *Cultural and subjective well-being* (pp.113-161). Cambridge, MA: MIT Press.
- Kitayama, S., Markus, H.R., & Kurokawa, M. (2000). Culture, emotion and well-being: Good feelings in Japan and the United States. *Cognition and Emotion*, 14, 93-124.
- Kitayama, S., Mesquita, B., & Karasawa, M. (2006). Cultural affordances and emotional experience: Socially engaging and disengaging emotions in Japan and the United States. *Journal of Personality and Social Psychology*, 91, 890-903.

SYMPTOMS AND CONDITIONS

Total Number of OTHER Symptoms and Conditions [C4H1TOTH]:

Items: Medical History Interview, Question 1x, y and othy

(Are there any other conditions (conditions 1, 2, additional others)?)

Coding: 1 Yes; 2 No.

Scaling: [C4H1TOTH] is constructed by counting the number of “Yes” responses to items X and Y, and then adding (counted via a separate process in Excel) the number of additional conditions recorded at Othy.

Missing Values: [C4H1TOTH] is computed for all cases having at least one valid response to this set of items.

Total Number of Symptoms and Conditions (Ever) [C4HSYMN]:

Items: Medical History Interview, Question 1a-w, plus the total # of ‘other’ conditions reported.

(Have you ever had any of the following conditions/illnesses?)

Coding: 1 Yes; 2 No.

Scaling: [C4HSYMN] is constructed by counting the **total number** of “Yes” responses to the questions and adding the value of [C4H1TOTH].

Note: Items X and Y in this set allow the respondent to report “Other” conditions or symptoms not included on the list. Sometimes respondents reported more than two “Other” conditions. Computation of the total number of “Other” conditions [C4H1TOTH] is described above.

Missing Values: [C4HSYMN] is computed for all cases having at least one valid response to this set of items.

Any Symptoms and Conditions? [C4HSYMX]:

Items: A dummy variable based on [C4HSYMN]

= 1 if [C4HSYMN] is greater than or equal to 1

= 0 if [C4HSYMN] is 0

COUNTS OF HEALTH EVENTS

Total Number of Broken Bones (Ever) [C4HBRKB]:

Items: Medical History Interview, Question 2 and 2a-n.

(Have you ever broken a bone? If yes, have you broken your....? If yes, how often?)

Coding: Number of times respondent reports having broken the indicated bone.

Scaling:

If the response to Q2 is No, then [C4HBRKB] is 0.

If the response to Q2 is Yes, then [C4HBRKB] is constructed by summing across items 2a-n.

Missing Values: [C4HBRKB] is computed for all cases.

Total Number of Surgeries (Ever) [C4HSURG]:

Items: Medical History Interview, Question 13 and 13a-j.

(Have you had surgery? If yes, describe each surgery.)

Coding: Number of times respondent reports having had any type of surgery.

Scaling:

If the response to Q13 is No, then [C4HSURG] is 0.

If the response to Q13 is Yes, then [C4HSURG] is constructed by summing across items 13a-j.

Missing Values: [C4HSURG] is computed for all cases.

Total Number of Head Injuries (Ever) [C4HHEAD]:

Items: Medical History Interview, Question 14 and 14a-c.

(Have you had a head injury? If yes, describe each head injury.)

Coding: Number of times respondent reports having had any type of surgery.

Scaling:

If the response to Q14 is No, then [C4HHEAD] is 0.

If the response to Q14 is Yes, then [C4HHEAD] is constructed by summing across items 14a-c.

Missing Values: [C4HHEAD] is computed for all cases.

Total Number of Joint Injuries (Ever) [C4HJNT]:

Items: Medical History Interview, Question 15 and 15a-c.

(Have you had a joint injury? If yes, describe joints (knee, shoulder, etc.) and injury.)

Coding: Number of times respondent reports having had any type of joint injury.

Scaling:

If the response to Q15 is No, then [C4HJNT] is 0.

If the response to Q15 is Yes, then [C4HJNT] is constructed by summing across items 15a-c.

Missing Values: [C4HJNT] is computed for all cases.

Total Number of Motor Vehicle Accident Injuries (Ever) [C4HMVA]:

Items: Medical History Interview, Question 16 and 16a-d.

(Have you ever been injured in a motor vehicle accident? If yes, describe the injury.)

Coding: Number of times a respondent reports having been injured in any type of motor vehicle accident.

Scaling:

If the response to Q16 is No, then [C4HMVA] is 0.

If the response to Q16 is Yes, then [C4HMVA] is constructed by summing across items 16a-d.

Missing Values: [C4HMVA] is computed for all cases.

Total Number of Permanent Amputations [C4HAMPU]:

Items: Medical History Interview, Question 17 and 17a-c.

(Have you permanently lost all or part of a limb (including tip of a finger or toe)? If yes, describe the amputation.)

Coding: Number of times a respondent reports having permanently lost all or part of a limb.

Scaling:

If the response to Q17 is No, then [C4HAMPU] is 0.

If the response to Q17 is Yes, then [C4HAMPU] is constructed by summing across items 17a-c.

Missing Values: [C4HAMPU] is computed for all cases.

Total Number of Other Major Injuries, Illnesses or Other Health Events Requiring Hospitalization (Ever) [C4HOHLTH]:

Items: Medical History Interview, Question 18 and 18a-d.

(Have you had any other major injuries, illnesses, or other health events that may or may not have required hospitalization? If yes, describe other injuries/illnesses.)

Coding: Number of times respondent reports having had other major injuries, illnesses or other health events.

Scaling:

If the response to Q18 is No, then [C4HOHLTH] is 0.

If the response to Q18 is Yes, then [C4HOHLTH] is constructed by summing across items 18a-d.

Missing Values: [C4HOHLTH] is computed for all cases.

MIDUS HEALTHY EATING INDEX

MIDUS Healthy Eating Index[C4HMHEI]

Items: Medical History Interview, this index included sets of questions about dietary habits.

- Q37b. Yogurt (including frozen yogurt) # of servings (8oz=1 serving)
- Q37c. Cheese # of servings (1oz=1 serving)
- Q41. On an average DAY, how many sugared beverages do you drink (e.g. soda, sports drinks, bottled drinks, fruit drinks)?
- Q45. On an average DAY, how many servings of fruit and vegetables do you eat (include 100% juice)?
- Q46. On an average DAY, how many servings of whole grain do you eat (e.g. oatmeal, whole grain bread or bagels, whole wheat cereal, brown rice, whole wheat pasta)
- Q47a. In an average WEEK, how often do you eat ocean (oily) fish? (tuna, salmon, mackerel)
- Q47b. In an average WEEK, how often do you eat beef or high fat meat (e.g. fried chicken, ribs, sausage)
- Q47c. In an average WEEK, how often do you eat lean meat (white meat chicken or poultry, lean beef or pork)
- Q47d. In an average WEEK, how often do you eat non-meat protein foods (e.g. tofu, seitan, soy or other bean/legumes, nuts, or nut butters)
- Q48. In an average WEEK, how often do you eat at a fast food restaurant or order food for takeout or delivery?
- Q50. During the past month, have you had at least one drink of any alcoholic beverage such as beer, wine, wine coolers, or liquor?
- Q51. During the past month, how often did you drink any alcoholic beverages, on the average?
- Q53. Now think about the types of alcohol you drink. We define one 'drink', as either a 12 ounce can or bottle of beer, a wine cooler, a 5-ounce glass of wine, a 1.5 ounce shot of liquor, or a mixed drink made with 1.5 ounces of hard liquor. With this definition in mind, on an average day when you drink how much...
 - a. Beer do you drink? # of Beers (12 oz)
 - b. Wine do you drink? # of glasses of Wine (5 oz)
 - c. Liquor shots or mixed drinks do you drink? # OF Liquor shots /Mixed Drink (1.5 oz) _____

d. How much of any other type of alcohol do you drink? # of Other Drinks?

Q54. Considering all types of alcoholic beverages, how many times during the past month did you have 5 or more drinks on the same occasion?

Coding: See following table for coding/scoring summary

MIDUS-HEI Component	Minimal score (0 points)	Intermediate score (0.5 points)	Maximal score (1 points)	Maximal double score (2 points)
Vegetables & fruits (servings/day)	None	1-2	3-4	≥5
Whole grains (servings/day)	None	1-2	≥3	N/A
Oily fish (servings/week)	<1	1-2	≥3	N/A
Lean meat (servings/week)	<1	1-2	≥3	N/A
Non meat protein food (servings/week)	<1	1-2	≥3	N/A
Sugared beverages (servings/day)	≥4	1-3	None	N/A
High fat meat (servings/week)	≥3	1-2	<1	N/A
Fast food (times/week)	≥1	<1	None	N/A
Fermented dairy (servings/day)	<1 or ≥5	(1 to <2) or (4 to <5)	≥2 and <4	N/A
Alcohol	<ul style="list-style-type: none"> Do not drink or Drink <1 day/week; >3 drinks per occasion in women; >4 drinks pre occasion in men 	<ul style="list-style-type: none"> Drink >1 days/week 2-3 drinks per occasion in women 3-4 drinks per occasion in men <1 drink per occasion 	<ul style="list-style-type: none"> Drink >1 days/week 1-<2 drinks per occasion in women 1-<3 drinks per occasion in men 	N/A

Scaling: The MIDUS Healthy Eating Index is constructed by sum all the coded items listed above, value ranges from minimum of 0 to maximum of 11.

Notes. Only for the combined vegetables and fruits component, the maximal score was 2 points, all other items were coded as 0, 0.5, or 1.

Missing Values: [C4HMHEI] is computed for all cases with valid value for all components. If any of the items is missing, 98 were used to indicate 'NOT CALCULATED (Due to missing data)'.

Source(s):

Echeverría, G., Berkowitz, L., Love, G.D., Ryff, C.D., Rigotti, A., 2023. "Assessment of dietary quality in American adults and its association with sociodemographic and metabolic syndrome-related biomarkers: Comparison of two samples from Midlife in the United States (MIDUS) study". Manuscripts submitted to **JMIR Public Health and Surveillance** (under review).

FAMILY MEDICAL HISTORY

Total Other Family Medical Conditions [C4H75TOTH]:

Items: Medical History Interview, Question 74, 74a, 75r, 75s, 75othy.

(Are you adopted? If No, do you know the medical history of your natural (or biological) mother, father, sisters or brothers? If yes, has anyone in your immediate family (blood relatives only) had any OTHER conditions? If yes, which family members?)

Coding: 1 Yes; 2 No.

Scaling: [C4H75TOTH] is constructed by counting the number of “Yes” responses to items R and S and then adding (counted via a separate process in Excel) the number of additional other conditions recorded at Q75othy.

Missing Values: [C4H75TOTH] is not computed if the respondent is adopted (Yes, at Q74) and/or reports having no knowledge of the medical history of his or her natural mother, father etc. and is coded as “99” for INAPP.

Total Number of Family Medical Conditions (Ever) [C4HFMHN]:

Items: Medical History Interview, Question 74, 74a, 75 and 75a-q, plus the total # of ‘other’ family medical conditions reported.

(Are you adopted? If No, do you know the medical history of your natural (or biological) mother, father, sisters or brothers? If yes, has anyone in your immediate family (blood relatives only) had...? If yes, which family members?)

Coding: 1 Yes; 2 No.

Scaling: [C4HFMHN] is constructed by counting the **total number** of “Yes” responses to the questions and adding the value of [C4HTOTH].

Note: Items R and S in this set allow the respondent to report “Other” conditions or symptoms not included on the list. Sometimes respondents reported more than two “Other” conditions. The total number of “Other” conditions is entered as variable [C4HTOTH].

Missing Values: [C4HFMHN] is not computed if the respondent is adopted (Yes, at Q74) and/or reports having no knowledge of the medical history of his or her natural mother, father, etc. and is coded as “99” for INAPP.

Any conditions in immediate family? [C4HFMHX]:

Items: A dummy variable based on [C4HFMHN]
= 1 if [C4HFMHN] is greater than or equal to 1

= 0 if [C4HFMHN] is 0
= 9 if [C4HFMHN] is 9

METABOLIC EQUIVALENT OF TASK (MET)

Total number of MET minutes per week [C4HMETMW]

Items: Medical History Interview Question set 73-73h ([C4H73] TO [C4H73HI]). This set of items assesses regular exercise or activity performed by the participant.

73. We define 3 general types of regular exercise or activity. It can be:

VIGOROUS- Which causes your heart to beat so rapidly you can feel it in your chest and you perform it long enough to work up a good sweat and breathe heavily (e.g., competitive sports, running, vigorous swimming, high intensity aerobics, digging in the garden, or lifting heavy objects).

MODERATE- Which causes your heart rate to increase slightly and you typically work up a sweat (e.g., leisurely sports like light tennis, slow or light swimming, low intensity aerobics or golfing without a power cart, brisk walking, mowing the lawn with a walking lawnmower).

LIGHT - Which requires little physical effort (e.g., light housekeeping like dusting or laundry, bowling, archery, easy walking, golfing with a power cart or fishing).

Keeping in mind our definitions of vigorous, moderate and light levels of activity, in general, do you engage in regular exercise, or activity, of any type for 20 minutes or more at least 3 times/week?

73a. Please name one type of exercise/activity that you do.

73as. Is this a seasonal activity? If so, which season(s)?

73afd. How many times per day do you do this activity/exercise?*

73afw. How many times per week do you do this activity/exercise?*

73am. What is the average number of minutes that you exercise per session?*

73ai. What is the intensity of this activity/exercise?*

1=VIGOROUS, 2=MODERATE, 3=LIGHT

*Item is used on computing MET value

Coding: Number of MET minutes per week respondent reports engaging in any regular exercise/physical activity.

Scaling:

If Q73 is No, then [C4HMETMW] is 0.

If Q73 is Yes, then [C4HMETMW] is constructed by multiplying the number of times per week [e.g., C4H73AFD*C4H73AFW] by the average number of minutes per session [e.g., C4H73AM] by an intensity factor [6=vigorous, 3=moderate, 1.1 = light] and summing across all reported activities.

Notes. In accordance with definitions from the American College of Sports Medicine and the American Heart Association, self-reported vigorous activity is assigned a value of 6 METs, moderate exercise is assigned a value of 3 METs, and light activity is assigned a value of 1.1 METs.

Missing Values: [C4HMETMW] is computed for all cases with valid value for exercise time and intensity. [C4HMETMW] is assigned a value of 0 if participant reports “No” (2) on engaging in regular exercise, or activity, of any type for 20 minutes or more at least 3 times/week [C4H73]? When no valid exercise time or intensity were available, 99998 were used to indicate ‘NOT CALCULATED (Due to missing data)’.

Source(s):

Haskell, W. L., Lee, I.-M., Pate, R. R., Powell, K. E., Blair, S. N., Franklin, B. A., ... Bauman, A. (2007). Physical Activity and Public Health. *Medicine & Science in Sports & Exercise*, 39(8), 1423–1434. <http://doi.org/10.1249/mss.0b013e3180616b27>.

MARITAL STATUS

Marital Status at Medical History Interview [C4HMARR]

Items: Medical History Interview Questions 82 and 85.

Q82 [C4H82]. Now I'd like to ask about experiences you've had since you completed MIDUS phone interview in (date). At that time, you indicated that you were (Status at phone interview). Is this still the case?

Q85 [C4H85]. What is your current marital status?

and Survey Project Phone Interview Questions B19, B30.

B19. [C1PB19] Are you married, separated, divorced, widowed, or never married?

B30. [C1PB30] Are you currently living with someone in a steady, marriage-like relationship?

Coding: There are marital status 6 categories:

- 1 "MARRIED"
- 2 "SEPARATED"
- 3 "DIVORCED"
- 4 "WIDOWED"
- 5 "NEVER MARRIED"
- 6 "LIVING W/ SOMEONE".

Scaling: Information about marital status at the Survey Project phone interview is combined with new information about change in marital status since then to create a single variable indicating marital status at the Biomarker clinic visit.

If marital status changed, [C4H82] = 2, then C4HMARR = [C4H85]

If marital status did not change, [C4H82] = 1, then C4HMARR = [C1PB19] or [C1PB30]

Missing Values: [C4HMARR] is computed for all cases.

COUNTS OF INTERVENING EVENTS

Total Number of Significant Deaths (Since P1 Interview) [C4HDIED] :

Items: Medical History Interview, Question 86 and 86a-e.

(Now I'd like to ask about (other/any) losses you may have experienced. Has anyone (else) close to you, a close friend or relative, passed away since we last interviewed you in (_____)?)

Coding: Number of times respondent reports losing someone close friend or relative.

Scaling:

If the response to Q86 is No, then [C4HDIED] is 0.

If the response to Q86 is Yes, then [C4HDIED] is constructed by summing across items 86a-e.

Missing Values: [C4HDIED] is computed for all cases.

Total Number of Other Major Events (Since P1 Interview) [C4H87TOT]:

Items: Medical History Interview, Question 87, 87a1-a5, and 87a6x

(Are there any other things, either positive or negative that have happened to you or your family or close friends since you completed the MIDUS Phone Interview in (_____) that stand out in your memory?)

Coding: Number of events reported by respondent.

Scaling:

If the response to Q87 is No, then [C4H87TOT] is 0.

If the response to Q87 is Yes, then [C4H87TOT] is constructed by summing across items 87a1-a5 and the adding the number of events listed at 87a6x. This number is obtained via separate process in Excel.

Missing Values: [C4H87TOT] is computed for all cases.

MEDICATION USE

Total number of medications R was taking (Current) [C4XTM]:

Items: Medication Chart, A count variable, sum the number of prescription medications [C4XPM], the number of Over-the-Counter medications [C4XOM], and the number of alternative medications [C4XAM].

Taking Any Prescription Medications (Current) [C4XPMD]:

Items: Medication Chart, A dummy variable based on [C4XPM]
= 1 if [C4XPM] is greater than or equal to 1
= 2 if [C4XPM] is 0

Taking Any Over the Counter Medications (Current) [C4XOMD]:

Items: Medication Chart, A dummy variable based on [C4XOM]
= 1 if [C4XOM] is greater than or equal to 1
= 2 if [C4XOM] is 0

Taking Any Alternative Medications (Current) [C4XAMD]:

Items: Medication Chart, A dummy variable based on [C4XAM]
= 1 if [C4XAM] is greater than or equal to 1
= 2 if [C4XAM] is 0

BODY INDICES

Body Mass Index [C4PBM1]:

Items: Biomarker Physical Exam Question 1a-b.

(Height, Weight)

Coding: Measurement obtained by staff.

Scaling: [C4PBM1] is computed by dividing weight (in kilograms) by height squared (in meters. Height measure (in centimeters) was divided by 100 to get the height in meters.

Missing Values: [C4PBM1] is not computed if there is missing data for either measurement and is coded as “999998” for MISSING.

Note(s):

1. The MIDUS 3 Survey data also include a composite Body Mass Index (BMI) variable (see the MIDUS 3 Project 1 Documentation of Psychosocial Constructs and Composite Variables for details) based on measurements based on self-reported data. The Biomarker measures are obtained by clinical staff according to a standardized protocol and are thus more accurate. Consequently, the adjustments applied to BMI ratios based on self-report measures are not applied to the biomarker measures.

Average of 2nd and 3rd Systolic [C4P1GS23] and Diastolic [C4P1GD23] Blood Pressure:

Items: Biomarker Physical Exam Question 1f2s & d, 1f3s & d

(BP sitting – 2nd and 3rd measurements)

Coding: Measurement obtained by staff.

Scaling:

[C4P1GS23] is computed by taking the mean of the second and third systolic blood pressure measurements.

[C4P1GD23] is computed by taking the mean of the second and third diastolic blood pressure measurements.

Scaling is based on the protocol used in the MacArthur Study of Successful Aging.

Missing Values: [C4P1GS23] and [C4P1GD23] are not computed if there is missing data for either measurement and are coded as “998” for MISSING.

Source(s):

Gruenewald, T.L., Seeman, T.E., Ryff, C. D., Karlamangla, A.S., and Singer, B.S. 2006.

“Combinations of biomarkers predictive of later life mortality.” *Proceedings of the National Academy of Sciences*, 103(38), p.14158-14163.

Waist to Hip Ratio [C4PWHR]:

Items: Biomarker Physical Exam Question 2a and 2c.

(Waist, Hip 2: Maximum extension)

Coding: Measurement obtained by clinical staff using a Gulik Tape Measure (see Physical Exam documentation for details).

Scaling: [C4PWHR] is computed by dividing waist measurement (in centimeters) by the maximum hip extension measurement (in centimeters). A filter variable [C4PWHRF] is also created to flag cases with values more than 4 standard deviations above or below the mean.

Missing Values: [C4PWHR] is not computed if there is missing data for either measurement and is coded as “999998” for MISSING.

Note(s):

The MIDUS 3 Survey data also include a composite Waist to Hip Ratio variable (see the MIDUS 3 Survey (Project 1) Documentation of Psychosocial Constructs and Composite Variables for details) based on measurements obtained by the respondent using a tape measure included with the Self-Administered Questionnaire. The Biomarker measures are obtained by clinical staff using a Gulik Tape measure according to a standardized protocol and are thus more accurate. Consequently, the adjustments applied to waist-to-hip ratios based on self-report measures are not applied to the biomarker measures. Rather, extreme values are flagged using the filter variable [C4PWHRF] identified above.

HOMA-IR: Insulin Resistance [C4BHOMAIR]:

Item: Blood fasting glucose level in mg/dL, Blood fasting insulin levels in uIU/mL.

Scaling: $([C4BGLUC] * [C4BINSLIN]) / 405$

Missing Values: [C4BHOMAIR] is not computed if there is missing data for either measurement.

Source:

Matthews. D.R. et al., Homeostasis model assessment: insulin resistance and beta-cell function from fasting plasma glucose and insulin concentrations in man. Diabetologia, 1985. 28(7): p. 412-9.

Glomerular Filtration Rate [C4BGFR]:

Items: Urine and Serum Creatinine levels, urine volume and urine collection period in hours.

Coding: Measurement obtained by staff and laboratory assay.

Scaling: GFR is computed as follows:

$$\text{GFR} = [\text{Ur. Creatinine} * \text{Ur. Volume}] / [\text{Serum Creatinine} * \text{Time (of urine collection)}]$$

The above is divided by 60 to convert to a filtration rate of ml/minute.

Missing Values: [C4BGFR] is not computed if there is missing data for any of the items.

12 hour values for Norepinephrine [C4BNE12], Epinephrine [C4BEPI12], and Dopamine [C4BDOP12] (ug/12h):

Items: Urine norepinephrine, epinephrine, and dopamine values (ug/dL) and Urine Volume (mL).

Coding: Measurements obtained from laboratory assay.

Scaling: Values adjusted to 12 hour collection period are computed as follows:

$$((\text{Urine Volume} * \text{Catecholamine ug/dL}) / 100)$$

Missing Values: [C4BNE12], [C4BEPI12], [C4BDOP12], are not computed if 1) the collection period is less than 11 hours, 2) the collection period is greater than 13 hours, or 3) there is missing data for any of the items.

Creatinine Adjusted Norepinephrine [C4BNOCRE], Epinephrine [C4BEPCRE], and Dopamine [C4BDOCRE] (ug/g):

Items: Urine norepinephrine, epinephrine, and dopamine values (ug/dL) and Urine Creatinine (mg/dL).

Coding: Measurements obtained from laboratory assay.

Scaling: Creatinine adjusted levels are computed as follows:

$$(\text{Catecholamine ug/dL}) / (\text{Urine Creatinine mg/d} * .001)$$

Missing Values: [C4BNOCRE], [C4BEPCRE], [C4BDOCRE], are not computed if there is missing data for any of the items.