

Unhappy Metros: Satisfaction With Life Scale (SWLS)

Adam Okulicz-Kozaryn*
Rutgers - Camden

Saturday 13th November, 2021 15:35

There are dozens of studies on urban-rural happiness gradient, but all studies use a simplistic single-item measurement of SWB. Such limitation is understandable and common, as multi-item scale measurement is typically restricted to small-sample laboratory settings. And urbanicity deriving from place of residence by definition requires wide geographical coverage and large sample. This is the first study of urban-rural happiness gradient using elaborate multi-item scale measurement of SWB. Satisfaction With Life Scale (SWLS) confirms earlier single-item finding of urban-rural happiness gradient. Urbanites fail especially on last item "If I could live my life over, I would change almost nothing" indicating that urban way of life may result in regrets. Effect sizes of urbanicity on SWB are substantial—about half of the coefficient on health—living in a metro depresses one's happiness as much as going half way from fair health to poor health, for instance.

PANEL STUDY OF INCOME DYNAMICS (PSID), URBAN-RURAL HAPPINESS GRADIENT, URBAN, CITIES, HAPPINESS, LIFE SATISFACTION, SUBJECTIVE WELLBEING (SWB), SATISFACTION WITH LIFE SCALE (SWLS)

The urban-rural happiness gradient states that happiness raises from its lowest in largest cities to highest in smallest places, little towns, villages, and open country. There is substantial evidence of urban-rural happiness gradient—urban unhappiness is common (Okulicz-Kozaryn and Valente 2021, Senior 2006, Office for National Statistics 2011, Chatterji 2013, Lu et al. 2015, Lenzi and Perucca 2016, Morrison 2015, Morrison and Weckroth 2017) with some added nuance in recent studies Lenzi and Perucca (2021), Morrison (2021), Okulicz-Kozaryn and Valente (2018). As a corollary, exposure to nature, the opposite of urbanicity, is related to happiness (Pretty 2012, Frumkin 2001, Wheeler et al. 2012, White et al. 2013a,b, Tesson 2013, Maller et al. 2006, Berman et al. 2008, 2012). Despite that, some economists are still trying to argue the opposite, that the happiness has its place in the city, arguably due to ideological reasons—in economics, *happiness* \approx *utility* \approx *money*—there is most money in cities, so there is most utility, so there must be most happiness as well, economic thinking goes. Nevermind that the data disagrees—economists cherry-pick data, e.g., the poorest African countries where indeed urbanites are happier, to find the evidence to support the economic theory (Glaeser 2011, Glaeser et al. 2016, Burger et al. 2020).

There are dozens of studies on urban-rural happiness gradient, but all studies use a simplistic single-item measurement of SWB. Such limitation is understandable and apparently insurmountable, as multi-item scale measurement is typically restricted to small-sample laboratory settings. And urbanicity deriving from place of residence by definition requires wide geographical coverage and large sample. This is the first study of urban-rural happiness gradient using elaborate, multi-item scale measurement of SWB.

1 Data

We use unique data, 2016 Wellbeing Module of Panel Study of Income Dynamics merged with 2015 family file (psidonline.isr.umich.edu). All wellbeing measures come from the 2016 module, and all other measures, including the urbanicity measure come from 2015 family file.¹

*EMAIL: adam.okulicz.kozaryn@gmail.com

All mistakes are mine.

¹There is no corresponding 2016 family file. Such setup may actually help with reverse causality—in our case wellbeing cannot cause urbanicity as it is observed afterwards. Still, of course, as any non-experimental study, the present study is observational or correlational. We keep only the reference person (head) following Brown and Gathergood (2019).

A unique advantage of PSID 2016 Wellbeing Module is multiple SWB measures. All variables are set in table 1, and summary statistics are in Supplementary Online Material (SOM). We will use several SWB measures. We start with a usual SWB item, a life satisfaction measure: “How satisfied are you with your life as a whole these days?” There is also a “ladder” SWB measure. And finally we have constructed a SWLS scale. Cronbach’s alpha of the scale is good at .88.² The items that have been used for the scale construction are listed under “swls items” in table 1.

Table 1: Variable definitions.

| name | description |
|--------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| global swb measures | |
| satisfied with life as a whole | "How satisfied are you with your life as a whole these days?" |
| life satisfaction ladder | "Suppose that the top of the ladder below represents the best possible life for you and the bottom of the ladder represents the worst possible life for you. On which step of the ladder do you feel you personally stand at the present time?" |
| swls | Satisfaction With Life Scale |
| swls items | |
| life is close to ideal | "How much do you agree or disagree with each of the following statements: In most ways, my life is close to my ideal." |
| conditions of life excellent | "(How much do you agree or disagree with each of the following statements:) The conditions of my life are excellent." |
| satisfied with life | "(How much do you agree or disagree with each of the following statements:) I am satisfied with my life." |
| gotten the important things | "(How much do you agree or disagree with each of the following statements:) So far, I have gotten the important things I want in life." |
| would change almost nothing | "(How much do you agree or disagree with each of the following statements:) If I could live my life over, I would change almost nothing." |
| explanatory variables | |
| metro | "Metropolitan/Non-metropolitan Indicator. This indicator is derived from the 2013 Beale-Ross Rural-Urban Continuum Codes published by USDA based on matches to the FIPS state and county codes." 1 Metropolitan area (Beale-Ross Code ER775923= 1-3) 0 Non-metropolitan area (Beale-Ross Code ER775923= 4-9) |
| age | age |
| age sq | age squared |
| last year total family income | last year total family income |
| employment status | "We would like to know about what (you/HEAD) (do/does) – (are/is) (you/HEAD) working now, looking for work, retired, keeping house, a student, or what?–FIRST MENTION" |
| race | "What is (your/his/her) race? (Are/Is) (you/he/she) white, black, American Indian, Alaska Native, Asian, Native Hawaiian or other Pacific Islander?–FIRST MENTION" NOTE: "latino" category derived from ER64809: " In order to get an idea of the different races and ethnic groups that participate in the study, I would like to ask you about (your/your spouse's/[HEAD]'s) background. (Are/Is) (you/he/she) Spanish, Hispanic, or Latino? That is, Mexican, Mexican American, Chicano, Puerto Rican, Cuban, or other Spanish?" |
| kids | "Number of Persons Now in the FU Under 18 Years of Age" |
| college | "Did (you/he/she) attend college?" 1='yes', 0='no' |
| health | "Now I have a few questions about your health. Would you say your health in general is excellent, very good, good, fair, or poor?" 1 (poor) to 5 (excellent) |
| male | gender |
| married | "Are you married, widowed, divorced, separated, or have you never been married?" 1='married'; 0 otherwise |
| family unit size | Number of Persons in FU at the Time of the Interview |
| important to live in a city/place that one likes | "(Below is a list of things that may or may not be important to you. How important are each of the following to you:) Living in a city or place that I like." |

²Using command alpha in stata without 'asis' and 'std' options: alpha WB16A3A WB16A3B WB16A3C WB16A3D WB16A3E,gen(SWLS)

Diener's Satisfaction With Life Scale (SWLS) (Diener et al. 1985) consists of 5 items as shown under 'swls items' in table 1. SWLS is the most popular scale for measurement of life satisfaction, e.g., the original paper introducing the scale (Diener et al. 1985) is cited over 30k times. More recently, Diener concludes that SWLS has good convergent validity with other scales and with other types of assessments of Subjective WellBeing (SWB). SWLS has some temporal stability (e.g., 0.54 for 4 years). Further, the scale has discriminant validity from emotional well-being measures (Pavot and Diener 2009, p. 101).

Let's look closer at items. Pavot and Diener (2009) argue that the fifth item is the weakest in terms of convergence with other items. This may be because most of the items refer primarily to the present, but the fifth item refers primarily to the past. A similar point is made by Slocum-Gori et al. (2009) that in terms of unidimensionality of SWLS it holds up reasonably well, except the last item. Oishi (2006) groups together first three items as referring to external living conditions or the present level of satisfaction, and the last two items assess one's satisfaction with past accomplishments.

Our main explanatory variable of interest is *metro*, a dummy variable that equals 1 if a county is metropolitan, and 0 if a county is non-metropolitan. More information is in Supplementary Online Material (SOM).

We control for a usual set of SWB predictors following Okulicz-Kozaryn and Valente (2018). Race is an important variable, as it not only predicts SWB, but is also confounded with urbanicity (e.g., Berry and Okulicz-Kozaryn 2011). Likewise, religiosity (Okulicz-Kozaryn 2010) and type of work (Okulicz-Kozaryn and Golden 2017) may affect SWB, and confound with urbanicity—we include additional models in SOM. We also would like to control for political views as they predict SWB (Okulicz-Kozaryn et al. 2014) and confound with urbanicity, but there are no political measures in PSID.

The US is a geographically diverse country with a multitude of regional differences that may affect the results, notably urban areas differ in their character greatly depending on the region, and hence, we include state dummies.

Finally, the 2016 PSID Wellbeing Module contains an item ‘‘important to live in a city/place that one likes’’—a weight that ones gives to place may affect results, hence, we include this item as a control as well.

We use ordinary least squares (OLS). Although OLS assumes cardinality of the outcome variable, and SWB measures are technically ordinal, OLS is an appropriate estimation method. Ferrer-i-Carbonell and Frijters (2004) has shown that OLS results are substantially the same as those from discrete models, and OLS has become the default method in happiness research (Blanchflower and Oswald 2011). Theoretically, while there is still debate about the cardinality of SWB, there are strong arguments to treat it as a cardinal variable (Ng 1996, 1997, 2011).

2 Results

We begin with simple differences of means of SWB measures by metro/non-metro. In table 2 we look at 3 global measures in first panel, and then 5 components of swls in second panel. There are small metro non-metro SWB differences in 1st panel. In the 2nd panel, the first 2 swls components has small differences as well, third component is about the same, and the last two components, especially the last one, have a substantial difference. Mean differences from table 2 will be about twice as large when controlling for SWB predictors in regressions (except the last swls item, which will be only slightly larger).

| | satisfied with life as a whole | life satis- faction ladder | swls | life close ideal | is to conditions of life excellent | satisfied with life | gotten the im- portant things | would change almost nothing |
|----------|-----------------------------------|----------------------------------|------|------------------------|---------------------------------------------|------------------------|----------------------------------|--------------------------------|
| nonmetro | 3.69 | 7.15 | 3.69 | 3.71 | 3.66 | 3.86 | 3.88 | 3.32 |
| metro | 3.61 | 7.05 | 3.63 | 3.65 | 3.63 | 3.88 | 3.80 | 3.17 |

Table 2: Metro non-metro differences of means: global SWB measure in 1st panel, and SWLS components in 2nd panel.

Table 6 in columns a1* has basic controls. While residents of metros are less happy, as expected, results are borderline statistically significant or insignificant. Addition of race categories in columns a2* raises statistical significance.³ Addition of evaluation whether living in a city/place that one likes is important further increases statistical significance in columns a3*. Finally, there are additional results controlling for occupational sector, religiosity, and satisfaction with city in SOM—results are substantively very similar.

Effect sizes are consistent. Satisfaction with life as a whole and SWLS are both on scales 1-5, whereas life satisfaction ladder question is on scale 1-10, and correspondingly coefficients are about twice as large on ladder question. In full specification, effect sizes are about half of the coefficient on health, so in practical terms this means that living in a metro depresses one's happiness as much as going half way from fair health to poor health, for instance.

Table 3: OLS regressions of global measures of SWB.

| | a1a | a1b | a1c | a2a | a2b | a2c | a3a | a3b | a3c |
|-----------------|----------------|----------|----------|----------------|----------|----------|----------------|----------|----------|
| | satisfied | life | satis- | satisfied | life | satis- | satisfied | life | satis- |
| | with life as a | fraction | ladder | with life as a | fraction | ladder | with life as a | fraction | ladder |
| | whole | | | whole | | | whole | | |
| metro | -0.08+ | -0.09 | -0.07+ | -0.12** | -0.21* | -0.10* | -0.14*** | -0.25** | -0.13** |
| age | -0.00 | 0.00 | -0.02* | -0.00 | -0.00 | -0.02* | -0.00 | -0.00 | -0.02** |
| age sq | 0.00 | 0.00 | 0.00** | 0.00 | 0.00 | 0.00** | 0.00 | 0.00 | 0.00*** |
| last year total | 0.00*** | 0.00*** | 0.00*** | 0.00*** | 0.00*** | 0.00*** | 0.00*** | 0.00*** | 0.00*** |
| family income | | | | | | | | | |
| temp not | -0.15 | -0.56 | -0.36 | -0.17 | -0.61 | -0.36 | -0.14 | -0.55 | -0.33 |
| working | | | | | | | | | |
| unemployed | -0.21** | -0.47** | -0.32*** | -0.22** | -0.50** | -0.32*** | -0.19* | -0.44** | -0.30*** |
| retired | 0.17*** | 0.19+ | 0.14** | 0.17*** | 0.20+ | 0.14** | 0.15** | 0.17+ | 0.13** |
| disabled | -0.05 | -0.23 | -0.22** | -0.07 | -0.27+ | -0.23** | -0.06 | -0.25+ | -0.22** |
| housekeeping | -0.03 | -0.05 | -0.02 | -0.04 | -0.08 | -0.03 | -0.03 | -0.07 | -0.02 |
| student | -0.18 | -0.39 | -0.21 | -0.21 | -0.46 | -0.22 | -0.21 | -0.48 | -0.24 |
| kids | -0.07* | -0.08 | -0.03 | -0.06* | -0.07 | -0.03 | -0.06* | -0.07 | -0.03 |
| college | -0.07* | -0.20** | -0.09** | -0.04 | -0.14* | -0.07* | -0.05 | -0.16* | -0.08* |
| health | 0.28*** | 0.56*** | 0.26*** | 0.28*** | 0.57*** | 0.26*** | 0.27*** | 0.54*** | 0.25*** |
| male | -0.09* | -0.18* | -0.11** | -0.07+ | -0.12 | -0.10* | -0.05 | -0.08 | -0.08* |
| married | 0.19*** | 0.51*** | 0.32*** | 0.21*** | 0.56*** | 0.33*** | 0.21*** | 0.55*** | 0.32*** |
| family unit | 0.08** | 0.08 | 0.04+ | 0.07** | 0.05 | 0.04 | 0.07** | 0.05 | 0.04 |
| size | | | | | | | | | |
| black | | | | 0.20*** | 0.52*** | 0.11** | 0.18*** | 0.48*** | 0.09* |
| other | | | | 0.27+ | 0.45 | 0.12 | 0.27* | 0.46 | 0.12 |
| asian | | | | 0.11 | 0.16 | 0.10 | 0.14 | 0.22 | 0.13 |
| latino | | | | 0.27*** | 0.72*** | 0.25*** | 0.25*** | 0.70*** | 0.24*** |
| important | | | | | | | 0.16*** | 0.32*** | 0.17*** |
| to live in a | | | | | | | | | |
| city/place | | | | | | | | | |
| that one likes | | | | | | | | | |
| constant | 2.79*** | 4.84*** | 3.06*** | 2.65*** | 4.46*** | 2.96*** | 2.12*** | 3.35*** | 2.39*** |
| state dummies | yes | yes | yes | yes | yes | yes | yes | yes | yes |
| N | 3707 | 3696 | 3722 | 3697 | 3686 | 3713 | 3688 | 3676 | 3703 |

+ p<0.10,
* p<0.05,
** p<0.01,
*** p<0.001;
robust std err

Next, we turn to SWLS components—regression results are in table 4. In final five specifications b3*, the first two items, ‘‘life is close to ideal’’, and ‘‘conditions of life excellent’’ are of similar magnitude at about .1. ‘‘Satisfied with life’’ in column b3d is insignificant⁴. And two final items of SWLS scale, ‘‘gotten the important things’’ and ‘‘would change almost nothing’’ are of greatest magnitude, especially the last one.

³Results on racial categories are unexpected. Blacks and Latinos are happier than whites, and we do not have an explanation for that.

⁴Note, wording of this question is different from life satisfaction question in table 6.

Table 4: OLS regressions of SWLS components.

| | b2a life is close to ideal | b2b conditions of life excellent | b2c satisfied with life | b2d gotten the important things | b2e would change almost nothing | b3a life is close to ideal | b3b conditions of life excellent | b3c satisfied with life | b3d gotten the important things | b3e would change almost nothing |
|-----------------------------------------------------------|----------------------------------|----------------------------------------|-------------------------------|------------------------------------------|---------------------------------------------|----------------------------------|----------------------------------------|-------------------------------|------------------------------------------|---------------------------------------------|
| metro | -0.08+ | -0.10* | -0.02 | -0.12* | -0.16** | -0.11* | -0.12* | -0.04 | -0.14** | -0.19** |
| age | -0.01 | -0.01+ | -0.01 | -0.03*** | -0.03** | -0.01 | -0.02* | -0.01 | -0.03*** | -0.03** |
| age sq | 0.00 | 0.00+ | 0.00 | 0.00*** | 0.00** | 0.00+ | 0.00* | 0.00 | 0.00*** | 0.00** |
| last year total family income | 0.00*** | 0.00*** | 0.00*** | 0.00*** | 0.00*** | 0.00*** | 0.00*** | 0.00*** | 0.00*** | 0.00*** |
| temp not working | -0.33 | -0.39 | -0.58 | -0.13 | -0.38 | -0.30 | -0.36 | -0.55 | -0.10 | -0.34 |
| unemployed | -0.33*** | -0.28** | -0.29*** | -0.39*** | -0.33*** | -0.31*** | -0.26** | -0.27** | -0.37*** | -0.31** |
| retired | 0.07 | 0.11+ | 0.12* | 0.20*** | 0.20** | 0.06 | 0.10 | 0.11+ | 0.18** | 0.18* |
| disabled | -0.22** | -0.23** | -0.23** | -0.23** | -0.25** | -0.21* | -0.23** | -0.22* | -0.23* | -0.24* |
| housekeeping | -0.21* | 0.06 | -0.07 | 0.07 | 0.01 | -0.21* | 0.06 | -0.06 | 0.07 | 0.02 |
| student | -0.16 | -0.19 | -0.16 | -0.35+ | -0.24 | -0.17 | -0.20 | -0.17 | -0.37+ | -0.25 |
| kids | -0.02 | -0.05 | -0.03 | -0.00 | -0.02 | -0.02 | -0.05 | -0.03 | -0.00 | -0.02 |
| college | -0.06 | -0.04 | -0.08* | -0.00 | -0.16*** | -0.07+ | -0.05 | -0.09* | -0.01 | -0.17*** |
| health | 0.28*** | 0.32*** | 0.27*** | 0.20*** | 0.24*** | 0.27*** | 0.30*** | 0.26*** | 0.19*** | 0.22*** |
| male | -0.06 | -0.03 | -0.11* | -0.18*** | -0.13* | -0.04 | -0.00 | -0.09+ | -0.15** | -0.11+ |
| married | 0.33*** | 0.28*** | 0.31*** | 0.38*** | 0.35*** | 0.33*** | 0.28*** | 0.30*** | 0.37*** | 0.35*** |
| family unit size | 0.02 | 0.03 | 0.04 | 0.03 | 0.04 | 0.02 | 0.03 | 0.04 | 0.04 | 0.04 |
| black | 0.11* | 0.10* | 0.19*** | -0.01 | 0.17** | 0.09* | 0.08+ | 0.17*** | -0.03 | 0.14* |
| other | 0.11 | 0.11 | 0.15 | 0.12 | 0.14 | 0.11 | 0.11 | 0.15 | 0.12 | 0.14 |
| asian | 0.20 | 0.03 | 0.06 | 0.13 | 0.06 | 0.22 | 0.06 | 0.09 | 0.16 | 0.09 |
| latino | 0.32*** | 0.29*** | 0.29*** | 0.17* | 0.20+ | 0.31*** | 0.28*** | 0.28*** | 0.16+ | 0.19+ |
| important to live in a city/place that one likes | | | | | | 0.16*** | 0.19*** | 0.17*** | 0.16*** | 0.18*** |
| constant | 2.80*** | 2.69*** | 2.84*** | 3.34*** | 2.99*** | 2.30*** | 2.07*** | 2.27*** | 2.78*** | 2.38*** |
| state dummies | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes |
| N | 3697 | 3692 | 3686 | 3691 | 3698 | 3687 | 3682 | 3676 | 3681 | 3688 |

+ p<0.10,
* p<0.05,
** p<0.01,
*** p<0.001;
robust std err

3 Conclusion and Discussion

There are dozens of studies on urban-rural happiness gradient, but all studies use a simplistic single-item measurement of SWB. Such limitation is understandable and common, as multi-item scale measurement is typically restricted to small-sample laboratory settings. And urbanicity deriving from place of residence by definition requires wide geographical coverage and large sample. This is the first study of urban-rural happiness gradient using elaborate multi-item scale measurement of SWB. Satisfaction With Life Scale (SWLS) confirms earlier single-item finding of urban-rural happiness gradient. Urbanites fail especially on last item ‘‘If I could live my life over, I would change almost nothing’’ indicating that urban way of life may result in regrets. Already 40 years ago Campbell noted that urbanities tend to find life frustrating as they think they weren’t able to achieve their full share of happiness (Campbell 1981) and further that aspirations and comparisons are critical to explaining urban unhappiness (Campbell et al. 1976).

Regressions coefficients on metro are about twice as large as simple differences of means, so it is important to adjust the metro non-metro happiness gap with happiness predictors, unlike in Burger et al. (2020).⁵

⁵Burger et al. (2020) also uses faulty Gallup data as elaborated in Okulicz-Kozaryn and Valente (2021)—in general, one should steer away from Gallup happiness data—Gallup charges \$30,000 for access (per one year), clearly ‘‘happiness industry’’, not happiness research Davies (2015).

Effect sizes are about half of the coefficient on health, so in practical terms this means that living in a metro depresses one's happiness as much as going half way from fair health to poor health, for instance.

As compared to the first two items of SWLS scale ‘‘In most ways my life is close to my ideal,’’ and ‘‘The conditions of my life are excellent,’’ the largest difference is on the fifth item ‘‘If I could live my life over, I would change almost nothing’’ and almost as large on the fourth item, which also has a similar meaning: ‘‘So far I have gotten the important things I want in life’’ We can speculate that this suggests that perhaps city exposes one to various stimuli and experiences (Okulicz-Kozaryn and Valente 2017) that make an urbanite regret things in life and wish it went in different direction, whereas in rural areas choices and pathways may be more limited, constrained, and easier (Schwartz 2004). Perhaps, in a way ‘‘ignorance is a bliss.’’ It remains for future research to explore it in detail.

There is a book (Ware 2012) by a palliative nurse about the top regrets of the dying. It is an amazing treasure trove for anyone interested in happiness—people on their deathbed have a full (lived their life) and honest (nothing to lose) perspective on what matters in life. None of the top regrets is about money, production, and consumption: ‘‘I wish I'd had the courage to live a life true to myself, not the life others expected of me,’’ ‘‘I wish I hadn't worked so hard,’’ ‘‘I wish I'd had the courage to express my feelings,’’ ‘‘I wish I had stayed in touch with my friends,’’ ‘‘I wish that I had let myself be happier.’’ Indeed, if anything, is it actually money, production, and consumption that makes us regret at the end of the life, as we devote our lives to them, and little else. And the conspicuous consumption capitalistic rat race has its home in metros (Rosenthal and Strange 2002, 2003, 2008, O'Sullivan 2009, Molotch 1976, Okulicz-Kozaryn 2015).

Of course, to be fair, there are multiple advantages to urbanism, notably emancipative (Tönnies [1887] 2002, Yamagishi et al. 2012), environmental (Meyer 2013), and creative (Florida 2008). Yet, in rural areas, too, one can be creative (Nietzsche and Parkes 2005, Florida 2018), free, and environmentally sustainable (Thoreau 1995 [1854], Tesson 2013).

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SUPPLEMENTARY ONLINE MATERIAL (SOM)

[note: this section will NOT be a part of the final version of the manuscript, but will be available online instead]

Variables' definitions, coding, and distributions

Metro definition

The metro v non-metro classification is based on the following:

| metro | beale code | rural-urban | description |
|-------|---------------|-------------|----------------------------------------------------------------------------------------------|
| 1 | 1 | | Metro: Counties in metro areas of 1 million population or more |
| 1 | 2 | | Metro: Counties in metro areas of 250,000 to 1 million population |
| 1 | 3 | | Metro: Counties in metro areas of fewer than 250,000 population |
| 0 | 4 | | Nonmetro: Urban population of 20,000 or more, adjacent to a metro area |
| 0 | 5 | | Nonmetro: Urban population of 20,000 or more, not adjacent to a metro area |
| 0 | 6 | | Nonmetro: Urban population of 2,500 to 19,999, adjacent to a metro area |
| 0 | 7 | | Nonmetro: Urban population of 2,500 to 19,999, not adjacent to a metro area |
| 0 | 8 | | Nonmetro: Completely rural or less than 2,500 urban population, adjacent to a metro area |
| 0 | 9 | | Nonmetro: Completely rural or less than 2,500 urban population, not adjacent to a metro area |

Table 5: metro variable: Metropolitan/Non-metropolitan Indicator: This indicator is derived from the 2013 Beale-Ross Rural-Urban Continuum Codes published by USDA based on matches to the FIPS state and county codes: 1. Metropolitan area (Beale-Ross Code ER775923= 1-3); 0. Non-metropolitan area (Beale-Ross Code ER775923= 4-9). Each county in the U.S. is assigned one of the 9 codes.

The PSID 2015 family file codebook (https://psidonline.isr.umich.edu/documents/psid/codebook/fam2015er_codebook.pdf) defines the BEALE RURAL-URBAN CODE:

ER65453 "BEALE RURAL-URBAN CODE" NUM(2.0) Metropolitan/Non-metropolitan Indicator 2013 Beale-Ross Rural-Urban Continuum Code for 2015 Residence

This variable is suppressed (filled with zeroes) in the public release file to protect the anonymity of respondents. The data are available in a separate file: FAM19YEAR_rst where Year is the corresponding Family File year (i.e. FAM1968_rst contains data for suppressed variables from the 1968 file). This file is available to qualified users under special contractual arrangements with the PSID. For more information, contact us at PSIDhelp@umich.edu and request County Level Identifiers restricted file. These codes are based on matches to the FIPS state and county codes against the 2013 Rural-Urban Continuum Codes published by USDA downloaded from <https://www.ers.usda.gov/data-products/rural-urban-continuum-codes/.aspx> The 2013 Rural-Urban Continuum Codes form a classification scheme that distinguishes metropolitan counties by the population size of their metro area, and nonmetropolitan counties by degree of urbanization and adjacency to a metro area. The official Office of Management and Budget (OMB) metro and nonmetro categories have been subdivided into three metro and six nonmetro categories. Each county in the U.S. is assigned one of the 9 codes. This scheme allows researchers to break county data into finer residential groups, beyond metro and nonmetro, particularly for the analysis of trends in nonmetro areas that are related to population density and metro influence. The Rural-Urban Continuum Codes were originally developed in 1974. They have been updated each decennial since (1983, 1993, 2003, 2013), and slightly revised in 1988. Note that the 2013 Rural-Urban Continuum Codes are not directly comparable with the codes prior to 2000 because of the new methodology used in developing the 2000 metropolitan areas.

Variables' coding, and distributions

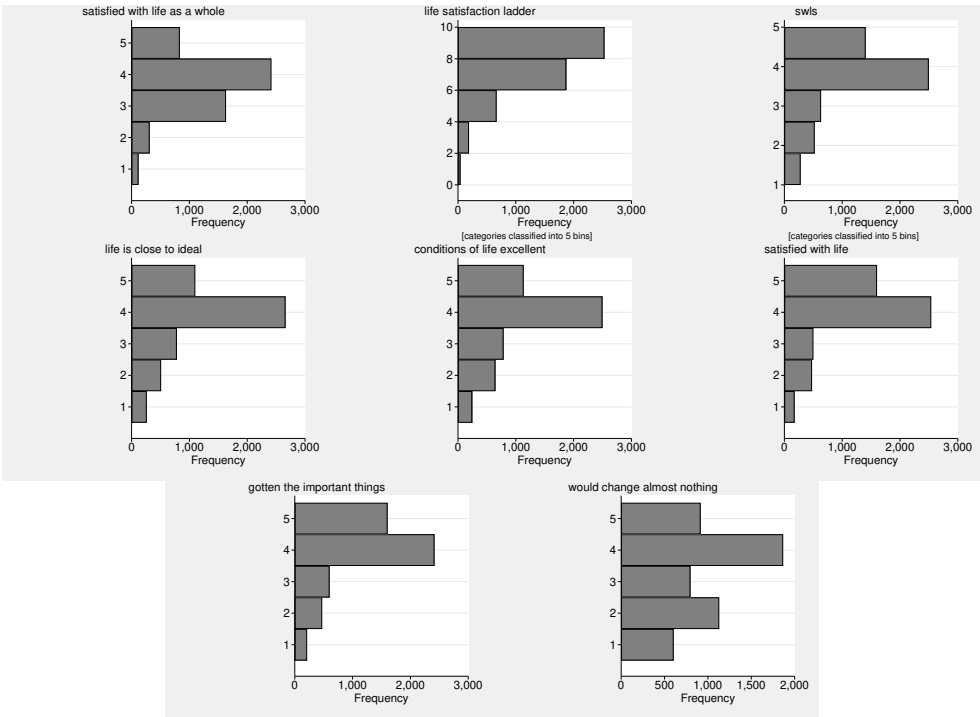


Figure 1: Variables' distribution.

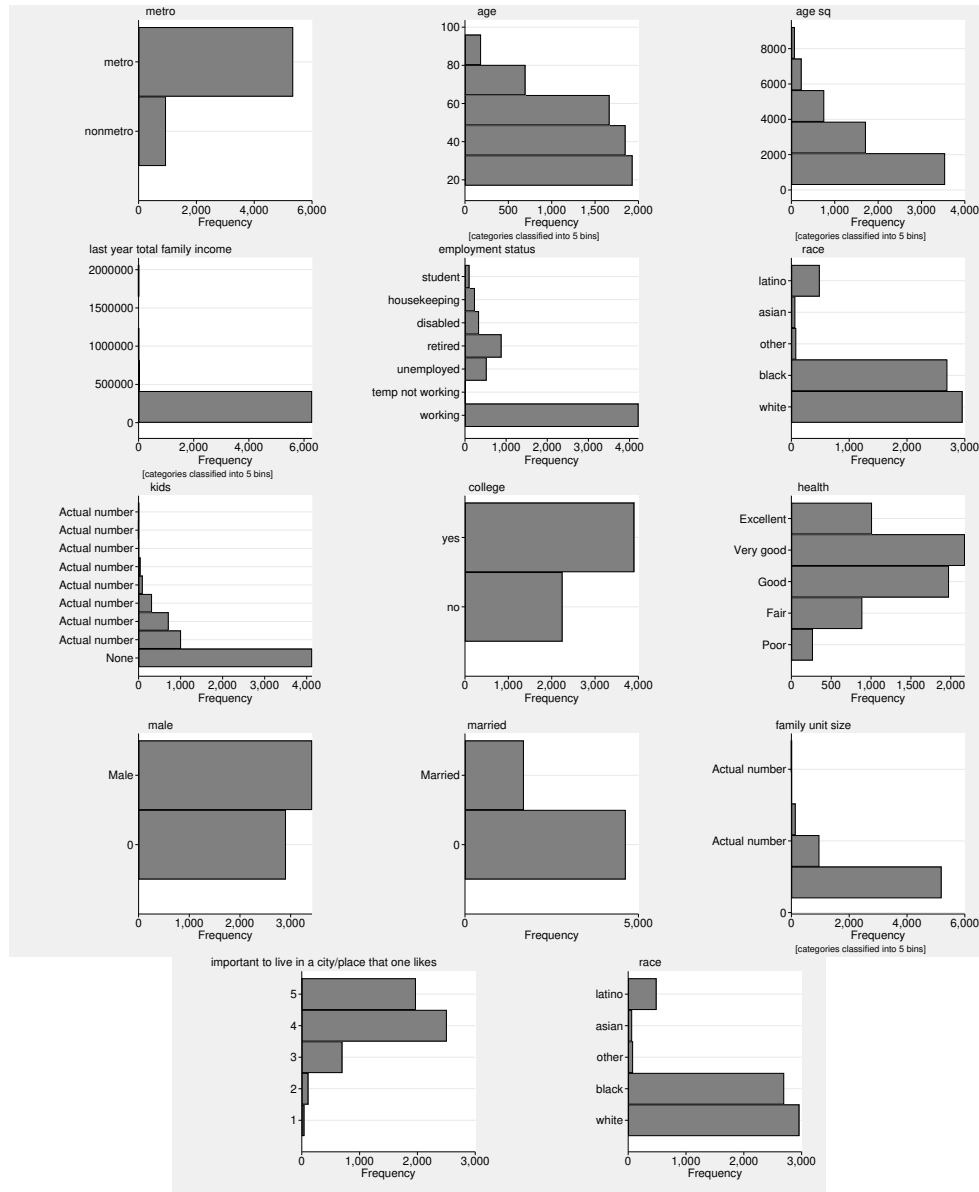


Figure 2: Variables' distribution.

Robustness Check: Additional Results

Repeating models a3a a3b a3c and b3a-b3e, but with religiosity, city satisfaction, and industry dummies. Conclusion: results substantively very similar.

Table 6: OLS regressions of SWB.

| | c3a | c3b | c3c | d3a | d3b | d3c | d3d | d3e |
|-----------------------------------------------------------|--------------------------------------|----------------------------------|----------|----------|----------|---------|----------|----------|
| | satisfied with life as a whole | life satis- faction ladder | swls | | | | | |
| metro | -0.14*** | -0.23** | -0.10** | -0.09+ | -0.12* | -0.03 | -0.12* | -0.14* |
| age | -0.01 | -0.00 | -0.02* | -0.01 | -0.02* | -0.01 | -0.03*** | -0.02* |
| age sq | 0.00 | 0.00 | 0.00* | 0.00 | 0.00 | 0.00 | 0.00*** | 0.00* |
| last year total family income | 0.00** | 0.00*** | 0.00*** | 0.00*** | 0.00*** | 0.00*** | 0.00*** | 0.00*** |
| temp not working | -0.25 | -0.72 | -0.43 | -0.39 | -0.44 | -0.65 | -0.21 | -0.39 |
| unemployed | -0.17* | -0.42** | -0.29*** | -0.32*** | -0.25** | -0.24** | -0.35*** | -0.35*** |
| retired | 0.09 | -0.02 | 0.04 | -0.07 | 0.01 | 0.03 | 0.15* | 0.00 |
| disabled | -0.13+ | -0.45** | -0.33*** | -0.36*** | -0.34*** | -0.32** | -0.28** | -0.45*** |
| housekeeping | -0.03 | -0.11 | -0.04 | -0.26* | 0.05 | -0.05 | 0.11 | -0.09 |
| student | -0.16 | -0.40 | -0.21 | -0.15 | -0.18 | -0.13 | -0.33+ | -0.27 |
| kids | -0.04 | -0.05 | -0.00 | -0.00 | -0.03 | -0.00 | 0.03 | -0.01 |
| college | -0.05 | -0.17* | -0.07* | -0.05 | -0.04 | -0.09* | 0.00 | -0.15** |
| health | 0.23*** | 0.47*** | 0.20*** | 0.23*** | 0.26*** | 0.21*** | 0.14*** | 0.17*** |
| male | -0.03 | -0.02 | -0.04 | 0.01 | 0.03 | -0.03 | -0.11* | -0.10 |
| married | 0.17*** | 0.46*** | 0.28*** | 0.28*** | 0.24*** | 0.27*** | 0.32*** | 0.32*** |
| family unit size | 0.05+ | 0.03 | 0.01 | 0.01 | 0.01 | 0.02 | 0.01 | 0.02 |
| black | 0.17*** | 0.46*** | 0.08* | 0.07 | 0.07 | 0.16*** | -0.01 | 0.12* |
| other | 0.32* | 0.57* | 0.19 | 0.19 | 0.18 | 0.25 | 0.18 | 0.17 |
| asian | 0.20 | 0.31 | 0.18 | 0.30+ | 0.12 | 0.12 | 0.22 | 0.13 |
| latino | 0.27*** | 0.72*** | 0.25*** | 0.34*** | 0.28*** | 0.30*** | 0.14 | 0.23* |
| important to live in a city/place that one likes | 0.06** | 0.13** | 0.06** | 0.05* | 0.07** | 0.06* | 0.06* | 0.06* |
| A4J HOW IMPORTANT STRONG RELIGIOUS FAITH | -0.04*** | -0.08** | -0.04*** | -0.05*** | -0.05*** | -0.04** | -0.03* | -0.06*** |
| A5B HOW SATISFIED W/ CITY | 0.29*** | 0.58*** | 0.32*** | 0.30*** | 0.33*** | 0.32*** | 0.29*** | 0.34*** |
| constant | 1.98*** | 2.95*** | 2.17*** | 2.12*** | 1.88*** | 2.05*** | 2.49*** | 2.23*** |
| industry dum- mies | yes | yes | yes | yes | yes | yes | yes | yes |
| state dummies | yes | yes | yes | yes | yes | yes | yes | yes |
| N | 3658 | 3646 | 3672 | 3656 | 3651 | 3647 | 3650 | 3657 |

+ p<0.10,
* p<0.05,
** p<0.01,
*** p<0.001;
robust std err