Author's response to reviews


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Author's response to reviews: see over
We’d like to thank the reviewers for their thoughtful and helpful comments. We have made changes to the text, highlighted in bold font. Additionally, we have added 4 new figures to depict differences between groups. (Please note, because we didn’t receive a Word document with the reviewers’ comments, I am paraphrasing comments in order to avoid having to re-type full comments, which can be accessed via the .pdf file.)

Specific revisions follow:

Response to Reviewers Comments

Reviewer 1

COMMENT: “...authors may want to present a single example of how full set of measures can be used to characterize a population, e.g., smokers.”

RESPONSE: In response to this and the editors’ comments, we have added several figures depicting outcomes for three subgroups by employment status (Figure 2), disability status (Figure 3), and smoking status (Figure 4) [below]. Additionally, we have noted the following point in the first paragraph of the discussion:

“As seen when characterizing employment status, disability status, or smoking status, these measures can be used to describe well-being outcomes for particular subpopulations.”
COMMENT: “Authors should add paragraph showing how measures relate to changing framework of moving from disease focus to health; from weakness to strengths, etc.”

RESPONSE: We have re-written the introduction to better emphasize the reviewer’s points. For example, we now state:

“This shift in how some health promotion goals will be measured now matches seminal declarations describing health as more than the absence of illness (“negative health”) [7-10], and is aligned with contemporary perspectives on positive health, inclusive of physical, mental and social resources that actively promote well-being [11-15]……… Such assets or protective factors (e.g., positive affect, satisfaction, vitality) that comprise well-being domains might serve to mediate protective physiological responses that are health enhancing (e.g. lower cortisol levels) or to more effectively moderate stressful responses (quell negative arousal), minimizing allostatic load—wear and tear on the body [28-30]. Over time, these protective factors and processes may confer advantages such as greater resiliency associated with more successful age-related transitions over the life course [13,29].”

We have made additional minor edits to the introduction in response to Reviewer no. 2, and believe the introduction better highlights the shift from a disease-based model to one of positive health and well-being and its links with social and environmental determinants.

Reviewer no. 2
COMMENT 1: Abstract (questioned term “positive affect”—“don’t know what it means”).

RESPONSE: We have replaced the term positive affect with “happiness.” The abstract now states:

“After adjustment for confounders, about 67% of adults in these states had high levels of well-being, including >80% reporting experiencing happiness.”

COMMENT 2: Wondering about cross-cultural performance of measures….might want to briefly mention this in Background section....”

RESPONSE: We have added a few general statements about cross-cultural issues related to well-being assessment in the Background section:

We have added additional general background on cross-cultural issues in the introduction. We state:

“….These difference may be associated with measurement issues (e.g., concept equivalence, response styles), cultural values (e.g., individualism vs. collectivism), socioeconomic factors (income levels, equality), or the interaction of these and other factors [35,36]. Widely used scales and items used in many countries and groups, such as the Satisfaction with Life Scale
(SWLS), and overall happiness have been studied in relation to these cross-cultural issues [37-39]. The SWLS is one of the most extensively used and cross-culturally validated instruments in well-being research demonstrating that asking people about what they think and how they feel about their lives offers valid information about an individual’s life circumstances and social context relative to other groups [38].”

**COMMENT 3:** In participants section, unclear why American Indian/Alaska native & Asian PI people omitted

**RESPONSE:** We have now provided estimates for these groups in all tables and have noted any significant differences in the text.

**COMMENT 4:** Page 10: first paragraph very confusing; suggest adding re-titling headings to better highlight specific outcomes (Mental Well-Being: Satisfaction with Life; Mental Well-Being: Global and Domain-Specific Life satisfaction) align with tables.

**RESPONSE:** We have added these headings to the appropriate sections within the manuscript.

**COMMENT 5:** might be useful to include information about time of questions and percent missing

**RESPONSE:** Done; we have added the following statements in the methods, and results, respectively:

“The well-being module took an average of 105 seconds to administer.”

“On average, <2% of responses to the mental, social, and physical well-being items were classified as “don’t know/refused.”

**COMMENT 6:** include BRFSS physical health question

**RESPONSE:** Done; we have added the following statement in the methods:

“The BRFSS self-rated health question asks participants, “Would you say that in general your health is excellent, very good, good, fair or poor? Responses are rated from 1 (excellent) to 5 (poor).”

**COMMENT 7:** Need to describe procedures for creating Table 1, including post-stratification details; then present Table 1 data in results

**RESPONSE:** Done; we have added the following statement in the methods:
“We examined the percentages of the characteristics of respondents for each state and overall with respect to gender, age, race/ethnicity, education, marital status, employment status, income, disability status, veteran status, chronic health condition, physical activity, smoking status, and overweight/obesity.”

Regarding poststratification details, we previously stated in the methods regarding BRFSS (under “survey”):

“Data are weighted to reflect the age, sex, and racial/ethnic distribution of the state’s estimated population during the survey year [44].”

The Results section begins with a heading on “Study Participants” including the sample description previously presented in Methods.

COMMENT 8: .....would have expected to see simple post-stratified frequencies for outcomes....not sure why data presented are adjusted for so many factors....”

>RESPONSE: We have added the following statement and supporting references to respond to this comment:

“Because other studies have found that sex, age, race/ethnicity, education, employment status, and related factors are correlated with well-being [23,36] we adjusted for these factors to avoid confounding.”

COMMENT 9: ...please use underlined headings to separate the outcomes
>RESPONSE: Done

COMMENT 10: Problem with sentence that begins “Meanwhile...”
>RESPONSE: This sentence has been revised.

COMMENT 11: not sure about statement regarding disparities in smokers and those with a disability
>RESPONSE: New Figures 3 and 4 should help better highlight the differences in well-being outcomes by smoking status, and disability status. While we previously noted the discrepancy in “mental well-being,” we have specified this to findings between those with/without disability in the Satisfaction with Life Scale—where differences are significant and substantial. We state:

This study found a large gap in mental well-being, assessed with the Satisfaction with Life Scale, in adults with disabilities.

COMMENT 12: ...discussion does not provide a clear call to action or recommendations....would be extremely helpful to have specific recommendations about which question series would be most beneficial for different purposes.
>RESPONSE: The purpose of the study was to highlight how the measures relate to Healthy People 2020 Foundation Health Measures on Well-Being. We have added the following statement to the conclusion to better highlight this point:
“Healthy People 2020 objectives for improving population well-being may galvanize national, state, and local efforts to implement evidence-based interventions such as those identified in the 2010 National Prevention, Health Promotion and Public Health Council [6]. Brief psychometrically sound measures like the ones used in this study can provide important information to identify vulnerable populations, identify population strengths, assess population changes in well-being due to interventions, and provide a basis for evaluating progress toward HP2020 goals.”

Consistent with other decisions related to BRFSS implementation, states are able to determine which modules and/or state-added questions are to be included on BRFSS. Related to this point, it should be noted, that in the discussion, we already noted the following:

“However, the participating states placed greater value on these selected measures for their programmatic needs.”

The federal agency authors must follow guidelines regarding recommendations.

**COMMENT 13:** might be worth noting large number and order of well-being questions could have affected responses…..

**RESPONSE:** As noted in our response to comment no. 5, there were small (<2%) numbers of missing responses, so it is unlikely that the number of well-being questions affected participation. We have also included the location of the well-being questions in the overall BRFSS survey:

“The physical well-being item, “self-rated health” is the first question, in section 1 (health status) of the BRFSS core survey, asked of all respondents. The BRFSS questions on social support and global life satisfaction were also part of the BRFSS core survey in 2010. These two questions were asked in section 22 of the survey, as the last questions on the BRFSS core, preceding state-added modules. The question on satisfaction with social and emotional support was asked first, followed by the question on life satisfaction. The pilot well-being module which included the global happiness item, the SWLS, domain-specific life satisfaction items, and the vitality item asked in this order, was the last module on BRFSS asked of respondents. The well-being module took an average of 105 seconds to administer.”

**Response to Editor**

**Comment:** Present data in more compelling way

**Response:** We have added four figures; Figure 1 summarizes overall findings for all states; Figures 2-4 highlight differences in well-being domains by employment status, disability status, and smoking status.

**Comment:** Emphasize differences across states

**Response:** We have described differences by states where significant. Because the data are limited to only 3 states that are not necessarily representative of more diverse U.S. states, differences were scant. Given the relative nature of the comparison, we would prefer to take a more conservative approach and not focus on state differences beyond stating any differences that were found. For example, by socio-demographic characteristics, and in well-being domains, respectively:
“….The three states did not differ in these characteristics except for greater percentages in New Hampshire than in Oregon of the employed and those with annual household incomes of $75,000 or more and greater percentages in New Hampshire than in Washington of white, non-Hispanics.”

“……New Hampshire adults reported more satisfaction with their energy levels than Washington adults.”

We have added the following limitation:

Fifth, the study was limited to data from three states, not necessarily representative of more diverse states, limiting comparisons.