

# Collaborating Center for Questionnaire Design and Evaluation Research

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## A Mixed Method Evaluation of the Whole Person Health Index

By: Paul Scanlon, PhD, Stephanie Willson, PhD

### INTRODUCTION

Whole Person Health (WPH) is a holistic approach to understanding health that incorporates factors such as physical and mental health, social connectiveness, stress, and sleep. In comparison to other conceptual models of health, WPH explicitly combines a medical model with psychosocial and environmental factors (2). The National Institutes of Health's (NIH) National Center for Complementary and Integrative Health (NCCIH) has supported extensive research on approaches to conceptualizing, measuring, and tracking WPH (1). However, there is a lack of consensus on which specific dimensions of health should be included in the conceptualization of WPH. Furthermore, most attempts at collecting WPH information have occurred in clinical settings, and not on a population level such as via a household survey (3).

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In collaboration with the National Center for Health Statistics (NCHS), NCCIH has attempted to address these challenges by proposing the Whole Person Health Index (WPHI), a short set of questions that has been released publicly for use across clinical and population settings (4). The specific dimensions of WPH included on the WPHI were identified by NCCIH after extensive review and outreach, including a public request for information (RFI) and stakeholder meeting in 2022 (5, 6). From these outreach exercises, NCCIH decided to focus on measuring subjective assessments of health status and individual-level causal factors and exclude physical and social environmental factors (e.g. neighborhood characteristics, housing, education, and employment). Given this focus, NCCIH proposed that the WPHI would focus on nine dimensions of WPH, and would ask respondents to rate their overall general health (typically referred to as “self-rated health”), as well as their quality of life, social and family connections, diet, physical activity, stress, sleep, spiritual wellbeing, and ability to manage their health. In order to limit the potential response burden each of the nine dimensions in the WPHI is measured by a single item, and all items would use the same response scale (“Excellent,” “Very Good,” “Good,” “Fair,” and “Poor”), which matches the response options typically used to measure self-rated health in the United States (7).



The overall goal of developing and releasing the WPHI is to facilitate the collection of information on these dimensions at the population level to further examine WPH's association with health indicators such as mortality, illness, and functional limitations. As a preliminary step in this process, NCCIH worked with NCHS' Collaborating Center for Questionnaire Design and Evaluation Research (CCQDER) to design and implement an iterative question evaluation study to test potential survey questions that capture these nine dimensions of WPH that could be used on national household health surveys such as the National Health Interview Survey (NHIS). This study, conducted in the summer and fall of 2024, was designed as a mixed method evaluation, using both qualitative analysis of cognitive interviews and quantitative analysis of NCHS' Research and Development Survey (RANDS) data. Mixed method approaches, such as this one, attempt to leverage the strengths of both qualitative and quantitative evaluation approaches to arrive at a complete understanding of how survey questions function. The specific purpose of CCQDER's study was to evaluate whether the individual WPHI items accurately capture the underlying dimension of WPH that each purports to measure.

## METHODOLOGY

### Samples

#### *Cognitive Interviews*

As a qualitative method, cognitive interviewing employs a purposive, non-random sample design whereby individuals are chosen on the basis of characteristics relevant to the questions under investigation (8). For this project, recruitment criteria focused on obtaining respondents in a variety of age categories to sample people with and without chronic health conditions.

#### *Research and Development Survey*

Quantitative evaluation of the NCCIH WPHI items is based on data from NCHS' Research and Development Survey (RANDS), round 10. RANDS is NCHS' methodological research survey system, which uses commercially available, statistically sampled online survey panels as its primary sample source. RANDS 10 was conducted in April and May of 2024, was fielded for NCHS by NORC at the University of Chicago using their statistically sampled AmeriSpeak panel as the primary sample source (9).

The RANDS 10 AmeriSpeak sample included 6,342 panelists, 5,017 of whom completed the survey for a completion rate of 79.1% (and a weighted cumulative response rate, which incorporates the completion rate as well as the panel recruitment and attrition rates, of 15.8%). Of these complete cases, 4,588 were from respondents answering the survey via the web, while 429 were conducted using outbound telephone interviews.

### Study design

#### *Cognitive Interviews*

Forty cognitive interviews were conducted in the Summer of 2024. The questionnaire used for the cognitive interviews included the WPHI items (presented in Table A) and a series of other questions undergoing unrelated evaluation (on social isolation and discrimination, see Appendix II for the full questionnaire used during the cognitive interviews). Because the questions were designed for interviewer administration, the cognitive interviews were conducted in two segments. First the cognitive interviewer asked all the questions to respondents and recorded their answers. The interviewer then followed up with retrospective probes to ascertain respondents' understandings of the questions, rationales for their answers, and whether any response difficulty occurred. Interviews were a maximum of 60 minutes in length and took place both in person and virtually using the Zoom for Government internet meeting platform. Respondents were given a remuneration of \$50 at the conclusion of the interview. The cognitive interviews (as well as the RANDS survey) received both Office of Management and Budget (OMB) and CDC Human Subjects approval.

## RANDS 10

RANDS 10 was conducted for NCHS by NORC at the University of Chicago using their probability-based AmeriSpeak panel as the primary sample source. A total of 5,017 responses were collected for RANDS 10 from the AmeriSpeak panel. The RANDS 10 questionnaire (see Appendix B) included the nine WPHI items and a series of follow-up measures used to compare respondents' answers to the WPHI questions and the dimensions they were designed to measure. This design allowed for evaluating internal validity by correlating the WPHI items against one another, and external validity by comparing individual WPHI items to known measures. Table A provides an overview of the WPHI dimensions, as well as the question wordings used for the cognitive interviews and for RANDS 10. Of note, three items' question wordings were changed between the cognitive interviews and RANDS: self-rated health, diet, and spirituality. The self-rated health wording used in the cognitive interviews was not standard and was worded the way it was to match the structure of the other WPHI items; for RANDS the wording was changed back to the standard form that is found across NCHS surveys including the NHIS. The diet item's wording was altered to limit the broad interpretation of the question (see the cognitive interviewing findings below) and focus the respondent by asking them to specifically judge themselves against a "healthy" diet. Finally, the spirituality item was revised to exclude the explicit reference to "God," as analysis of the cognitive interviews indicated that this caused some confusion over whether the question was asking about spirituality or organized religion.

Table A: Whole Person Health Index dimensions, cognitive interviewing and Research and Development Survey 10 question wordings

Whole person health dimension	Cognitive interview question wording	RANDS 10 question wording <sup>1</sup>
Self-rated health	How would you rate your health in general?	Would you say your <u>health in general</u> is excellent, very good, good, fair, or poor?
Quality of life	How would you rate your quality of life, focusing on what matters most to you?	How would you rate your quality of life, focusing on what matters most to you?
Social and family connections	How would you rate your social and family connections?	How would you rate your social and family connections?

<b>Diet</b>	How would you rate your diet?	In general, how healthy is your overall diet?
<b>Physical activity</b>	How would you rate your physical activity?	How would you rate your physical activity?
<b>Stress</b>	How would you rate your ability to manage stress?	How would you rate your ability to manage stress?
<b>Sleep</b>	How would you rate your sleep?	How would you rate your sleep?
<b>Spirituality</b>	How would you rate your spirituality or belief in God?	How would you rate your spirituality or spiritual life?
<b>Health management</b>	How would you rate your ability to manage your most bothersome symptom or health concern?	How would you rate your ability to manage your most bothersome symptom or health concern?
<p><sup>1</sup>Self-response wording is shown. For RANDS interviewer-administered cases, the telephone interviewer added the phrase “Would you say excellent, very good, good, fair, or poor?” at the end of each item. NOTE: All Whole Person Health items in both the cognitive interviews and RANDS used the same answer categories: “Excellent,” “Very good,” “Good,” “Fair,” and “Poor.” SOURCE: National Center for Health Statistics, 2024.</p>		

Table B details the comparison measures included on the RANDS 10 questionnaire to validate the Whole Person Health Index items. Note that no explicit comparisons were included for the self-rated health and health management dimensions. In the case of self-rated health, previous evaluations of that question have shown that it functions well and correlates to morbidity and mortality. In the case of health management, CCQDER researchers determined that, as written, the question was broad and would benefit from more qualitative study before deciding on specific measures or scales to compare against—given the short turn around between the cognitive interviews and RANDS 10 going into the field, it was not possible to include comparison scales on the RANDS instrument.

*Table B: Research and Development Survey 10 comparison measures by Whole Person Health Index dimension*

<b>Whole person health dimension</b>	<b>Comparison measure(s) included on RANDS 10 questionnaire</b>
<b>Self-rated health</b>	...
<b>Quality of life</b>	<p>Life satisfaction item<sup>1</sup>:</p> <ul style="list-style-type: none"> <li>In general, how satisfied are you with your life? Would you say very satisfied, satisfied, dissatisfied, or very dissatisfied?</li> </ul> <p>Healthy days items<sup>2</sup>:</p> <ul style="list-style-type: none"> <li>Now thinking about your physical health, which includes physical illness and injury, for how many days during the past 30 days was your physical health not good?</li> <li>Now thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good?</li> <li>During the past 30 days, for about how many days did poor physical or mental health keep you from doing your usual activities, such as self-care, work, or recreation?</li> </ul>

<b>Social and family connections</b>	<p>Lubben Social Network Scale-6:<sup>3</sup></p> <ul style="list-style-type: none"> <li>• Considering the people to whom you are related by birth, marriage, or adoption, how many relatives do you...see or hear from at least once a month?</li> <li>• ...Feel at ease with that you can talk about private matters?</li> <li>• ...Feel close to such that you could call them for help?</li> <li>• Considering all of your friends, including those who live in your neighborhood, how many do you...see or hear from at least once a month?</li> <li>• ...Feel at ease with that you can talk about private matters?</li> <li>• ...Feel close to such that you could call them for help?</li> </ul> <p>Social strain score:<sup>4</sup></p> <ul style="list-style-type: none"> <li>• How often do members of your family or your friends...criticize you?</li> <li>• ... Make too many demands on you?</li> <li>• ... Let you down when you are counting on them?</li> <li>• ... Get on your nerves?</li> </ul> <p>Berkman-Syme Scale:<sup>5</sup></p> <ul style="list-style-type: none"> <li>• In a typical week, how often do you talk on the telephone with family, friends, or neighbors?</li> <li>• In a typical week, how often do you get together with friends or relatives?</li> <li>• How often do you attend church or religious services?</li> <li>• Altogether, how often do you attend meetings of clubs or organizations you belong to, such as church groups, unions, fraternal or athletic groups, or school groups?</li> </ul> <p>UCLA Loneliness Scale:<sup>6</sup></p> <ul style="list-style-type: none"> <li>• How often do you feel socially isolated from others?</li> <li>• How often do you feel you lack companionship?</li> <li>• How often do you feel left out?</li> </ul> <p>PRAPARE social and emotional health item:<sup>7</sup></p> <ul style="list-style-type: none"> <li>• In a typical week, how often do you see or talk to people that you care about and feel close to?</li> </ul>
<b>Diet</b>	Diet Quality Questionnaire <sup>8</sup>
<b>Physical activity</b>	<p>United States Government Activity Guidelines based on NHIS Leisure-time Physical Activity Items<sup>9</sup></p> <ul style="list-style-type: none"> <li>• How often do you do light or moderate leisure-time physical activities for at least 10 minutes that cause only light sweating or a slight to moderate increase in breathing or heart rate?</li> <li>• How often do you do vigorous leisure-time physical activities for at least 10 minutes that cause heavy sweating or large increases in breathing or heart rate?</li> <li>• How often do you do leisure-time physical activities specifically designed to strengthen your muscles such as lifting weights or doing calisthenics?</li> </ul>
<b>Stress</b>	<p>Behavioral Risk Factor Surveillance System item on stress<sup>10</sup></p> <ul style="list-style-type: none"> <li>• Stress means a situation in which a person feels tense, restless, nervous or anxious or is unable to sleep at night because their mind is troubled all the time. Within the last 30 days, how often have you felt this kind of stress</li> </ul> <p>Perceived Stress Scale<sup>11</sup></p> <ul style="list-style-type: none"> <li>• In the last month, how often have you felt...That you were unable to control the important things in your life?</li> <li>• ...Confident about your ability to handle your personal problems?</li> </ul>

	<ul style="list-style-type: none"> <li>• ...That things were going your way?</li> <li>• ...Difficulties were piling up so high that you could not overcome them?</li> </ul>
<b>Sleep</b>	Pittsburgh Sleep Quality Index <sup>12</sup>
<b>Spirituality</b>	10-Item Spirituality Well-being Scale (SWBS-10) <sup>13</sup> <ul style="list-style-type: none"> <li>• I don't know who I am, where I come from, or where I am going.</li> <li>• I believe that God/a Higher Power loves me and cares about me .</li> <li>• I have a personally meaningful relationship with God/a Higher Power.</li> <li>• I feel very fulfilled and satisfied with my life.</li> <li>• I don't get much personal strength and support from God/a Higher Power.</li> <li>• I believe that God/a Higher Power is concerned about my problems.</li> <li>• I feel good about my future.</li> <li>• My life doesn't have much meaning.</li> <li>• My relationship with God/a Higher Power contributes to my sense of well-being.</li> <li>• I believe there is some real purpose for my life.</li> </ul>
<b>Health management</b>	--
<p><sup>1</sup>Included on the National Health Interview Survey.</p> <p><sup>2</sup>The Centers for Disease Control and Prevention's Healthy Days Measures (CDC HRQOL-4). The CDC HRQOL-4 also includes the general self-rated health item, which in this case was administered earlier in the questionnaire. (10).</p> <p><sup>3</sup>The Abbreviated Lubben Social Network Scale (11, 12) . Answer categories for all items are: "0", "1", "2", "3-4", "5-8", "9 or more". Score is sum of 6 items' answer category values, where the categories "3-4", "5-8", and "9 or more" are assigned the values 3,4, and 5, respectively. Missing values were coded as "0;" cases with at least one non-missing value were included in the analysis.</p> <p><sup>4</sup>Items are from the Family and Friend Strain scales in the Midlife in the United States 2 (MIDUS 2) survey (13),see <a href="https://midus.wisc.edu/midus2/">https://midus.wisc.edu/midus2/</a>. Answer categories for all items are: "Never," "Rarely," "Some of the time," and "Often." The responses to these items were summed to arrive at a composite score. Missing values were coded as "0;" cases with at least one non-missing value were included in the analysis.</p> <p><sup>5</sup>Berkman-Syme Scale (14). Answer categories for the first two items are: "Less than once a week," "One or two times a week," "Three or four times a week," and "Five or more times a week." Answer categories for the final two items are: "Never or less than once a year," "1 to 3 times a year," "4 to 11 times a year," and "12 or more times a year." Additionally, an additional category ("I do not belong to a group.") was included in the final question about clubs and organizations. Scores range from 0 to 4 with respondents receiving 1 point for each of the following: whether or not the respondent is married or living together with someone in a partnership, averaging 3 or more interactions per week with other people, reporting that they attended church or religious services 4 or more times per year, and reporting that they belonged to a club or organization (15). Cases with at least one non-missing value were included in the analysis.</p> <p><sup>6</sup> Questions are from the three-item UCLA Loneliness Scale Answer categories for all items are: "Always," "Usually," "Sometimes," "Rarely," and "Never" (16). The responses to these items were summed to arrive at a composite score. Missing values were coded as "0;" cases with at least one non-missing value were included in the analysis.</p> <p><sup>7</sup>Protocol for Responding to and Assessing Patient Assets, Risks, and Experiences, <a href="http://www.nachc.org/PRAPARE">http://www.nachc.org/PRAPARE</a>. Answer categories are: "Less than once a week," "One or two times a week," "Three or four times a week," and "Five or more times a week."</p> <p><sup>8</sup>Diet Quality Questionnaire and the Global Dietary Recommendation Score, <a href="https://www.dietquality.org/">https://www.dietquality.org/</a>. Questionnaire asks a series of binary yes/no items about the previous day's diet, including whether respondents ate a series of food stuff such as bread, starches, vegetables, fruits, processed foods, dairy, and meat, and fast food (17, 18). Two scores were derived from these data: the Global Dietary Recommendation score and the Dietary Diversity score. The former is derived by summing the total number of healthy food groups that respondents indicated they had consumed in the past day (including whole grains, pulses, nuts or seeds, dark leafy greens, other vegetables, vitamin-A-rich fruits, citrus, and other fruits), then subtracting the sum of the total number of foods associated with dietary risk factors of non-communicable diseases consumed in the past day (including soft drinks, baked sweets, other sweets, processed meats, unprocessed red meats, deep fried foods, instant noodles, fast food, and ultra-processed snacks). The latter score is derived by summing the total number of food groups consumed in the past day from a list including grains and tubers, pulses, nuts or seeds, dairy products, meats or poultry or fish, eggs,</p>	



leafy vegetables, other vegetables, vitamin-A-rich fruit and vegetables, and other fruit. In the calculation of both scores, missing values were coded as “0;” cases with at least one non-missing value were include in the analysis.

<sup>9</sup>Comparisons were made against the aerobic and the combined aerobic and strength guidelines, based on the 2018 Physical Activity Guidelines for Americans report (<https://odphp.health.gov/our-work/nutrition-physical-activity/physical-activity-guidelines>). For the aerobic guidelines, “Inactive” is defined as not reporting any moderate or vigorous physical activity, “Insufficiently Active” is defined as reporting less than the equivalent of 150 minutes of moderate physical activity a week, “Sufficiently Active” is defined as the equivalent of 150 minutes or more of moderate physical activity a week. A minute of vigorous activity counts as two minutes of moderate activity. A final binary code was constructed by classifying those respondents who were sufficiently active and those who were not. The strength guideline is defined as reporting two or more instances of strength training a week, and was coded as “met” or “not met.” (19). A binary combined aerobic and strength guidelines code was constructed by classifying those who were coded as both sufficiently active aerobically and met the strength guideline, and those who were not.

<sup>10</sup>Social Determinants and Health Equity BRFSS module. <https://www.cdc.gov/brfss/questionnaires/pdf-ques/2023-BRFSS-Questionnaire-508.pdf>. Answer categories are: “Always,” “Usually,” “Sometimes,” “Rarely,” and “Never.”

<sup>11</sup>Answer categories for all items are: “Always,” “Usually,” “Sometimes,” “Rarely,” “Never.” Score is summed total of all items (20). . Missing values were coded as “0;” cases with at least one non-missing value were included in the analysis.

<sup>12</sup>This set includes behavioral items (e.g. what time the respondent typically goes to bed) regarding a respondent’s typical sleep patterns over the previous month (21). The calculation of the final PSQI score is complex, including the calculation of seven separate components, which are then summed. An explanation and discussion of these calculations is available at the scale author’s website (22). Missing values were coded as “0;” cases with at least one non-missing value were included in the analysis.

<sup>13</sup>Responses for each of the items are assigned a numerical value of 1-5 with higher values equating to greater levels of wellbeing (items written in the opposite direction were reverse coded). The ten items alternate between measuring Religious Well-Being (items that refer to “God”) and Existential Well-Being. The score of each of these subscales is the sum of its items; the two subscales are summed to arrive at the overall measure of spiritual wellbeing (23). The 10-item version of this scale uses 5 items from each subscale (24).

NOTE: NHIS: National Health Interview Survey.

## Covariates

Differences across characteristic groups are presented in the statistical results. No *a priori* hypotheses about group differences were made beforehand, rather they were conducted as part of a descriptive analysis. Statistically significant differences between groups indicate areas on which more dedicated evaluations of measurement invariance could focus; however this is not the focus of this analysis and discussion of subgroup differences is not included in this report. The following independent variables were used across the analyses presented in this report: age, sex, educational attainment, and race and Hispanic ethnicity. Age (in years) is categorized as 18-29, 30-44, 45-59, and 60 and over. Education is categorized as high school diploma or less, some college including Associates degree, Bachelor’s degree, and graduate degree. Race/ethnicity is categorized as Black, non-Hispanic; Other, non-Hispanic; White, non-Hispanic; and Hispanic. “Other, non-Hispanic” race/ethnicity includes respondents who indicated their race(s) were Asian, American Indian or Alaska Native, Native Hawaiian or Pacific Islander, or a combination of two or more non-Hispanic races.

## Analysis

### *Qualitative analysis:*

Qualitative analysis proceeded using a typically iterative, inductive process at both individual respondent and subgroup levels (25, 26). The responses to the cognitive interviews and open-ended RANDS probes were examined by the authors and coding schema were developed. In the case of the cognitive interviews, responses were then coded using NCHS' Q-Notes software (27); in the case of the RANDS probes, codes were appended to the survey's data file for additional statistical analyses.

### *Statistical analysis:*

Results for the analyses of RANDS in this report are unweighted, as the primary goal was to describe the in-sample measurement characteristics related to the WPHI dimensions, not to generalize to a target population. Analysis was conducted using R version 4.3 (28). Descriptive statistics were calculated using the survey package to take the complex survey design into account (29). Absolute values of Spearman coefficients, which are based on complete cases, are presented for correlations; magnitudes are described as small when  $|\rho| \leq 0.30$ , medium  $0.30 < |\rho| < 0.50$ , and large when  $|\rho| \geq 0.50$  (30). The distribution of responses across the covariates are presented and Rao-Scott chi square tests are used to determine whether observed differences are statistically significant (31).

## **FINDINGS**

### Sample characteristics

Tables C and D present sample characteristics for the WPHI Cognitive Interviewing Study and RANDS 10, respectively.

*Table C: Sample composition for cognitive interviews conducted in for Whole Person Health Index cognitive interviewing study*

Variable	Characteristic	Cognitive interviewing sample size
Age	18-29	–
	30-44	9
	45-59	13
	60+	18
Sex	Female	22
	Male	18
Educational attainment	High school diploma or less	10
	Some college, including Associate's degree	6
	Bachelor's degree	12
	Graduate degree	12
	Black, non-Hispanic	16



<b>Race and ethnicity<sup>1</sup></b>	Other, non-Hispanic <sup>2</sup>	3
	White, non-Hispanic	22
	Hispanic	–
<p>– Quantity zero.</p> <p><sup>1</sup>Numbers do not add to total because respondents could choose more than one race or ethnicity category.</p> <p><sup>2</sup>“Other, non-Hispanic” race and ethnicity includes respondents who indicated their race(s) were Asian, non-Hispanic, American Indian or Alaska Native, non-Hispanic, Native Hawaiian or Pacific Islander, non-Hispanic, or a combination of two or more non-Hispanic races.</p> <p>NOTE: Total number of interviews = 40.</p> <p>SOURCE: National Center for Health Statistics, Collaborating Center for Questionnaire Design and Evaluation Research, 2024.</p>		

Table D: Unweighted sample sizes and percentages for selected demographic characteristics, AmeriSpeak sample, Research and Development Survey 10

Variable	Characteristic	AmeriSpeak sample	
		Sample size	Percent
Age	18-29	695	13.9
	30-44	1418	28.3
	45-59	1096	21.8
	60+	1808	36.0
Gender	Female	2595	51.7
	Male	2422	48.3
Educational attainment	High school diploma or less	1130	22.5
	Some college, including Associate's degree	2134	42.5
	Bachelor's degree	989	19.7
	Graduate degree	764	15.2
Race and ethnicity	Black, non-Hispanic	672	13.4
	Other, non-Hispanic <sup>1</sup>	379	7.6
	White, non-Hispanic	3131	62.4
	Hispanic	835	16.6
<p><sup>1</sup>“Other, non-Hispanic” race and ethnicity includes respondents who indicated their race(s) were Asian, non-Hispanic, American Indian or Alaska Native, non-Hispanic, Native Hawaiian or Pacific Islander, non-Hispanic, or a combination of two or more non-Hispanic races.</p> <p>NOTES: AmeriSpeak sample, n = 5,017 complete cases. Column percents may not sum to exactly 100% due to rounding.</p> <p>SOURCE: National Center for Health Statistics, Research and Development Survey 10, 2024.</p>			

## Qualitative findings

### General health

Even though there was some variation in how respondents interpreted this question, there was no pattern of any substantive deviation. The concept of “health in general” was interpreted as physical health, physical *and* mental health, personal habits, and hereditary predispositions.

*Physical health:* The most common interpretation of ‘health in general’ was based on physical health. This typically included chronic conditions. One respondent said, “I’m dealing with a lot of health stuff. I’m on blood pressure medications, was borderline diabetic, so it’s fair.” Some respondents also thought of chronic pain. For example, one respondent explained, “I do have nagging chronic pain issues that I’m always managing.” In addition, respondents commonly thought of weight and obesity as an indicator of health. As one respondent said, “I’ve gained a lot of weight. I gained plenty of weight and I just don’t feel that my health is where it’s supposed to be.”

*Physical and mental health:* Some respondents thought of their mental health when answering this question, but it was always in combination with their physical health – no one answered the question based on their mental health alone. One respondent said, “I have physical pain, daily. So, I deal with that. And then mental-wise, just because I take on the burden of my family. Yes, I have a choice if I want to. But in my position and my culture, I’m the oldest and I am responsible to take care of my family.”

*Personal habits:* Another pattern of interpretation for ‘health in general’ relates to personal habits, particularly those that are known to have an effect on one’s health. This is indirectly related to the first pattern of interpretation (physical health). Respondents thought of smoking, exercise, and diet as indicators of their health status. One respondent said, “There’s things I need to work on. Working on quitting smoking.” Another respondent said, “It could definitely be better...I’m a sugar eater; I love sugar. I could definitely get more physical activity in.”

*Hereditary predispositions:* While not a common interpretation, one respondent thought of their genetic proclivity to chronic illness based on their knowledge of family history, irrespective of whether they currently had the condition. Like the previous pattern (personal habits), this is also indirectly tied to the first pattern (physical health). The respondent explained, “Because when I know when it comes to hereditary or otherwise, what I get from my parents, what’s passed down, I know I have a high chance, I’m at high risk for it. So, I have to be careful of certain things.”

Respondents made assessments of their health several ways, including drawing comparisons to earlier selves, comparison to a peer group, ability to manage health conditions, and averaging good and bad aspects of their health.

*Comparison to earlier self:* A common strategy respondents used to rate their health was to compare their current health status to their health at an earlier stage in life. One respondent said, “I’d say compared to five years ago or 10 years ago or 15 - so on a timeline if I’m looking back I would put myself in fair range. Because looking back I would’ve given myself a higher score.”

*Comparison to a peer group:* Most respondents did not think of comparing themselves to their peers when answering this question. However, even though not common, this pattern was observed. For example, one respondent assessed her health by thinking of it in relation to the health risks associated with her racial group. She said, “Because I’m African American and I know the issues in our community, I’m very much on top of my health in terms of, I make it an intention that I do not have high blood pressure, high cholesterol, diabetes, and those things.” Similarly, another respondent compared himself with other people his age. He said, “I think that my health is pretty good...for my age.”

*Success managing health:* Many respondents made their health assessment by judging their ability to manage their chronic health conditions. In other words, simply having a chronic condition was not the sole basis of judging one’s health. Some respondents evaluated the extent to which their condition was controlled (for example through medication or lifestyle) when answering the question. Those who felt they did a good job with this tended to rate their health higher, even though they had a chronic illness. As one respondent explained, “I have a chronic disease, but I feel like for a person with that disease, I manage it well. So, in that scale, I sort of feel like it is in the middle. I’m not a healthy person but for a person who is not healthy, I’m doing really well.”

*Averaging good and bad:* Finally, some respondents assessed their health by comparing good and bad aspects of their health. One respondent said, “I had suffered a lot of injuries when I was in the army, so I got some metal plates and pins...but I still rate myself as good because I get up every day and stretch and try to do some yoga and try to combat those things. I also try to eat well.”

### *Quality of life*

There were two fundamental ways in which respondents judged the quality of their life. Most respondents took a holistic approach: When thinking about ‘what matters most,’ many respondents did not focus on a single area. Their quality of life was influenced by several factors, all of which they took into consideration when answering the question. One respondent said, “I was thinking just maybe a little bit of physical health, a little bit spiritual, a little bit social-emotional health. And I think all-in-all I would be a little better than fair, which would be very good.”

A smaller group of respondents focused only on the one dimension of their life that they believed had the most impact on its quality. The most common dimension respondents cited was social or familial connections (“My husband responds to me well. We communicate very well. I have a nice, active social network of friends of women of different ages.”). Other dimensions included financial security (“I have a roof over my head, I’ve got food in my belly, money in my pocket, so pretty good to go.”), health (“I currently have been struggling with this illness for several years.”), personal autonomy (“Am I able to freely do what it is that I would like to do? Or am I restrained? Overall, I pretty much can do whatever it is that I feel I want to do.”), spirituality (“My religious beliefs.”), and work/career (“I recently started a new work shift and it doesn’t allow me to spend as much time on the things that matter most to me. So, the work-life balance is a little out of whack right now.”).

### *Social and family connections*

Three major interpretations emerged across the interviews, with the respondents understanding the question to be asking about their family, social connections, or both:

*Family:* When interpreting this question, most respondents thought of their family. Many respondents thought of family as people joined by blood, marriage, cohabitation or adoption. For example, when asked about whom she was thinking, one respondent said, “My immediate family, my grandparents, my aunts, and my uncles. I enjoy the conversations and the relationships that we have now.” However, other respondents thought of their family as those people they choose to define as such. For example, one respondent said, “To me, family isn’t the people that you were born with but the ones that you’ve created.”

*Non-Family Social Connections:* Other respondents thought more of social connections. For example, when asked who she included in her answer, one respondent said, “I say ‘very good’ because I’m very active here in the community.”

*Both Family and Other Social Connections:* A third group considered both family and social connections. For example, when describing who he included in his answer, one respondent said, “I have my family and I have my social side.”

In assessing the quality of their connections, two metrics were used by respondents to answer the question. The first was to evaluate frequency of interaction. For example, one respondent answered ‘excellent’ to the question “Because I talk to my friends and my family every day. We’re always checking in with each other and trying to do things together.” The second metric was to evaluate the quality of the relationship. One respondent said, “I’m not seeing them as often. But the relationship is very good and that’s what matters to me.”

Other respondents incorporated both metrics into their answer. One respondent described both the quality and quantity of family interaction and said, “My family, like I said, we have good communication at this stage...My sisters I talk to weekly if not daily.”

As mentioned above, some respondents considered both family and social connections in this question. When family and social life were assessed differently, respondents tended to either focus on one or the other when answering the question (“So with fair, I was mostly focusing on the family part.”), or they averaged the two together. One respondent explained, “I have a huge social network within the workspace. So, on the social side, it’s phenomenal. On the family side it’s a little lackluster. Because family dynamics, family drama. So that drops the needle down into good.”

### *Diet*

There were three basic interpretations of this question. “Diet” was understood as the nutritional value of food eaten, as the amount of food eaten, or as both quality and quantity of food eaten.

*Nutritional value of food:* Respondents often interpreted this question as asking about the nutritional value of the food they eat. However, all respondents did not speak of nutrition in the same terms. Sometimes nutritional value was assessed as the quality of the food they normally eat, such as homegrown or organic. One respondent said “We try to eat healthy. I grow our own vegetables and stuff like that.” Another respondent answered ‘excellent’ because, “I eat all organic food. I spend a lot on buying organic food, but I feel like it’s worth it.”

Other respondents assessed the nutritional value of their diet based on the types of food they eat as part of an overall diet, such as having well-balanced meals. For example, one respondent said, “We just try to stick with the normal meat, potatoes, fish. We try to do the circle - vegetables, salad.” Others rated themselves lower when they judged themselves to eat too many low-nutrition items, (often referred to as “junk food”) at the expense of a well-balanced diet with a variety of food. One respondent said, “I was eating McDonald’s three, four, five, six times a week. And it became like, man, I gotta get McDonald’s today. And I said I have to stop this. I’ve been eating a lot of junk food lately, for the last months.”

Sometimes the nutritional quality of the food respondents eat was assessed in the context of the chronic conditions they have, and whether their diet exacerbates a condition. One respondent said, “It can be better. I’ve given up pork, I just eat beef now in limited amounts. I focus more on eating vegetables, fish, and chicken. We’ll wait and see the next blood test. My cholesterol’s coming down, but it can always be better.”

*Quantity of food:* Some respondents interpreted ‘diet’ as the amount of the food they eat, usually in relation to personal weight goals. One respondent explained, “Fair because of the conscious aspect of me trying to get rid of this weight. I don’t want to be consuming a bunch of everything.” One respondent, however, was not thinking of weight loss when answering in terms of the amount of food he eats. He lives in an assisted living facility for people with disabilities and his diet is somewhat beyond his control. To him, the question was about whether his diet consists of enough food. He rated his diet as ‘very good’ because, “I eat all my food. I don’t have a problem with eating all my food. And I have a lot of snacks. So, I have a very good diet.”

*Quality and quantity of food:* Finally, some respondents thought of both quality and quantity of food they eat. One respondent explained, “I try not to overeat. I start with a high protein breakfast. And a lot of fiber for lunch. And for dinner I generally afford myself a few extra calories. I don’t snack.”

### *Physical activity*

Most respondents understood this question as asking about an exercise routine. This could involve a walk (“I do walk in the morning. I do get out and walk. So that’s ‘fair.’”) or simply any exercise done at home (“I walk every day either on the treadmill or outdoors. I sometimes ride on a

stationary bike. Occasionally I might lift some weights.”). Very often respondents were thinking of time spent at the gym (“I work late so it’s hard to get to the gym.”).

One respondent, however, interpreted this question as asking about any type of physical activity, not just that which is associated with going to the gym or formal exercise. She said, “I’m going to say, ‘very good.’ I do all my own housework and even laundry. We have a three-bedroom home to take care of.” She is 84 years of age and felt competent in her ability to still take care of the house.

When deciding how to answer the question, some respondents assessed their physical activity based on a perceived generic standard. Often, this standard was the goal of 10,000 steps a day. For example, one respondent said, “On a good day I can probably average about 10,000 steps. On an average day I can get around 4500.” However, other respondents thought about their current level of activity compared to an early time. One respondent said, “Back in the day, I played soccer and baseball. And I just don’t do that as much anymore.” These types of self-comparisons often had their foundation in the aging process. For example, when asked why one respondent answered ‘fair,’ she attributed it to aging (she is currently 48) and explained, “Because if I give it a time structure, I’d say compared to five years ago or 10 years ago or 15 - so on a timeline if I’m looking back, I would put myself in fair range [now]. Because looking back I would’ve given myself a higher score... Since then it’s slowly gone downhill.”

### *Stress*

When discussing the concept of stress, respondents used different, but interrelated, examples of how they experienced and described stress. These included:

- Mental health conditions (“When I came back from Iraq, I was diagnosed by medical doctors that I had PTSD, as well as anxiety, depression.”)
- Anxiety (“So the anxiety is just [holds hand up above head].”)
- Fear (“If you’re anxious around money, if you think you don’t have enough money to pay your rent, all of that is fear.”)
- Agitation (“What I may do is, I may get extremely agitated.”)
- Anger (“I get irritated easily and I have a short temper.”)
- Conflict (“I don’t like conflict...I like to debate but if the conversation cannot be civil, I just walk away. Try to stay out of stressful situations because of my health.”)
- Grief (“I’m still in grief. My sister passed away two years ago. In the beginning of that, all I did was cry.”)

To answer this question, respondents also had to decide what was meant by ‘manage stress.’ When asked how they processed this, respondents described different mechanisms by which they manage



stress and answered based on how well they implement the strategies they developed for themselves. These included:

- Exercise (“The first thing that I should do when managing stress is go for a walk.”)
- Establishing boundaries (“I’ve learned to say no.”)
- Avoidance (“I guess I avoid it if I can. I don’t want to be in a stressful situation; conflict with others. I have high blood pressure, so I have to avoid those situations.”)
- Develop a plan (“Like for work if we’re getting bombarded, I have to see one email at a time. Just take one thing at a time. Focus.”)
- Spirituality (“Every day I do a devotional. I try to. I pray daily.”)
- Social support (“When I feel stress I maybe make a phone call to a friend and talk for an hour.”)

Many times, respondents described using multiple coping strategies. One respondent explained, “Exercise is a big part of that [managing stress]. Breathing exercises, music, being mindful, paying attention to my triggers and avoiding ones I can.”

### *Sleep*

When answering this question, respondents thought most often of the amount of sleep they get as the basis of their answer. But some respondents took the quality of their sleep into consideration as well.

*Quantity of sleep:* Many respondents rated their sleep in terms of the number of hours they get per night (“To me, I average six to eight hours daily.”). Some respondents have always had difficulty sleeping and described it as endemic to who they are. This was not always seen as problematic. One respondent said, “I’ve never gotten enough. Even as a child I never slept that well. It works for me. I can’t say I want more. When my body says, ‘get up’ I get up.” For other respondents, lack of sleep was a more recent phenomenon, so they tended to judge their inability to sleep eight hours more harshly. For example, one respondent said, “Right now I’ve been having issues either falling asleep, or if I do fall asleep, I don’t stay asleep. So, yeah, that’s why I rated it ‘fair.’”

Other respondents talked about medical conditions that impede their ability to get eight hours of sleep (“Sleep apnea is a challenge.”). Mental health was included as well. One respondent explained, “Sleep’s not that great because PTSD keeps me from getting a good night’s sleep...When I do fall asleep, the dreams I have of what happened to me come back.”

Some respondents discussed their difficulty as insomnia (“Terrible. I have really bad insomnia.”) and some take medication for it. One respondent reported, “Well, I have to

take sleep medication, that's the only way I can sleep. And it gives me about six hours of sleep. Sometimes it works, sometimes it doesn't. Four to six hours of sleep, what I get. Sometimes broken sleep during the night."

*Quality of sleep:* Respondents also took the quality of their sleep into account when answering the question. This included broken sleep and lack of deep sleep. For example, one respondent explained, "Right now I'm averaging maybe five hours. Let me say this. I think I get three solid hours of sleep, straight sleep. But I'm not at the REM phase, not at the total relaxation and I'm a very light sleeper."

### *Spirituality*

The two main interpretations of this question were that it was asking about either organized religion or personal spirituality:

*Organized religion:* For some respondents this was a question about their commitment to and involvement with organized religion. It was straightforward for those who are deeply involved in a religious community. For example, one respondent answered 'very good' because, "I've been in my church 20 some-odd years. Active." Other respondents were more loosely affiliated with a religion and took that into account when answering. One respondent discussed her activities at synagogue, such as participating in the choir, but she did not describe herself as overly religious. She said, "I guess I have my doubts, but I do go to services."

*Personal spirituality:* Other respondents answered from a perspective of personal spirituality. One respondent said, "I am a praying woman. I practice meditation and I am intentional in the time that I spend with God. I am intentional in the time that I sit and read my Bible." But she did not go to church. Other respondents made an explicit distinction between spirituality versus the need for involvement in organized religion. One respondent explained, "I'm not the most religious individual. More like spiritual. And I believe you can practice your faith without going to a religious house, a church, or a synagogue or Mosque. Kind of practice it on my own. I don't necessarily attend church services too much."

Some respondents who saw spirituality and religiosity as different sometimes expressed confusion by the wording of the question. It was the mixing of spirituality and God that gave them pause. One respondent explained, "I would say I'm a spiritual person. I'm not a religious person. For me, that one is more like, I'm good with myself and I don't think that one's very relevant. I think, spirituality-wise, but bringing God into the mix throws me a little." Further, those who have no belief in God may have trouble answering altogether. One respondent demonstrated this pattern by saying, "Um, I don't know how to answer that. I fall under agnostic. So, I believe there's a higher power, but I don't necessarily pray to any particular being. So I don't know how to answer that."

### *Health management*

The interpretation and response process of this question varied by whether respondents had one chronic illness, multiple chronic conditions, or no chronic conditions.

*One chronic condition:* Respondents who had one chronic condition typically had no difficulty answering the question. Their condition was the first thing they thought of. For example, one respondent immediately said, “Mine is my arthritis. My wrists, my knees, my shoulders. Every day I’m feeling tingling, my strength is off. That is why I am going to physical therapy. My strength is so weak.”

Moreover, the health conditions respondents thought of were varied. Respondents included mental illnesses (“For me, number one is my mental illness because my anxiety and OCD get in my way all the time, every day.”), physical illnesses (“My migraines. They’re a work in progress. There’s not an easy fix. I’m always managing.”), and even problems with sleep (“I guess a major concern is the insomnia because there’s so much emphasis on sleeping seven, eight hours a night. And I never am able to. And it could affect me in the future in terms of dementia.”).

*Multiple chronic conditions:* Many respondents had multiple health conditions. Some respondents answered for one, particularly if it was easy to identify as ‘most bothersome.’ For example, one respondent said, “That would be my hip. My mobility. Yeah. My weight loss is being controlled. My blood pressure is being controlled. But the major thing right now is my hip.” Other respondents considered how they managed all their symptoms in totality. One respondent explained, “I have a lot of injuries and medical conditions I’m dealing with. I’m trying my best to get a handle on it, with the help of doctors and medication.”

*No chronic conditions:* Respondents without a chronic condition had a different approach to this question. They tended to think about how they manage the care of their health in general, not in relation to any specific health concern or symptom. This often meant thinking about keeping track of and scheduling routine visits to doctors. For example, one respondent said, “I’ve always been good about annual physicals and all that, for instance.”

Other respondents thought about how they manage symptoms when they do get sick, such as through self-care and over-the-counter medications. One respondent said, “I thought about ailments or anything else that comes up. Because you know, when I get a cold or a sinus infection or whatnot, I try to keep things on hand. That way I don’t have to keep going back to the store. So, I’m able to do that.” Another respondent who had no chronic conditions thought about ‘management’ as her resistance to seeking out medical care when she does not feel well. She said, “Because I don’t like going to the doctor. I’m not a good medical person. I don’t like hospitals - they make me feel sick. So, I’m someone who kinda has to feel like I’m dying to go to the hospital, the clinic, or whatever.”

## Statistical findings

Supplementary Tables I through IX (Appendix I) provide the unweighted distribution of the responses to the nine WPHI questions for the entire sample and the distributions and tests of association across age, sex, educational attainment, and race and ethnicity population subgroups.

Table E provides the results of the correlations among the nine questions, and Table F provides cross-item correlations between the WPHI questions on RANDS 10 and the comparison items that were described in Table B.

Table E: Cross-item Spearman correlations across the whole person health questions, Research and Development Survey 10

	General health	Quality of life	Social and family connections	Diet	Physical activity	Stress	Sleep	Spirituality	Health management
<b>General health</b>	1.00								
<b>Quality of life</b>	0.60	1.00							
<b>Social and family connections</b>	0.40	0.62	1.00						
<b>Diet</b>	0.53	0.50	0.41	1.00					
<b>Physical activity</b>	0.58	0.47	0.34	0.56	1.00				
<b>Stress</b>	0.40	0.51	0.47	0.44	0.40	1.00			
<b>Sleep</b>	0.42	0.46	0.40	0.41	0.35	0.47	1.00		
<b>Spirituality</b>	0.25	0.38	0.40	0.33	0.25	0.41	0.31	1.00	
<b>Health management</b>	0.53	0.56	0.47	0.46	0.44	0.56	0.46	0.41	1.00
NOTES: n = 4,999 complete cases. Cells are shaded by the Spearman correlation ( $\rho$ ) using the following scheme: A Spearman's correlation of $ \rho  \leq 0.30$ is considered a small correlation and is shaded in yellow. A Spearman's correlation of $0.30 <  \rho  < 0.50$ is considered a medium correlation and is shaded in green. A Spearman's correlation of $ \rho  \geq 0.50$ is considered a large correlation and is shaded in blue.									
SOURCE: National Center for Health Statistics, Research and Development Survey 10, 2024									

Cross-item correlations between the nine WPHI items were generally medium to large and ranged from  $|0.25|$  at the low end (between the spirituality item and the general health and physical activity items) to  $|0.6|$  (between the quality of life and the general health item) (Table F). The quality of life item showed the greatest number of strong correlations (with five out of nine having an absolute value greater than or equal to 0.5).

As shown across Supplementary I through XI (Appendix 1), statistically significant differences were found in the respondents' answers to for most of the nine WPHI items and age, sex, educational attainment, and race and ethnicity groups. No statistically significant differences were found across age groups for the physical activity item, across sex groups for the general health, diet, sleep, and health management items, and across educational attainment groups for the spirituality item.

Most external comparisons to the WPHI items had medium to large correlations, though some were small (i.e. having a Spearman coefficient less than or equal to 0.3) (Table F). The quality of life question demonstrated a large correlation compared with NHIS' life satisfaction item (0.59) and medium correlation with the CDC's Healthy Days items (ranging from 0.34 to 0.40). The social and family connections question demonstrated medium correlations with the Lubben Social Network Scale (-0.42) and the UCLA Loneliness Scale (-0.49), and small correlations with the Berkman-Syme Scale (0.28), the social and emotional health item from the PRAPARE questionnaire (0.29), and the Social Strain Score (0.29). The diet question demonstrated a medium correlation with the Global Dietary Recommendations Score (0.34), and a small correlation with the Dietary Diversity Score (-0.26). The physical activity question demonstrated medium correlations with the Aerobic (0.46) and combined Aerobic and Strength Physical Activity Guidelines for Americans (0.48). The stress question demonstrated a large correlation with the single-item stress question from the Behavioral Risk Factor Surveillance System (BRFSS) questionnaire (0.50), and a large correlation with the Perceived Stress Scale (0.51). The sleep question demonstrated large correlation with the Pittsburgh Sleep Quality Index (0.56). Finally, the spirituality question demonstrated medium correlations with the Spiritual Wellbeing Scale's Existential (0.45) and Religious Wellbeing (0.45) subscales, and large correlation with the overall Spiritual Wellbeing Scale (0.50). (As noted previously, no external comparisons were made for the general health or health management WPHI items.)

Table F: Spearman correlation coefficients between whole person health questions and comparison scores or items, Research and Development Survey 10

Whole person health question	Comparison score or item	Absolute value of Spearman correlation coefficient <sup>1</sup>
Quality of life	NHIS life satisfaction item	0.59
	How many days...was your physical health not good?	0.34
	How many days...was your mental health not good?	0.40
	...how many days did poor physical or mental health keep you from doing your usual activities...?	0.35
Social and family connections	Lubben Social Network Scale	0.42
	Social Strain Score	0.29
	Berkman-Syme Scale	0.28
	UCLA Loneliness Scale	0.49
	PRAPARE social and emotional health item	0.29
Diet	Global Dietary Recommendations Score	0.34
	Dietary Diversity Score	0.26
Physical activity	Aerobic Physical Activity Guidelines for Americans	0.46
	Aerobic and Strength Physical Activity Guidelines for Americans	0.48
Stress	BRFSS Stress Item	0.50
	Perceived Stress Scale	0.51

<b>Sleep</b>	Pittsburgh Sleep Quality Index	0.56
<b>Spirituality</b>	Spiritual Wellbeing Scale, Existential Wellbeing Subscale	0.45
	Spiritual Wellbeing Scale, Religious Wellbeing Subscale	0.45
	Overall Spiritual Wellbeing Scale	0.50

<sup>1</sup> Cells are shaded by the Spearman correlation ( $\rho$ ) using the following scheme: A Spearman's correlation of  $|\rho| \leq 0.30$  is considered a small correlation and is shaded in yellow. A Spearman's correlation of  $0.30 < |\rho| < 0.50$  is considered a medium correlation and is shaded in green. A Spearman's correlation of  $|\rho| \geq 0.50$  is considered a large correlation and is shaded in blue..

NOTE: Due to the general nature of the whole person health questions on general health and health management, no comparisons with those measures are shown in this table as the dimensions were considered to be too broad to be compared with a single scale or measure.

SOURCE: National Center for Health Statistics, Research and Development Survey 10, 2024.

Note:

## Summary

The WPHI items were evaluated using both qualitative and quantitative approaches to determine whether they captured their intended dimensions of WPH. Overall, analysis of the cognitive interviews demonstrated that the questions function largely as intended, and the analysis of the RANDS data show that the WPHI items largely have moderate to strong correlations with related measures. It is important to note that in some cases, the WPHI question wordings tested in the cognitive interviews and RANDS 10 differ from those used in the 2025 NHIS, specifically the versions of the self-rated health, diet, spirituality, and health management questions used in the cognitive interviews and the spirituality and health management questions used in RANDS 10. The construct validity of the final WPHI spirituality and health management questions will be evaluated in future cognitive interviews and rounds of RANDS.

Analysis of the qualitative data from the cognitive interviews indicated that although the dimensions were in many cases multidimensional, most of the interpretive patterns of the WPHI items were within the scope of the questions' intents. One topic of note is spirituality. The question evaluated in the cognitive interviews read, "How would you rate your spirituality or belief in God?" As discussed above, the two main interpretations of this question were that it was asking about either organized religion or personal spirituality. The word "God" in particular prompted some respondents to think about their opinion of organized religion versus their personal belief system. Depending on question intent, eliminating the word "God" (as was done on RANDS 10, where the question wording was "How would you rate your spirituality or spiritual life?") may direct more respondents to consider their personal belief systems instead of organized religion.

Like the qualitative findings, the statistical analysis of the RANDS 10 data suggest that the WPHI questions capture related dimensions, based on correlations with other variables measuring these same dimensions. The quality of life, stress, and sleep items had the strongest correlations with their comparison scales, while diet and social connections had the weakest. However, the absolute value of the correlations between the WPHI questions and related scales or items range from 0.26 to 0.56. A limiting factor to comparing these correlations is that the chosen scales have differing levels of specificity, and therefore might capture more or less of the WPHI dimensions by design. For instance, the diet quality questionnaire (and the Global Dietary Recommendations and Dietary Diversity Scores that are derived from this question set) is, by design, a broad measure of food



consumption—correspondently, a strong correlation with a general question on diet (such as the diet WPHI item) would be expected. However, a very specific measure like the UCLA loneliness scale—which measures only a conceptually limited part of one’s social connections—should have a weaker correlation with a broad item on social and family connectiveness. Nonetheless, the correlations across most of the WPHI dimensions indicate moderate to large correlations with the comparisons used in this study. Overall, the mixed method analysis of the WPHI items indicate that the questions have construct validity and largely capture the intended dimensions.

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## Appendix I. Supplementary tables

Table I: Unweighted distributions of responses to the general health Whole Person Health Index Item overall and by selected population groups, and tests of association, Research and Development Survey 10

Variable	Characteristic	Response to general health question					p-value
		Excellent	Very good	Good	Fair	Poor	
Total	...	7.2	36.1	39.7	14.9	2.1	...
Age	18-29	11.4	35.4	38.3	13.4	1.6	<0.001
	30-44	8.1	37.5	39.8	12.8	1.7	
	45-59	6.3	38.3	38.8	14.3	2.3	
	60+	5.4	33.8	40.8	17.4	2.5	
Sex	Female	6.6	37.1	40.3	13.8	2.1	0.075
	Male	7.7	35.1	39.2	15.9	2.1	
Educational attainment	High school diploma or less	6.6	27.5	41.7	19.6	4.5	<0.001
	Some college, including Associate's degree	5.3	32.5	43.1	17.1	2.0	
	Bachelor's degree	8.9	44.7	35.8	9.8	0.8	
	Graduate degree	11.0	47.4	32.6	8.4	0.7	
Race and ethnicity	Black, non-Hispanic	7.4	25.3	44.9	19.3	3.0	<0.001
	Other, non-Hispanic <sup>1</sup>	9.0	40.6	34.3	13.7	2.4	
	White, non-Hispanic	6.9	39.0	38.8	13.4	1.9	
	Hispanic	7.3	31.5	41.7	17.5	2.0	

... Category not applicable.

<sup>1</sup>“Other, non-Hispanic” race and ethnicity includes respondents who indicated their race(s) were Asian, non-Hispanic, American Indian or Alaska Native, non-Hispanic, Native Hawaiian or Pacific Islander, non-Hispanic, or a combination of two or more non-Hispanic races.

NOTES: n = 5,017 complete cases. P-values based on a chi-square test with Rao-Scott’s second-order correction across the characteristics within each demographic variable. Row totals may not sum to exactly 100% due to rounding.

SOURCE: National Center for Health Statistics, Research and Development Survey 10, 2024.

Table II: Unweighted distributions of responses to the quality of life Whole Person Health Index item overall and by selected population groups, and tests of association, Research and Development Survey 10

Variable	Characteristic	Response to quality of life question					p-value
		Excellent	Very good	Good	Fair	Poor	
<b>Total</b>	...	14.5	42.9	31.6	9.6	1.4	...
<b>Age</b>	18-29	15.7	37.6	32.8	11.7	2.3	<0.01
	30-44	13.9	41.7	34.0	9.3	1.1	
	45-59	13.4	44.4	32.3	8.4	1.5	
	60+	15.2	45.1	28.8	9.7	1.2	
<b>Sex</b>	Female	13.6	43.5	31.7	9.7	1.6	0.041

	Male	15.3	42.4	31.5	9.5	1.2	
Educational attainment	High school diploma or less	13.6	33.7	36.7	13.7	2.2	<0.001
	Some college, including Associate's degree	12.0	41.9	33.6	10.8	1.7	
	Bachelor's degree	15.7	50.8	27.4	5.6	0.6	
	Graduate degree	21.3	49.2	23.8	5.2	0.4	
Race and ethnicity	Black, non-Hispanic	11.2	34.2	37.5	15.5	1.6	<0.001
	Other, non-Hispanic <sup>1</sup>	15.3	37.5	35.9	9.8	1.6	
	White, non-Hispanic	15.8	46.6	28.6	7.7	1.2	
	Hispanic	12.0	38.7	35.9	11.7	1.7	
... Category not applicable.							
<sup>1</sup> “Other, non-Hispanic” race and ethnicity includes respondents who indicated their race(s) were Asian, non-Hispanic, American Indian or Alaska Native, non-Hispanic, Native Hawaiian or Pacific Islander, non-Hispanic, or a combination of two or more non-Hispanic races.							
NOTES: n = 5,017 complete cases. P-values based on a chi-square test with Rao-Scott’s second-order correction across the characteristics within each demographic variable. Row totals may not sum to exactly 100% due to rounding.							
SOURCE: National Center for Health Statistics. Research and Development Survey 10, 2024.							

Table III: Unweighted distributions of responses to the social and family connections Whole Person Health Index item overall and by selected population groups, and tests of association, Research and Development Survey 10

Variable	Characteristic	Response to social and family connections question					p-value
		Excellent	Very good	Good	Fair	Poor	
Total	...	18.2	37.3	29.4	11.9	3.2	...
Age	18-29	16.4	30.8	33.1	15.4	4.3	<0.001
	30-44	15.5	34.1	32.2	14.2	3.9	
	45-59	17.9	38.6	30.1	10.5	2.9	
	60+	21.2	41.5	25.2	9.6	2.4	
Sex	Female	15.9	37.9	30.6	12.4	3.2	<0.010
	Male	20.4	36.7	28.2	11.4	3.2	
Educational attainment	High school diploma or less	18.1	34.3	27.8	14.8	5.0	<0.001
	Some college, including Associate's degree	17.2	36.6	29.7	13.2	3.2	
	Bachelor's degree	17.5	39.1	31.5	9.7	2.1	
	Graduate degree	22.1	41.1	27.9	7.1	1.8	
Race and ethnicity	Black, non-Hispanic	17.6	32.3	28.7	15.3	6.1	<0.001
	Other, non-Hispanic <sup>1</sup>	16.4	29.3	37.5	12.9	4.0	
	White, non-Hispanic	19.2	39.7	28.3	10.3	2.6	
	Hispanic	16.0	35.8	30.3	14.9	3.0	
... Category not applicable.							

<sup>1</sup>“Other, non-Hispanic” race and ethnicity includes respondents who indicated their race(s) were Asian, non-Hispanic, American Indian or Alaska Native, non-Hispanic, Native Hawaiian or Pacific Islander, non-Hispanic, or a combination of two or more non-Hispanic races.  
 NOTES: n = 5,017 complete cases. P-values based on a chi-square test with Rao-Scott’s second-order correction across the characteristics within each demographic variable. Row totals may not sum to exactly 100% due to rounding.  
 SOURCE: National Center for Health Statistics, Research and Development Survey 10, 2024.

Table IV: Unweighted distributions of responses to the diet Whole Person Health Index item overall and by selected population groups, and tests of association, Research and Development Survey 10

Variable	Characteristic	Response to diet question					p-value
		Excellent	Very good	Good	Fair	Poor	
Total	...	5.9	29.0	40.4	20.7	4.0	...
Age	18-29	6.5	19.7	42.9	24.0	6.9	<0.001
	30-44	4.1	26.4	42.2	22.5	4.8	
	45-59	5.9	27.9	42.2	20.4	3.6	
	60+	7.0	35.3	36.9	18.3	2.5	
Sex	Female	5.7	30.0	40.4	20.3	3.6	0.360
	Male	6.0	28.1	40.3	21.2	4.4	
Educational attainment	High school diploma or less	5.9	22.4	38.6	26.5	6.5	<0.001
	Some college, including Associate's degree	4.6	26.5	42.2	22.7	4.0	
	Bachelor's degree	5.9	33.3	41.5	16.7	2.7	
	Graduate degree	9.4	40.4	36.4	12.0	1.7	
Race and ethnicity	Black, non-Hispanic	5.8	21.6	40.2	26.8	5.7	<0.001
	Other, non-Hispanic <sup>1</sup>	7.4	30.6	40.1	19.3	2.6	
	White, non-Hispanic	5.8	31.6	40.5	18.7	3.4	
	Hispanic	5.5	24.7	40.1	24.1	5.6	
... Category not applicable.							
<sup>1</sup> “Other, non-Hispanic” race and ethnicity includes respondents who indicated their race(s) were Asian, non-Hispanic, American Indian or Alaska Native, non-Hispanic, Native Hawaiian or Pacific Islander, non-Hispanic, or a combination of two or more non-Hispanic races.							
NOTES: n = 5,017 complete cases. P-values based on a chi-square test with Rao-Scott’s second-order correction across the characteristics within each demographic variable. Row totals may not sum to exactly 100% due to rounding. .							
SOURCE: National Center for Health Statistics, Research and Development Survey 10, 2024.							

Table V: Unweighted distributions of responses to the physical activity Whole Person Health Index item overall and by selected population groups, and tests of association, Research and Development Survey 10

Variable	Characteristic	Response to physical activity question					p-value
		Excellent	Very good	Good	Fair	Poor	
<b>Total</b>	...	7.6	22.5	32.7	26.4	10.7	...
<b>Age</b>	18-29	10.5	18.8	33.4	26.5	10.8	0.140
	30-44	7.9	22.7	32.9	26.3	10.2	



	45-59	7.1	22.4	34.4	26.5	9.7	
	60+	6.6	23.9	31.4	26.4	11.7	
Sex	Female	8.5	24.9	32.9	24.7	9.0	<0.001
	Male	6.8	20.3	32.6	28.0	12.3	
Educational attainment	High school diploma or less	7.7	19.1	32.4	29.0	11.8	<0.001
	Some college, including Associate's degree	6.0	20.1	33.4	28.3	12.3	
	Bachelor's degree	9.3	25.3	32.7	23.8	9.0	
	Graduate degree	10.1	30.8	31.5	20.7	6.9	
Race and ethnicity	Black, non-Hispanic	7.7	17.0	31.8	33.3	10.1	<0.010
	Other, non-Hispanic <sup>1</sup>	7.9	22.4	35.6	23.5	10.6	
	White, non-Hispanic	7.6	24.5	32.1	25.2	10.6	
	Hispanic	7.4	19.6	34.4	26.8	11.7	
... Category not applicable.							
<sup>1</sup> “Other, non-Hispanic” race and ethnicity includes respondents who indicated their race(s) were Asian, non-Hispanic, American Indian or Alaska Native, non-Hispanic, Native Hawaiian or Pacific Islander, non-Hispanic, or a combination of two or more non-Hispanic races.							
NOTES: n = 5,017 complete cases. P-values based on a chi-square test with Rao-Scott’s second-order correction across the characteristics within each demographic variable. Row totals may not sum to exactly 100% due to rounding.							
SOURCE: National Center for Health Statistics. Research and Development Survey 10, 2024.							

Table VI: Unweighted distributions of responses to the stress Whole Person Health Index item overall and by selected population groups, and tests of association, Research and Development Survey 10

Variable	Characteristic	Response to stress question					p-value
		Excellent	Very good	Good	Fair	Poor	
<b>Total</b>	...	10.1	30.5	35.8	19.1	4.5	...
<b>Age</b>	18-29	9.8	18.4	36.4	26.6	8.8	<0.001
	30-44	7.1	24.5	38.9	23.3	6.2	
	45-59	9.1	31.7	36.4	18.5	4.3	
	60+	13.3	39.0	32.7	13.4	1.6	
<b>Sex</b>	Female	13.0	33.4	33.8	16.4	3.5	<0.001
	Male	7.4	27.8	37.6	21.7	5.4	
<b>Educational attainment</b>	High school diploma or less	10.8	24.6	35.7	21.9	7.1	<0.001
	Some college, including Associate's degree	9.4	31.6	35.6	18.8	4.6	
	Bachelor's degree	10.1	31.1	37.0	18.1	3.6	
	Graduate degree	11.1	35.1	34.9	17.4	1.4	
<b>Race and ethnicity</b>	Black, non-Hispanic	12.8	28.3	35.4	18.9	4.6	<0.001
	Other, non-Hispanic <sup>1</sup>	9.0	27.4	39.1	19.8	4.7	
	White, non-Hispanic	10.3	32.7	35.3	17.6	4.1	

	Hispanic	8.0	25.1	36.3	24.7	5.9	
<p>... Category not applicable.</p> <p><sup>1</sup>“Other, non-Hispanic” race and ethnicity includes respondents who indicated their race(s) were Asian, non-Hispanic, American Indian or Alaska Native, non-Hispanic, Native Hawaiian or Pacific Islander, non-Hispanic, or a combination of two or more non-Hispanic races.</p> <p>NOTES: n = 5,017 complete cases. P-values based on a chi-square test with Rao-Scott’s second-order correction across the characteristics within each demographic variable. Row totals may not sum to exactly 100% due to rounding.</p> <p>SOURCE: National Center for Health Statistics, Research and Development Survey 10, 2024.</p>							

Table VII: Unweighted distributions of responses to the sleep Whole Person Health Index item overall and by selected population groups, and tests of association, Research and Development Survey 10

Variable	Characteristic	Response to sleep question					p-value
		Excellent	Very good	Good	Fair	Poor	
Total	...	6.9	21.7	36.1	25.6	9.6	...
Age	18-29	8.3	22.0	34.2	24.5	10.9	<0.001
	30-44	5.8	17.9	37.1	28.4	10.8	
	45-59	4.7	21.7	36.2	27.0	10.4	
	60+	8.7	24.6	36.0	22.9	7.8	
Sex	Female	7.0	22.7	36.9	24.3	9.1	0.190
	Male	6.9	20.8	35.4	26.8	10.2	
Educational attainment	High school diploma or less	7.7	19.6	33.5	26.0	13.3	<0.001
	Some college, including Associate's degree	6.4	18.9	37.1	26.9	10.7	
	Bachelor's degree	6.9	25.2	36.4	24.2	7.4	
	Graduate degree	7.5	28.3	37.0	23.0	4.2	
Race and ethnicity	Black, non-Hispanic	7.4	17.1	33.5	29.6	12.4	<0.001
	Other, non-Hispanic <sup>1</sup>	7.7	18.2	34.6	30.6	9.0	
	White, non-Hispanic	6.7	24.3	36.8	24.2	8.0	
	Hispanic	6.9	17.4	36.5	25.3	13.9	

... Category not applicable.

<sup>1</sup>“Other, non-Hispanic” race and ethnicity includes respondents who indicated their race(s) were Asian, non-Hispanic, American Indian or Alaska Native, non-Hispanic, Native Hawaiian or Pacific Islander, non-Hispanic, or a combination of two or more non-Hispanic races.

NOTES: n = 5,016 complete cases; 1 respondent with missing data was excluded. P-values based on a chi-square test with Rao-Scott’s second-order correction across the characteristics within each demographic variable. Row totals may not sum to exactly 100% due to rounding.

SOURCE: National Center for Health Statistics, Research and Development Survey 10, 2024.

Table VIII: Unweighted distributions of responses to the spirituality Whole Person Health Index item overall and by selected population groups, and tests of association, Research and Development Survey 10

Variable	Characteristic	Response to spirituality question					p-value
		Excellent	Very good	Good	Fair	Poor	
Total	...	16.5	27.8	32.7	15.6	7.1	...
Age	18-29	15.7	19.9	33.5	19.1	11.7	<0.001
	30-44	11.9	24.0	36.7	19.6	7.6	
	45-59	17.0	27.6	33.9	15.1	5.9	
	60+	20.2	34.0	28.4	11.4	5.6	
Sex	Female	15.0	27.3	32.5	16.0	8.9	<0.001
	Male	18.0	28.3	32.8	15.3	5.4	
Educational attainment	High school diploma or less	17.1	26.5	32.6	15.8	7.8	0.250
	Some college, including Associate's degree	16.8	28.2	31.9	15.2	7.9	
	Bachelor's degree	15.1	27.2	34.9	16.2	6.3	
	Graduate degree	17.0	29.5	32.2	15.7	4.7	
Race and ethnicity	Black, non-Hispanic	18.9	32.0	30.4	12.5	6.1	<0.010
	Other, non-Hispanic <sup>1</sup>	15.6	23.7	34.8	18.5	6.6	
	White, non-Hispanic	16.7	28.6	31.7	15.6	7.0	
	Hispanic	14.4	23.5	37.1	16.6	8.3	
... Category not applicable.							
<sup>1</sup> “Other, non-Hispanic” race and ethnicity includes respondents who indicated their race(s) were Asian, non-Hispanic, American Indian or Alaska Native, non-Hispanic, Native Hawaiian or Pacific Islander, non-Hispanic, or a combination of two or more non-Hispanic races.							
NOTES: n = 5,002 complete cases; 15 respondents with missing data were excluded. P-values based on a chi-square test with Rao-Scott’s second-order correction across the characteristics within each demographic variable. Row totals may not sum to exactly 100% due to rounding.							
SOURCE: National Center for Health Statistics, Research and Development Survey 10, 2024.							

Table IX: Unweighted distributions of responses to the health management Whole Person Health Index item overall and by selected population groups, and tests of association, Research and Development Survey 10

Variable	Characteristic	Response to health management question					p-value
		Excellent	Very good	Good	Fair	Poor	
<b>Total</b>	...	8.4	31.2	39.3	17.2	3.8	...
<b>Age</b>	18-29	11.5	23.9	39.6	18.1	6.9	<0.001
	30-44	8.5	26.4	42.6	18.4	4.1	
	45-59	7.1	32.6	37.0	19.3	3.8	
	60+	8.0	36.8	38.1	14.6	2.4	

Sex	Female	9.0	31.4	39.4	16.2	3.9	0.360
	Male	7.9	30.9	39.2	18.1	3.8	
Educational attainment	High school diploma or less	9.2	24.3	40.7	20.6	5.0	<0.001
	Some college, including Associate's degree	7.5	29.9	40.0	18.0	4.6	
	Bachelor's degree	8.0	36.7	38.0	15.1	2.1	
	Graduate degree	10.3	37.8	37.0	12.7	2.1	
Race and ethnicity	Black, non-Hispanic	10.4	25.9	41.1	18.8	3.9	<0.010
	Other, non-Hispanic <sup>1</sup>	8.2	27.4	42.5	17.9	3.7	
	White, non-Hispanic	8.3	33.8	38.2	16.0	3.6	
	Hispanic	7.4	27.2	40.6	20.1	4.7	
... Category not applicable.							
<sup>1</sup> “Other, non-Hispanic” race and ethnicity includes respondents who indicated their race(s) were Asian, non-Hispanic, American Indian or Alaska Native, non-Hispanic, Native Hawaiian or Pacific Islander, non-Hispanic, or a combination of two or more non-Hispanic races.							
NOTES: n = 5,002 complete cases; 15 respondents with missing data were excluded. P-values based on a chi-square test with Rao-Scott’s second-order correction across the characteristics within each demographic variable. Row totals may not sum to exactly 100% due to rounding.							
SOURCE: National Center for Health Statistics, Research and Development Survey 10, 2024.							

## Appendix II. Cognitive Interview Questionnaire

### Whole Person Health Test Instrument

1. How would you rate your health in general?
  - ☐ Excellent
  - ☐ Very good
  - ☐ Good
  - ☐ Fair
  - ☐ Poor
2. How would you rate your quality of life, focusing on what matters most to you?
  - ☐ Excellent
  - ☐ Very good
  - ☐ Good
  - ☐ Fair
  - ☐ Poor
3. How would you rate your social and family connections?
  - ☐ Excellent
  - ☐ Very good
  - ☐ Good
  - ☐ Fair
  - ☐ Poor
4. How would you rate your diet?
  - ☐ Excellent
  - ☐ Very good
  - ☐ Good
  - ☐ Fair
  - ☐ Poor
5. How would you rate your physical activity?
  - ☐ Excellent
  - ☐ Very good
  - ☐ Good
  - ☐ Fair
  - ☐ Poor
6. How would you rate your ability to manage stress?
  - ☐ Excellent
  - ☐ Very good
  - ☐ Good
  - ☐ Fair
  - ☐ Poor
7. How would you rate your sleep?
  - ☐ Excellent
  - ☐ Very good
  - ☐ Good
  - ☐ Fair
  - ☐ Poor

8. How would you rate your spirituality or belief in God?

- ☐ Excellent
- ☐ Very good
- ☐ Good
- ☐ Fair
- ☐ Poor

9. How would you rate your ability to manage your most bothersome symptom or health concern?

- ☐ Excellent
- ☐ Very good
- ☐ Good
- ☐ Fair
- ☐ Poor

Social Isolation and Loneliness

PULSE\_SOC1. How often do you get the social and emotional support you need? Would you say always, usually, sometimes, rarely, or never?

- ☐ Always
- ☐ Usually
- ☐ Sometimes
- ☐ Rarely
- ☐ Never

PULSE\_SOC2. How often do you feel lonely? Would you say always, usually, sometimes, rarely, or never?

- ☐ Always
- ☐ Usually
- ☐ Sometimes
- ☐ Rarely
- ☐ Never

**[NOTE TO INTERVIEWERS: Split interviews and either PULSE\_SOCIND1 through PULSE\_SOCIND4 or NEW\_SIL1 and NEW\_SIL2]**

PULSE\_SOCIND1. In a typical week, how often do you talk on the telephone with family, friends, or neighbors?

- ☐ Less than once a week
- ☐ One or two times a week
- ☐ Three or four times a week
- ☐ Five or more times a week

PULSE\_SOCIND2. In a typical week, how often do you get together with friends or relatives?

- ☐ Less than once a week
- ☐ One or two times a week
- ☐ Three or four times a week
- ☐ Five or more times a week

PULSE\_SOCIND3. How often do you attend church or religious services?

- ☐ Never or less than once a year
- ☐ 1 to 3 times a year
- ☐ 4 to 11 times a year
- ☐ 12 or more times a year

PULSE\_SOCIND4. Altogether, how often do you attend meetings of clubs or organizations you belong to, such as church groups, unions, fraternal or athletic groups, or school groups?

- ☐ You do not belong to a group
- ☐ Never or less than once a year
- ☐ 1 to 3 times a year
- ☐ 4 to 11 times a year
- ☐ 12 or more times a year

NEW\_SIL1. In a typical week, how often do you get together in person, or talk on the phone (or video) with family members, friends, or neighbors? (Instruction: text, DM, email, etc. does not count)

- ☐ Never
- ☐ Less than once a week
- ☐ 1 or 2 times a week
- ☐ 3 or 4 times a week
- ☐ 5 or more times a week

NEW\_SIL2. In a typical month, how often do you participate in meetings of the clubs or organizations you belong to such as volunteer groups, school groups, social clubs and gatherings, or religious services?

- ☐ Never
- ☐ Less than once a month
- ☐ 1 or 2 times a month
- ☐ 3 or 4 times a month
- ☐ 5 or more times a month

PULSE\_SOCIND5. In a typical week, how often do you text or message with family, friends, or neighbors?

- ☐ Less than once a week
- ☐ One or two times a week
- ☐ Three or four times a week
- ☐ Five or more times a week

PREPARE16. In a typical week, how often do you see or talk to people that you care about and feel close to?

- ☐ Less than once a week
- ☐ One or two times a week
- ☐ Three or four times a week
- ☐ Five or more times a week

### Everyday Discrimination Scale

In your day-to-day life how often have any of the following things happened to you? Would you say: Almost every day, At least once a week, A few times a month, A few times a year, Less than once a year, or Never...

1. You are treated with less courtesy or respect than other people.

- ☐ Almost every day
- ☐ At least once a week
- ☐ A few times a month
- ☐ A few times a year
- ☐ Less than once a year
- ☐ Never

2. You receive poorer service than other people at restaurants or stores.



- ☐ Almost every day
- ☐ At least once a week
- ☐ A few times a month
- ☐ A few times a year
- ☐ Less than once a year
- ☐ Never

3. People act as if they think you are not smart.

- ☐ Almost every day
- ☐ At least once a week
- ☐ A few times a month
- ☐ A few times a year
- ☐ Less than once a year
- ☐ Never

4. People act as if they are afraid of you.

- ☐ Almost every day
- ☐ At least once a week
- ☐ A few times a month
- ☐ A few times a year
- ☐ Less than once a year
- ☐ Never

5. You are threatened or harassed.

- ☐ Almost every day
- ☐ At least once a week
- ☐ A few times a month
- ☐ A few times a year
- ☐ Less than once a year
- ☐ Never

#### Everyday Discrimination Scale

In your day-to-day life how often have any of the following things happened to you? Would you say: Almost every day, At least once a week, A few times a month, A few times a year, Less than once a year, or Never...

6. You are treated with less courtesy or respect than other people.

- ☐ Almost every day
- ☐ At least once a week
- ☐ A few times a month
- ☐ A few times a year
- ☐ Less than once a year
- ☐ Never

7. You receive poorer service than other people at restaurants or stores.

- ☐ Almost every day
- ☐ At least once a week
- ☐ A few times a month
- ☐ A few times a year
- ☐ Less than once a year
- ☐ Never

8. People act as if they think you are not smart.

- ☐ Almost every day

- ☐ At least once a week
- ☐ A few times a month
- ☐ A few times a year
- ☐ Less than once a year
- ☐ Never

9. People act as if they are afraid of you.

- ☐ Almost every day
- ☐ At least once a week
- ☐ A few times a month
- ☐ A few times a year
- ☐ Less than once a year
- ☐ Never

10. You are threatened or harassed.

- ☐ Almost every day
- ☐ At least once a week
- ☐ A few times a month
- ☐ A few times a year
- ☐ Less than once a year
- ☐ Never

#### Heightened Vigilance Scale

In your day-to-day life, how often do you do the following things: Almost every day, At least once a week, A few times a month, A few times a year, Less than once a year, Never

1. You try to prepare for possible insults from other people before leaving home.

- ☐ Almost every day
- ☐ At least once a week
- ☐ A few times a month
- ☐ A few times a year
- ☐ Less than once a year
- ☐ Never

2. Feel that you always have to be very careful about your appearance to get good service or avoid being harassed.

- ☐ Almost every day
- ☐ At least once a week
- ☐ A few times a month
- ☐ A few times a year
- ☐ Less than once a year
- ☐ Never

3. Carefully watch what you say and how you say it.

- ☐ Almost every day
- ☐ At least once a week
- ☐ A few times a month
- ☐ A few times a year
- ☐ Less than once a year
- ☐ Never

4. Try to avoid certain social situations and places.

- ☐ Almost every day
- ☐ At least once a week

- ☐ A few times a month
- ☐ A few times a year
- ☐ Less than once a year
- ☐ Never

## Appendix III. RANDS 10 Questionnaire

---

### WINTRO\_1.

This survey is about general health topics.

---

### CONFID\_DISPLAY.

Some of the content of the questions in the survey are sensitive in nature. This research is covered by a Certificate of Confidentiality from the National Institutes of Health. The Certificate of Confidentiality protects your privacy by prohibiting disclosure of identifiable, sensitive research information to anyone not connected to the research. This means that the researchers cannot release or use information that may identify you in any action or suit unless you say it is okay. An example would be a court subpoena.

The Certificate does not stop reporting what federal, state or local laws require. Some examples are laws that require reporting of child or elder abuse and threats to harm yourself or others. CIPSEA, explained on the next screen, does protect from this reporting and covers this research. Neither protect from any physical harm to yourself or others that may result from this survey. If at any point you do not feel safe while completing the survey, you can stop the survey and complete it at a later time that is better. There will also be resources available throughout the survey should you feel you need talk with anyone.

---

### WEBINTRO.



**CENTERS FOR DISEASE  
CONTROL AND PREVENTION**

The National Center for Health Statistics, part of the Centers for Disease Control and Prevention, is conducting a study and we need your help. We are interested in your health and wellness, and will be asking you a series of questions about your health history, behaviors, and opinions. This should take about 20 minutes or less to complete. Participation in this survey is completely voluntary, and you may skip any question(s) you do not want to answer and may quit the survey at any time. You will not receive any monetary reward or incentive from the government for participating in this survey. The information being collected is for research purposes only, and will assist NCHS and CDC in their ongoing efforts to track the health of the American public. Your data will be held confidential, will be used for statistical purposes only, and will not be disclosed or released to other persons without your consent in accordance with Section 308(d) of the Public Health Service Act [42 U.S.C. 242m(d)] and the Confidential Information and Statistical Efficiency Act

(Title III of the Foundations for Evidence-Based Policymaking Act of 2018, Pub. L. No. 115-435, 132 Stat. 5529, § 302).

If you have any questions about this study, please call the office of the Ethics Review Board at the National Center for Health Statistics, toll-free at 1-800-223-8118. Please leave a brief message with your name and phone number. Say that you are calling about Protocol #7420. Your call will be returned as soon as possible.

Notice - CDC estimates the average public reporting burden for this collection of information as 20 minutes per response, including the time for reviewing instructions, searching existing data/information sources, gathering and maintaining the data/information needed, and completing and reviewing the collection of information. An agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to CDC/ATSDR Information Collection Review Office, 1600 Clifton Road, MS D-74, Atlanta, GA 30333; ATTN: PRA (0902-0222).

Assurance of confidentiality - We take your privacy very seriously. All information that relates to or describes identifiable characteristics of individuals, a practice, or an establishment will be used only for statistical purposes. NCHS staff, contractors, and agents will not disclose or release responses in identifiable form without the consent of the individual or establishment in accordance with section 308(d) of the Public Health Service Act (42 U.S.C. 242m) and the Confidential Information Protection and Statistical Efficiency Act (Title III of the Foundations for Evidence-Based Policymaking Act of 2018 (Pub. L. No. 115-435, 132 Stat. 5529 § 302)). In accordance with CIPSEA, every NCHS employee, contractor, and agent has taken an oath and is subject to a jail term of up to five years, a fine of up to \$250,000, or both if he or she willfully discloses ANY identifiable information about you.

Click the "Continue" button below to begin.

---

## SECTION: Non-probability Sample Demographics

---

## SECTION: Whole Person Health

---

### PHSTAT.

Would you say your health in general is excellent, very good, good, fair, or poor?

### RESPONSE OPTIONS:

1. Excellent
2. Very good
3. Good
4. Fair
5. Poor

---

[SHOW IF PHSTAT=1,2,3,4,5]

PROBE\_SRH.

When you said your health in general was [INSERT RESPONSE FROM PHSTAT], which of the following, if any, were you thinking about?

*Select all that apply.*

RESPONSE OPTIONS:

1. Your diet and nutrition
2. Your exercise habits
3. Your smoking or drinking habits
4. Your health problems or conditions
5. Your lack of health problems or conditions
6. The amount of pain that you have
7. Your ability to do daily activities without assistance
8. The amount of sleep you get
9. Your mental or emotional health
10. The Coronavirus or COVID-19 pandemic
11. Something else, please specify: [TEXTBOX]
12. None of the above

---

WPH\_QOL.

How would you rate your quality of life, focusing on what matters most to you?

RESPONSE OPTIONS:

1. Excellent
2. Very good
3. Good
4. Fair
5. Poor

---

WPH\_SOC.

How would you rate your social and family connections?

Would you say excellent, very good, good, fair, or poor?

RESPONSE OPTIONS:

1. Excellent
2. Very good
3. Good
4. Fair
5. Poor

---

**WPH\_DIET.**

In general, how healthy is your overall diet?

**RESPONSE OPTIONS:**

1. Excellent
  2. Very good
  3. Good
  4. Fair
  5. Poor
- 

**WPH\_PHYS.**

How would you rate your physical activity?

**RESPONSE OPTIONS:**

1. Excellent
  2. Very good
  3. Good
  4. Fair
  5. Poor
- 

**WPH\_STRESS.**

How would you rate your ability to manage stress?

**RESPONSE OPTIONS:**

1. Excellent
  2. Very good
  3. Good
  4. Fair
  5. Poor
- 

**WPH\_SLEEP.**

How would you rate your sleep?

**RESPONSE OPTIONS:**

1. Excellent
2. Very good
3. Good
4. Fair
5. Poor



---

WPH\_SPIRIT.

How would you rate your spirituality or spiritual life?

RESPONSE OPTIONS:

1. Excellent
2. Very good
3. Good
4. Fair
5. Poor

---

WPH\_HEALTH.

How would you rate your ability to manage your most bothersome symptom or health concern?

RESPONSE OPTIONS:

1. Excellent
2. Very good
3. Good
4. Fair
5. Poor

---

SECTION: Calibration Variables

---

SINGLE\_GEN.

Are you...?

*Select all that apply.*

RESPONSE OPTIONS:

1. Female
2. Male
3. Transgender, non-binary, or another gender

**INSERT FOOTER:** The purpose of this question is to get a better understanding about how people's gender impacts their health. Your answer to this question, and all of your answers, are protected by law.

---

GAD2.

Over the last 2 weeks, how often have you been bothered by the following problems?

GRID ITEMS:

- A. Feeling nervous, anxious, or on edge
- B. Not being able to stop or control worrying

**RESPONSE OPTIONS:**

- 1. Not at all
- 2. Several days
- 3. More than half the days
- 4. Nearly every day

**INSERT FOOTER** These questions may be difficult to answer. If you need help, please click here for a list of resources.

**LINK BEHIND “HERE”:** [8935 RANDS 10 Resources.pdf](#)

---

**CREATE DOV\_GAD:**

WHEN COMPUTING DOV\_GAD, FOR GAD2A AND GAD2B, “NOT AT ALL”=0, “SEVERAL”=1, “MORE THAN HALF”=2, “NEARLY EVERY”=3. ALSO, 77s, 98s, and 99s=0

IF SUM(GAD2A AND GAD2B)>=3, DOV\_GAD=1, ELSE DOV\_GAD=0

---

**PHQ.**

Over the last 2 weeks, how often have you been bothered by the following problems?

**GRID ITEMS:**

- A. Little interest or pleasure in doing things
- B. Feeling down, depressed, or hopeless

**RESPONSE OPTIONS:**

- 1. Not at all
- 2. Several days
- 3. More than half the days
- 4. Nearly every day

**INSERT FOOTER** These questions may be difficult to answer. If you need help, please click here for a list of resources.

**LINK BEHIND “HERE”:** [8935 RANDS 10 Resources.pdf](#)

---

**CREATE DOV\_PHQ:**

WHEN COMPUTING DOV\_PHQ, FOR PHQA AND PHQB, "NOT AT ALL"=0, "SEVERAL"=1, "MORE THAN HALF"=2, "NEARLY EVERY"=3. ALSO, 77s, 98s, and 99s=0

IF SUM(PHQA AND PHQB)>=3, DOV\_PHQ =1, ELSE DOV\_PHQ=0

---

#### SOCERRNDS.

Because of a physical, mental, or emotional condition, do you have difficulty doing errands alone such as visiting a doctor's office or shopping?

#### RESPONSE OPTIONS:

1. No difficulty
  2. Some difficulty
  3. A lot of difficulty
  4. Cannot do this at all
- 

#### SOCSCLPAR.

Because of a physical, mental, or emotional condition, do you have difficulty participating in social activities such as visiting friends, attending clubs and meetings, or going to parties?

#### RESPONSE OPTIONS:

1. No difficulty
  2. Some difficulty
  3. A lot of difficulty
  4. Cannot do this at all
- 

#### HOVER\_DISPLAY1.

There are terms in the following question that have some additional text available to help explain what they are. If you are interested in that additional information, please hover over the terms in [blue](#) text to see it.

---

#### SOCWRKLIM.

Are you limited in the kind or amount of work you can do because of a physical, mental, or emotional problem?

[INSERT FOLLOWING HOVER TEXT OVER "work": *Work includes paid work, volunteer work, schoolwork, and homework.*

#### RESPONSE OPTIONS:

1. Yes
2. No

---

**CHRONSERIES.**

The next few questions are about medical conditions you may have been told you had.

Have you ever been told by a doctor or other health professional that you had...

**GRID ITEMS, RANDOMIZE:**

**HYPEV.** Hypertension, also called high blood pressure?

**CHLEV.** High cholesterol?

**CHDEV.** Coronary heart disease?

**ASEV.** Asthma?

**COPDEV.** Chronic Obstructive Pulmonary Disease (C.O.P.D.), emphysema, or chronic bronchitis?

**CANEV.** Cancer or a malignancy of any kind?

**ARTHEV.** Some form of arthritis, rheumatoid arthritis, gout, lupus, or fibromyalgia?

**RESPONSE OPTIONS:**

1. Yes
  2. No
- 

[SHOW IF CHLEV = 1]

**CHL12M.**

During the past 12 months, have you had high cholesterol?

**RESPONSE OPTIONS:**

1. Yes
  2. No
- 

[SHOW IF ASEV = 1]

**ASTILL.**

Do you still have asthma?

**RESPONSE OPTIONS:**

1. Yes
  2. No
- 

**PULMSERIES.**

The next few questions are about other medical conditions you may have been told you had.

Have you ever been told by a doctor or other health professional that you had...

**GRID ITEMS, RANDOMIZE AND RECORD:**

**ANGEV.** Angina, also called angina pectoris?

**MIEV.** A heart attack, also called myocardial infarction?

**STREV.** A stroke?

**RESPONSE OPTIONS:**

1. Yes
  2. No
- 

**PREDIB.**

Has a doctor or other health professional ever told you that you had prediabetes or borderline diabetes?

**RESPONSE OPTIONS:**

1. Yes
  2. No
- 

**GESDIB.**

Has a doctor or other health professional ever told you that you had gestational diabetes, a type of diabetes that occurs only during pregnancy?

**RESPONSE OPTIONS:**

1. Yes
  2. No
  3. Not applicable
- 

**DIBEV.**

[SHOW IF (PREDIB= 1) AND (GESDIB= 1)] Not including prediabetes or gestational diabetes, has a doctor or other health professional ever told you that you had diabetes?

[SHOW IF (PREDIB= 1) AND (GESDIB= 2,3,77,98,99)] Not including prediabetes, has a doctor or other health professional ever told you that you had diabetes?

[SHOW IF (PREDIB= 2,77,98,99) AND (GESDIB= 1)] Not including gestational diabetes, has a doctor or other health professional ever told you that you had diabetes?

[SHOW IF (PREDIB= 2,77,98,99) AND (GESDIB= 2,3,77,98,99)] Has a doctor or other health professional ever told you that you had diabetes?

**RESPONSE OPTIONS:**

1. Yes

2. No

SMKEV.

Have you smoked at least 100 cigarettes in your entire life?

RESPONSE OPTIONS:

1. Yes
2. No

During the past 30 days, how many days per week or per month did you have at least one drink of any alcoholic beverage such as beer, wine, a malt beverage or liquor?

[NUMBOX]

ALCDAY5.

Number of days:

[NUMBOX; RANGE 0-30, 7777, 9998, 9999]

[DROPDOWN]

ALCDAY5\_DROP.

Per week/month (select one):

RESPONSE OPTIONS:

1. Per week
2. Per month

[SHOW IF ALCDAY5=1 - 30; SKIP IF 77, 98,  
AVEDRNK3.

99]

One drink is equivalent to a 12-ounce beer, a 5-ounce glass of wine, or a drink with one shot of liquor.

During the past 30 days, on the days when you drank, about how many drinks did you drink on the average?

Number of drinks:

[NUMBER BOX, RANGE 0-100, 777, 998, 999]

COMPUTE DRNK3GE5\_INS:

IF PANEL\_TYPE<20:

IF SINGLE\_GEN=2 ONLY, DRNK3GE5\_INS = '5'

ELSE (INCLUDING MULTIPLE ANSWERS), DRNK3GE5\_INS = '4'

IF PANEL\_TYPE>=20:

IF SINGLE\_GEN\_OPT=2 ONLY, DRNK3GE5\_INS = '5'

ELSE (INCLUDING MULTIPLE ANSWERS), DRNK3GE5\_INS = '4'

---

[SHOW IF ALCDAY5=1 - 30; SKIP IF 77, 98, 99]  
DRNK3GE5.

Considering all types of alcoholic beverages, how many times during the past 30 days did you have [DRNK3GE5\_INS] or more drinks on an occasion?

Number of times:

[NUMBER BOX, RANGE 0-100, 777, 998, 999]

---

[SHOW IF ALCDAY5=1 - 30; SKIP IF 77, 98, 99]  
MAXDRNKS.

During the past 30 days, what is the largest number of drinks you had on any occasion?

Number of drinks:

[NUMBER BOX, RANGE 0-100, 777, 998, 999]

---

[SHOW IF MODE\_JS=CATI]  
ACCSSINT.

Do you have access to the Internet?

RESPONSE OPTIONS:

1. Yes
2. No

IF MODE\_JS =CAWI, AUTO-PUNCH 1 AT ACCSSINT

---

[SHOW IF ACCSSINT=1]  
ACCSSHOM.

Do you have access to the Internet from your home?

RESPONSE OPTIONS:

1. Yes
  2. No
- 

[SHOW IF ACCSSINT=1]  
HOVER\_DISPLAY2.

There are terms in the following question that have some additional text available to help explain what they are. If you are interested in that additional information, please hover over the terms in blue text to see it.

---



[SHOW IF ACCSSINT=1]

HIT\_GRID.

During the past 12 months, have you used the Internet for any of the following reasons?

[INSERT FOLLOWING HOVER TEXT OVER “Internet”: *Include Internet and data use through a computer, tablet, smartphone, or other electronic device.*

GRID ITEMS:

HITLOOK. To look for health or medical information.

HITCOMM. To communicate with a doctor or doctor’s office.

HITTEST. To look up medical test results.

RESPONSE OPTIONS:

1. Yes
  2. No
- 

EMPLASTWK.

Last week, did you work for pay at a job or business?

RESPONSE OPTIONS:

1. Yes
  2. No
- 

CEVOLUN1.

During the past 12 months, did you spend any time volunteering for any organization or association?

RESPONSE OPTIONS:

1. Yes
  2. No
- 

[SHOW IF CEVOLUN1=2,77,98]

CEVOLUN2.

Some people don’t think of activities they do infrequently or for children’s schools or youth organizations as volunteer activities. During the past 12 months, have you done any of these types of activities?

RESPONSE OPTIONS:

1. Yes
  2. No
-

**CEMMETNG.**

During the past 12 months, did you attend a public meeting, such as a zoning or school board meeting, that discussed a local issue?

**RESPONSE OPTIONS:**

1. Yes
  2. No
- 

**CEVOTELC.**

Did you vote in the last local elections, such as for mayor, councilmembers, or school board?

**RESPONSE OPTIONS:**

1. Yes
  2. No
- 

**SECTION: Quality of Life**

---

**LSATIS4.**

In general, how satisfied are you with your life?

**RESPONSE OPTIONS:**

1. Very satisfied
  2. Satisfied
  3. Dissatisfied
  4. Very dissatisfied
- 

**HEALTHYDAY2.**

Now thinking about your physical health, which includes physical illness and injury, for how many days during the past 30 days was your physical health not good?

Number of days:

[NUMBER BOX, RANGE 0-30, 98, 99]

---

**HEALTHYDAY3.**

Now thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good?

Number of days:

[NUMBER BOX, RANGE 0-30, 98, 99]

[INSERT FOOTER](#) These questions may be difficult to answer. If you need help, please click here for a list of resources.

[LINK BEHIND “HERE”](#): 8935 RANDS 10 Resources.pdf

---

#### HEALTHYDAY4.

During the past 30 days, for about how many days did poor physical or mental health keep you from doing your usual activities, such as self-care, work, or recreation?

Number of days:

[NUMBER BOX, RANGE 0-30, 98, 99]

[INSERT FOOTER](#) These questions may be difficult to answer. If you need help, please click here for a list of resources.

[LINK BEHIND “HERE”](#): 8935 RANDS 10 Resources.pdf

---

#### SECTION: Social and Family Connections

---

#### LSNS6\_FAMILYGRID.

Considering the people to whom you are related by birth, marriage, or adoption, how many relatives do you...

##### GRID ITEMS:

- |          |  |
|----------|--|
| LSNS6_1. | See or hear from at least once a month?                    |
| LSNS6_2. | Feel at ease with that you can talk about private matters? |
| LSNS6_3. | Feel close to such that you could call them for help?      |

##### RESPONSE OPTIONS:

0. None
  1. One
  2. Two
  3. Three or Four
  4. Five through Eight
  5. Nine or More
- 

#### LSNS6\_FRIENDGRID.

Considering all of your friends, including those who live in your neighborhood, how many do you...

##### GRID ITEMS:

- |          |  |
|----------|--|
| LSNS6_4. | See or hear from at least once a month?                    |
| LSNS6_5. | Feel at ease with that you can talk about private matters? |
| LSNS6_6. | Feel close to such that you could call them for help?      |

## RESPONSE OPTIONS:

0. None
  1. One
  2. Two
  3. Three or Four
  4. Five through Eight
  5. Nine or More
- 

## STRAIN\_GRID.

How often do members of your family or your friends...

## GRID ITEMS:

- |          |   |
|----------|---|
| STRAIN1. | Criticize you?                              |
| STRAIN2. | Make too many demands on you?               |
| STRAIN3. | Let you down when you are counting on them? |
| STRAIN4. | Get on your nerves?                         |

## RESPONSE OPTIONS:

0. Never
  1. Rarely
  2. Some of the time
  3. Often
- 

## PULSE\_SOC1.

How often do you get the social and emotional support you need?

## RESPONSE OPTIONS:

1. Always
  2. Usually
  3. Sometimes
  4. Rarely
  5. Never
- 

## PULSE\_SOC2.

How often do you feel lonely?

## RESPONSE OPTIONS:

1. Always
  2. Usually
  3. Sometimes
  4. Rarely
  5. Never
- 

## PULSE\_SOCIND1.

In a typical week, how often do you talk on the telephone with family, friends, or neighbors?

RESPONSE OPTIONS:

1. Less than once a week
  2. One or two times a week
  3. Three or four times a week
  4. Five or more times a week
- 

PULSE\_SOCIND2.

In a typical week, how often do you get together with friends or relatives?

RESPONSE OPTIONS:

1. Less than once a week
  2. One or two times a week
  3. Three or four times a week
  4. Five or more times a week
- 

PULSE\_SOCIND5.

In a typical week, how often do you text or message with family, friends, or neighbors?

RESPONSE OPTIONS:

1. Less than once a week
  2. One or two times a week
  3. Three or four times a week
  4. Five or more times a week
- 

PREPARE16.

In a typical week, how often do you see or talk to people that you care about and feel close to?

RESPONSE OPTIONS:

1. Less than once a week
  2. One or two times a week
  3. Three or four times a week
  4. Five or more times a week
- 

PULSE\_SOCIND3.

How often do you attend church or religious services?

RESPONSE OPTIONS:

0. Never or less than once a year
  1. 1 to 3 times a year
  2. 4 to 11 times a year
  3. 12 or more times a year
-

**PULSE\_SOCIND4.**

Altogether, how often do you attend meetings of clubs or organizations you belong to, such as church groups, unions, fraternal or athletic groups, or school groups?

**RESPONSE OPTIONS:**

0. I do not belong to a group
  1. Never or less than once a year
  2. 1 to 3 times a year
  3. 4 to 11 times a year
  4. 12 or more times a year
- 

**UCLA\_GRID.**

The next questions are about how you feel about different aspects of your life. For each one indicate how often you feel that way.

**GRID ITEMS:**

<b>SUPPORT.</b>	How often do you get the social and emotional support that you need?
<b>UCLA1.</b>	How often do you feel socially isolated from others?
<b>UCLA2.</b>	How often do you feel you lack companionship?
<b>UCLA3.</b>	How often do you feel left out?

**RESPONSE OPTIONS:**

1. Always
  2. Usually
  3. Sometimes
  4. Rarely
  5. Never
- 

**SECTION: Diet**

---

**DQQ\_INTRO.**

The next questions are about foods and drinks that you consumed yesterday during the day or night, whether you had it at home or somewhere else.

---

**DQQ\_GRID1.**

Yesterday, did you eat any of the following vegetables and other foods?

**GRID ITEMS:**

<b>DQQ1.</b>	Bread, rice, pasta, tortilla, or cereal?
<b>DQQ2.</b>	Fresh corn, popcorn, oats, granola, brown rice, or quinoa?
<b>DQQ3.</b>	Potato?
<b>DQQ4.</b>	Beans, refried beans, peas, lentils, hummus, chickpeas, tofu, or lima beans?

- DQQ5. Carrots, orange squash, pumpkin, sweet potato, or red bell pepper?  
DQQ6. Broccoli, spinach, arugula, kale, collards, turnip greens, or mustard greens?  
DQQ7. Lettuce, tomatoes, green beans, celery, green peppers, cabbage, or cucumber?  
DQQ8. Zucchini, mushrooms, eggplant, cauliflower, okra, asparagus, or radish?

## RESPONSE OPTIONS:

1. Yes  
0. No
- 

## DQQ\_GRID2.

Yesterday, did you eat any of the following fruits?

## GRID ITEMS:

- DQQ9. Cantaloupe, mango, papaya, apricots, or dried apricots?  
DQQ10. Orange, clementine, mandarin, tangerine, or grapefruit?  
DQQ11\_1. Banana, apple, watermelon, grapes, avocado, berries, or cherries?  
DQQ11\_2. Pineapple, pear, kiwi, plums, prunes, peaches, or nectarines?

## RESPONSE OPTIONS:

1. Yes  
0. No
- 

## DQQ\_GRID3.

Yesterday, did you eat any of the following sweets?

## GRID ITEMS:

- DQQ12. Cakes, cookies, brownies, donuts, pastries, or pie?  
DQQ13. Candy, candy bars, chocolates, ice cream, popsicles, milkshake, or pudding?

## RESPONSE OPTIONS:

1. Yes  
0. No
- 

## DQQ\_GRID4.

Yesterday, did you eat any of the following foods of animal origin?

## GRID ITEMS:

- DQQ14. Eggs?  
DQQ15. Cheese?  
DQQ16. Yogurt?  
DQQ17. Sausages, hot dogs, pepperoni, luncheon meat, ham, or bacon?  
DQQ18. Beef, hamburger, lamb, or venison?  
DQQ19. Pork?



DQQ20.

Chicken or turkey?

DQQ21.

Fish, tuna fish, shrimp, or seafood?

## RESPONSE OPTIONS:

- 1. Yes
  - 0. No
- 

## DQQ\_GRID5.

Yesterday, did you eat any of the following other foods?

## GRID ITEMS:

DQQ22.

Peanut butter, almond butter, peanuts, almonds, cashews, walnuts, pecans, or pistachios?

DQQ23.

Potato chips, Cheetos, Doritos, Fritos, or Pringles?

DQQ24.

Ramen noodle soup or other instant soup?

DQQ25.

French fries, onion rings, fried chicken, chicken nuggets, fish sticks, fish fry, or fried shrimp?

## RESPONSE OPTIONS:

- 1. Yes
  - 0. No
- 

## DQQ\_GRID6.

Yesterday, did you have any of the following beverages?

## GRID ITEMS:

DQQ26.

Milk, including dairy milk on cereal or in lattes?

DQQ27.

Coffee with sugar, sweet coffee drinks, hot cocoa, or chocolate milk?

DQQ28.

Fruit juice, fruit-flavored drinks, lemonade, or sweet tea?

DQQ29.

Soft drinks or pop such as Coke, Pepsi, Sprite, or Dr Pepper, sports drinks, or energy drinks?

## RESPONSE OPTIONS:

- 1. Yes
  - 0. No
- 

## DQQ30.

Yesterday, did you get food from any place like McDonald's, Burger King, Subway, Dunkin, Wendy's, Taco Bell, or Chick-Fil-A?

## RESPONSE OPTIONS:

- 1. Yes
  - 0. No
-

## SECTION: Physical Activity

---

### ACTV\_INTRO.

The next questions are about physical activities (exercise, sports, physically active hobbies...) that you may do in your leisure-time. The first questions ask about light or moderate physical activities, then there will be questions about vigorous physical activities.

---

### MODNO.

How often do you do light or moderate leisure-time physical activities for at least 10 minutes that cause only light sweating or a slight to moderate increase in breathing or heart rate?

per day/week/month/year

[NUMBER BOX, RANGE 0-995, 998] Number of times [DROPDOWN LIST]

#### DROPDOWN LIST RESPONSE OPTIONS:

1. Never
  2. Per day
  3. Per week
  4. Per month
  5. Per year
  6. Unable to do this type of activity
- 

[SHOW IF MODNO\_DROPDOWN=2,3,4,5 AND (MODNO\_NUMBOX>0 AND MODNO\_NUMBOX NE '998')]

### MODLNGNO.

About how long do you do these light or moderate leisure-time physical activities each time?

Minutes/Hours

[NUMBER BOX, RANGE 1-90, 998] Number of [DROPDOWN LIST]

#### DROPDOWN LIST RESPONSE OPTIONS:

1. Minutes
  2. Hours
- 

### VIGNO.

How often do you do vigorous leisure-time physical activities for at least 10 minutes that cause heavy sweating or large increases in breathing or heart rate?

per day/week/month/year

[NUMBER BOX, RANGE 0-995, 998] Number of times [DROPDOWN LIST]

#### DROPDOWN LIST RESPONSE OPTIONS:

1. Never
  2. Per day
  3. Per week
  4. Per month
  5. Per year
  6. Unable to do this type of activity
- 

[SHOW IF VIGNO\_DROPDOWN=2,3,4,5 AND (VIGNO\_NUMBOX>0 AND VIGNO\_NUMBOX NE '998')]

VIGLNGNO.

About how long do you do these vigorous leisure-time physical activities each time?

Minutes/Hours

[NUMBER BOX, RANGE 1-90, 998] Number of [DROPDOWN LIST]

DROPDOWN LIST RESPONSE OPTIONS:

1. Minutes
  2. Hours
- 

STRNGNO.

How often do you do leisure-time physical activities specifically designed to strengthen your muscles such as lifting weights or doing calisthenics?

*Include all such activities even if you have mentioned them before.*

per day/week/month/year

[NUMBER BOX, RANGE 0-995, 998] Number of times [DROPDOWN LIST]

DROPDOWN LIST RESPONSE OPTIONS:

1. Never
  2. Per day
  3. Per week
  4. Per month
  5. Per year
  6. Unable to do this type of activity
- 

PROBE\_PHYSACT

In the last week, did you do any of the following things for 20 or more minutes at once?

*Please select all that apply.*

RESPONSE OPTIONS:

1. Running or jogging
2. Hiking
3. Walking as part of your job

4. Walking outside of work
  5. Yardwork or cleaning your home
  6. Working out with exercise equipment
  7. Lifting weights
  8. Cycling, swimming, or other aerobic exercises
  9. Yoga or stretching
  10. Playing a sport, please specify which sport: [TEXTBOX]
  11. Other, please specify: [TEXTBOX]
- 

## SECTION: Stress

---

### STRESS.

Stress means a situation in which a person feels tense, restless, nervous, or anxious, or is unable to sleep at night because their mind is troubled all the time.

Within the last 30 days, how often have you felt this kind of stress?

#### RESPONSE OPTIONS:

1. Always
2. Usually
3. Sometimes
4. Rarely
5. Never

**INSERT FOOTER** These questions may be difficult to answer. If you need help, please click here for a list of resources.

**LINK BEHIND “HERE”:** [8935 RANDS 10 Resources.pdf](#)

---

### PSS\_SERIES.

In the last month, how often have you felt the following?

#### GRID ITEMS:

- PSS\_2. That you were unable to control the important things in your life
- PSS\_4. Confident about your ability to handle your personal problems
- PSS\_5. That things were going your way
- PSS\_10. Difficulties were piling up so high that you could not overcome them

#### RESPONSE OPTIONS:

1. Always
2. Usually
3. Sometimes
4. Rarely

## 5. Never

**INSERT FOOTER** These questions may be difficult to answer. If you need help, please click here for a list of resources.

**LINK BEHIND “HERE”:** [8935 RANDS 10 Resources.pdf](#)

**CREATE DOV\_PSS:**

**WHEN COMPUTING DOV\_PSS,**

**FOR PSS\_2, PSS\_10, "ALWAYS"=4, "USUALLY" =3, "SOMETIMES"=2, "RARELY"=1, "NEVER"=0.**

**FOR PSS\_4, PSS\_5, "ALWAYS"=0, "USUALLY" =1, "SOMETIMES"=2, "RARELY"=3, "NEVER"=4.**

**DOV\_PSS = SUM OF PSS\_2, PSS\_10, PSS\_4, PSS\_5 USING RULES ABOVE FOR VALUES**

**IF ANY OF PSS\_2, PSS\_4, PSS\_5, OR PSS\_10 IS 77s, 98s, and 99s, SET DOV\_PSS=99**

## **SECTION: Sleep**

### **PSQI\_1.**

During the past month, what time have you usually gone to bed?

**[NUMBOX, RANGE 1-12] Hour    [NUMBOX, RANGE 0-59] Minute**

**RESPONSE OPTIONS:**

1. AM
2. PM

**[DISPLAY ON SAME SCREEN AS PSQI\_1]**

### **PSQI\_2.**

During the past month, how long (in minutes) has it usually taken you to fall asleep?

**[NUMBOX, RANGE 0-1440] minutes**

### **PSQI\_3.**

During the past month, what time have you usually gotten up?

[NUMBOX, RANGE 1-12] Hour    [NUMBOX, RANGE 0-59] Minute

RESPONSE OPTIONS:

1. AM
  2. PM
- 

PSQI\_4.

During the past month, how many hours of actual sleep did you get on an average day?

This may be different than the number of hours you spent in bed.

*If you get something like 6 hours and 45 minutes of sleep, please include minutes as well.*

[NUMBOX RANGE 0-24] Hours

[NUMBOX RANGE 0-59] Minutes

---

PSQI\_5.

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

GRID ITEMS:

- A. Cannot get to sleep within 30 minutes
- B. Wake up in the middle of the night or early morning
- C. Have to get up to use the bathroom
- D. Cannot breathe comfortably
- E. Cough or snore loudly
- F. Feel too cold
- G. Feel too hot
- H. Had bad dreams
- I. Have pain
- J. Some other reason, please specify [TEXTBOX]

RESPONSE OPTIONS:

0. Not during the past month
  1. Less than once a month
  2. Once or twice a month
  3. Three or more times a month
- 

PSQI\_6.

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

RESPONSE OPTIONS:

- 0. Very good
  - 1. Fairly good
  - 2. Fairly bad
  - 3. Very bad
- 

**PSQI\_78GRID.**

During the past month, how often have you...

**GRID ITEMS:**

PSQI\_7. taken medicine to help you sleep?

PSQI\_8. had trouble staying awake while driving, eating meals, or engaging in social activity?

**HOVER TEXT OVER “medicine”:** *Either prescribed or over the counter*

**RESPONSE OPTIONS:**

- 0. Not during the past month
  - 1. Less than once a month
  - 2. Once or twice a month
  - 3. Three or more times a month
- 

**PSQI\_9.**

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

**RESPONSE OPTIONS:**

- 0. No problem at all
  - 1. Only a slight problem
  - 2. Somewhat of a problem
  - 3. A very big problem
- 

**SECTION: Spirituality**

---

**SWBS\_GRID.**

Would you strongly agree, agree, neither agree nor disagree, disagree, or strongly disagree with the following statements?

**GRID ITEMS:**

- A. I don't know who I am, where I come from, or where I am going.
- B. I believe that God/a Higher Power loves me and cares about me.
- C. I have a personally meaningful relationship with God/a Higher Power.
- D. I feel very fulfilled and satisfied with my life.
- E. I don't get much personal strength and support from God/a Higher Power.
- F. I believe that God/a Higher Power is concerned about my problems.
- G. I feel good about my your future.

- H. My life doesn't have much meaning.
- I. My relationship with God/a Higher Power contributes to my sense of well-being.
- J. I believe there is some real purpose for my life.

**RESPONSE OPTIONS:**

- 1. Strongly Agree
  - 2. Agree
  - 3. Neither Agree nor Disagree
  - 4. Disagree
  - 5. Strongly Disagree
- 

**SECTION: Health Management**

---

**HICOV.**

Are you covered by any kind of health insurance or some other kind of health care plan?

**RESPONSE OPTIONS:**

- 1. Yes
  - 2. No
- 

**[SHOW IF HICOV=1]****HIKIND.**

What kinds of health insurance or health care coverage do you have?

*Select all that apply.*

**RESPONSE OPTIONS:**

- 1. Private health insurance
  - 2. Medicare
  - 3. Medigap
  - 4. Medicaid
  - 5. Children's Health Insurance Program (CHIP)
  - 6. Military related health care: TRICARE (CHAMPUS) / VA health care / CHAMP-VA
  - 7. Indian Health Service
  - 8. State-sponsored health plan
  - 9. Other government program
  - 10. No coverage of any type
- 

**USUALPL.**

Is there a place that you usually go to if you are sick and need health care?



**RESPONSE OPTIONS:**

1. Yes
  2. No, there is no place
  3. There is more than one place
- 

**SECTION: Discrimination**

---

**EDS.**

These next questions are about times and places where you were treated unfairly. In your day-to-day life, how often have any of the following things happened to you?

**GRID ITEMS, RANDOMIZE AND RECORD:**

- EDSA.** You are treated with less courtesy or respect than other people  
**EDSB.** Compared to other people, you receive poorer service at restaurants or stores  
**EDSC.** People act as if they think you are not smart  
**EDSD.** People act as if they are afraid of you  
**EDSE.** You are threatened or harassed

**RESPONSE OPTIONS:**

1. At least once a week
  2. A few times a month
  3. A few times a year
  4. Less than once a year
  5. Never
- 

**CREATE DOV\_EDS:**

**IF ANY OF EDSA TO EDSE = 1-4      DOV\_EDS=1**  
**ELSE      DOV\_EDS=0**

---

**[SHOW IF DOV\_EDS=1]****EDS\_FU.**

What do you think the main reason is for these experiences?

**RESPONSE OPTIONS:**

1. Your Ancestry or National Origins
2. Your Gender
3. Your Race
4. Your Age
5. Your Religion
6. Your Height
7. Your Weight

8. Some other Aspect of Your Physical Appearance
9. Your Sexual Orientation
10. Your Education or Income Level

### HVS.

In your day-to-day life, how often did you...

### GRID ITEMS, RANDOMIZE AND RECORD:

- HVSA. Try to prepare for possible insults from other people before leaving home?
- HVSB. Feel that you have to be very careful about appearance to get good service or avoid getting harassed?
- HVSC. Carefully watch what you say and how you say it?
- HVSD. Try to avoid certain social situations and places?

### RESPONSE OPTIONS:

1. Almost every day
2. At least once a week
3. A few times a month
4. A few times a year
5. Less than once a year
6. Never

### CREATE DOV\_HVS:

```
IF ANY OF HVSA TO HVSD = 1-5      DOV_HVS=1
ELSE      DOV_HVS=0
```

### CREATE PROBE\_EDSHVS\_FILL:

```
IF RND_01 = 1  PROBE_EDSHVS_FILL = you are treated with less courtesy or respect than other
people
IF RND_01 = 2  PROBE_EDSHVS_FILL = you receive poorer service than other people at restaurants
or stores
IF RND_01 = 3  PROBE_EDSHVS_FILL = people act as if they think you are not smart
IF RND_01 = 4  PROBE_EDSHVS_FILL = people act as if they are afraid of you
IF RND_01 = 5  PROBE_EDSHVS_FILL = you are threatened or harassed
IF RND_01 = 6  PROBE_EDSHVS_FILL = you try to prepare for possible insults from other people
before leaving home
IF RND_01 = 7  PROBE_EDSHVS_FILL = you feel that you have to be very careful about appearance
to get good service or avoid getting harassed
IF RND_01 = 8  PROBE_EDSHVS_FILL = you carefully watch what you say and how you say it
IF RND_01 = 9  PROBE_EDSHVS_FILL = you try to avoid certain social situations and places
```

### PROBE\_EDSHVS.

When we asked you how often [PROBE\_EDSHVS\_FILL], what were you thinking about?

[TEXTBOX]

---

PROBE\_DISCRIM.

[SHOW IF P\_PROMPT=1] We want to better understand how you think about some of the questions we are asking you in this survey.

When answering the previous few questions about your experiences and how you have been treated, which of the following, if any, were you mainly thinking about?

RESPONSE OPTIONS:

1. Racism or discrimination based on your race and ethnicity
  2. Negative social interactions, such as receiving poor service at stores or dealing with rude people
  3. Social inequalities based on things like age, gender, and education
  4. Something else, please specify [TEXTBOX]
- 

SECTION CLOSE: Burden and Close

---

BURDEN1.

How burdensome was it to complete this survey?

RESPONSE OPTIONS:

1. Not at all burdensome
  2. A little burdensome
  3. Moderately burdensome
  4. Very burdensome
  5. Extremely burdensome
- 

BURDEN2.

How difficult was it to answer the questions?

RESPONSE OPTIONS:

1. Not at all difficult
2. A little difficult
3. Moderately difficult
4. Very difficult
5. Extremely difficult

**Demographic Profile:**  
**Additional questions asked of panelists prior to this survey**  
**and are included with the survey data**

Variable	Values
Gender	1 = Male
	2 = Female
Age	Age in years
Age (7 categories)	1 = 18-24; 2 = 25-34; 3 = 35-44; 4 = 45-54; 5 = 55-64; 6 = 65-74; 7 = 75+
Age (4 categories)	1 = 18-29; 2 = 30-44; 3 = 45-59; 4 = 60+
Education (5 categories)	1 = Less than HS
	2 = HS graduate
	3 = Some college/associates degree
	4 = Bachelor's degree
	5 = Post grad study/professional degree
Race/Ethnicity	1 = White, Non-Hispanic
	2 = Black, Non-Hispanic
	3 = Other, Non-Hispanic
	4 = Hispanic
	5 = 2+ races, Non-Hispanic
	6 = Asian/Pacific Islander, Non-Hispanic
Housing Type	1 = A one-family house detached from any other house
	2 = A one-family house attached to one or more houses
	3 = A building with 2 or more apartments
	4 = A mobile home or trailer
	5 = Boat, RV, van, etc.
Household Income (18 categories)	1 = Less than \$5,000      2 = \$5,000 to \$9,999
	3 = \$10,000 to \$14,999      4 = \$15,000 to \$19,999
	5 = \$20,000 to \$24,999      6 = \$25,000 to \$29,999
	7 = \$30,000 to \$34,999      8 = \$35,000 to \$39,999
	9 = \$40,000 to \$49,999      10 = \$50,000 to \$59,999
	11 = \$60,000 to \$74,999      12 = \$75,000 to \$84,999
	13 = \$85,000 to \$99,999      14 = \$100,000 to \$124,999
	15 = \$125,000 to \$149,999      16 = \$150,000 to \$174,999
	17 = \$175,000 to \$199,999      18 = \$200,000 or more
Household Income (9 categories)	1 = Less than \$10,000
	2 = \$10,000 to \$19,999
	3 = \$20,000 to \$29,999
	4 = \$30,000 to \$39,999
	5 = \$40,000 to \$49,999
	6 = \$50,000 to \$74,999
	7 = \$75,000 to \$99,999
	8 = \$100,000 to \$149,999
	9 = \$150,000 or more
Household Income (4 categories)	1 = Less than \$30,000
	2 = \$30,000 to \$59,999
	3 = \$60,000 to \$99,999
	4 = \$100,000 or more

Variable	Values
Marital Status	1 = Married
	2 = Widowed
	3 = Divorced
	4 = Separated
	5 = Never married
Metropolitan Statistical Area Status	0 = Non-Metro
	1 = Metro (as defined US OMB Core-Based Statistical Area)
Home Internet Access	0 = No
	1 = Yes
Telephone Service	1 = Landline telephone only
	2 = Have a landline, but mostly use cellphone
	3 = Have cellphone, but mostly use landline
	4 = Cellphone only
	5 = No telephone service
Ownership of Living Quarters	1 = Owned or being bought by you or someone in your household
	2 = Rented for cash
	3 = Occupied without payment of cash rent
Region 4 (US Census)	1 = Northeast
	2 = Midwest
	3 = South
	4 = West
Region 9 (US Census)	1 = New England
	2 = Mid-Atlantic
	3 = East-North Central
	4 = West-North Central
	5 = South Atlantic
	6 = East-South Central
	7 = West-South Central
	8 = Mountain
	9 = Pacific
State	State of residence
Household Size	Total number of members in household
HH members, age 0-1	Known number of household members in age group
HH members, age 2-5	Known number of household members in age group
HH members, age 6-12	Known number of household members in age group
HH members, age 13-17	Known number of household members in age group
HH members, age 18+	Known number of household members in age group
Current Employment Status	1 = Working - as a paid employee
	2 = Working - self-employed
	3 = Not working - on temporary layoff from a job
	4 = Not working - looking for work
	5 = Not working – retired
	6 = Not working – disabled
	7 = Not working – other
Trust in People	1 = Most people can be trusted
	2 = Most people cannot be trusted
	3 = It depends
General Trust in News Media	1 = None
	2 = A little

Variable	Values
	3 = A moderate amount
	4 = A lot
	5 = A great deal
Trust in Washington DC to do what is right	1 = Just about always
	2 = Most of the time
	3 = Only some of the time
	4 = Almost never
Trust Media to Report the News Fairly	1 = Just about always
	2 = Most of the time
	3 = Only some of the time
	4 = Almost never
Current Voter Registration	1 = Registered at current address
	2 = Registered at a different address
	3 = Not currently registered
	4 = I am not eligible to vote
	5 = Not sure
Religiosity	1 = Very religious
	2 = Moderately religious
	3 = Slightly religious
	4 = Not religious at all
Spirituality	1 = Very spiritual
	2 = Moderately spiritual
	3 = Slightly spiritual
	4 = Not spiritual at all
Usually try new things	1 = Strongly Disagree
	2 = Disagree
	3 = Neither Agree or Disagree
	4 = Agree
	5 = Strongly Agree
Like to shop for what is new	1 = Strongly Disagree
	2 = Disagree
	3 = Neither Agree or Disagree
	4 = Agree
	5 = Strongly Agree
Like to tell others about new brands or technology	1 = Strongly Disagree
	2 = Disagree
	3 = Neither Agree or Disagree
	4 = Agree
	5 = Strongly Agree
Past 12 months seen a Mental Health Professional	1 = Yes
	2 = No
Past 12 months seen a Dentist	1 = Yes
	2 = No
Content Consumption Language	1 = English
	2 = Other language from LANGOTHER2NEW