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A New Measure of Life Satisfaction: The Riverside Life Satisfaction Scale

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ABSTRACT

The Satisfaction With Life Scale (Diener, Emmons, Larsen, & Griffin, 1985) has been the dominant measure of life satisfaction since its creation more than 30 years ago. We sought to develop an improved measure that includes indirect indicators of life satisfaction (e.g., wishing to change one's life) to increase the bandwidth of the measure and account for acquiescence bias. In 3 studies, we developed a 6-item measure of life satisfaction, the Riverside Life Satisfaction Scale, and obtained reliability and validity evidence. Importantly, the Riverside Life Satisfaction Scale retained the high internal consistency, test–retest stability, and unidimensionality of the Satisfaction With Life Scale. In addition, the Riverside Life Satisfaction Scale correlated with other well-being measures, Big Five personality traits, values, and demographic information in expected ways. Although the Riverside Life Satisfaction Scale correlated highly with the Satisfaction With Life Scale, we believe it improves the Satisfaction With Life Scale by appropriately increasing construct breadth and reducing the potential for bias.

Over the past few decades, research on well-being has grown dramatically (Diener, 2013). One of the most catalytic events in the history of well-being science occurred when Diener (1984) formally defined subjective well-being, thereby providing a shared conception for well-being researchers—one that is used by scientists and policymakers to this day. Subjective well-being, according to Diener (1984), is comprised of both affective well-being (i.e., positive and negative affect) and life satisfaction. Life satisfaction is a cognitive evaluation of one's own life as a whole (Shin & Johnson, 1978). Importantly, life satisfaction judgments are based on one's own subjective criteria, rather than necessarily reflecting outward conditions (hence, the label *subjective*).

To study life satisfaction, Diener and his colleagues created a life satisfaction measure, the five-item Satisfaction With Life Scale (SWLS; Diener, Emmons, Larsen, & Griffin, 1985). With the rapid growth in subjective well-being research, the SWLS garnered wide adoption, with translations and administration all over the world. Both mean levels (Diener, Diener, & Diener, 1995) and correlates (Suh, Diener, Oishi, & Triandis, 1998) of the SWLS have been found to differ across countries. Unfortunately, some SWLS items also appear to function differently across countries (Oishi, 2006; Tucker, Ozer, Lyubomirsky, & Boehm, 2006). At this writing, the paper introducing the SWLS had more than 19,000 citations. Currently, the SWLS is the dominant multiple-item measure of life satisfaction.

Most studies that require a multiple-item measure of life satisfaction use the SWLS. However, researchers do not always wish to include a multiple-item measure of life satisfaction. Large panel studies, for example, instead of using the SWLS, commonly use single items to assess life satisfaction, such as

"All things considered, how satisfied are you with your life?" (Lucas & Donnellan, 2012). Reliability estimates for single-item life satisfaction measures are typically around 0.7 (Lucas & Donnellan, 2012), sufficient for some purposes (Lucas & Donnellan, 2012), but nevertheless likely to result in attenuated validity coefficients. Thus, when life satisfaction is an important construct in a research program, a multiple-item measure should be preferred.

Generally, life satisfaction can be measured with multiple items in three ways. The first approach is the one adopted by the SWLS, where all items directly indicate overall life satisfaction or closely related concepts like contentedness. Second, life satisfaction can be measured by assessing satisfaction with one's past, present, and future lives. The Temporal Satisfaction With Life Scale (TSWLS) accomplishes this by including each of the SWLS items three times (once for each time frame; Pavot, Diener, & Suh, 1998). Unsurprisingly, the creators of the TSWLS found that it correlated highly with the SWLS (approximately $r = .84$; Pavot et al., 1998). The added dimensions of the TSWLS showed incremental validity and separated neatly into three factors. However, data from Chinese university students suggest that some items of the TSWLS have low factor loadings and including only three items (instead of five) per time frame might be preferable. Finally, life satisfaction could be inferred from items that individually refer to satisfaction with a different life domain (e.g., finances, friendships, health; cf. Michalos, 1980).

However, most studies seem to be targeting overall life satisfaction rather than particular domain satisfactions. Accordingly, a measure with items that assess overall life satisfaction is desirable for two reasons. First, measuring domain satisfaction

involves a trade-off between comprehensiveness and efficiency. Presumably, one needs to assess satisfaction with many domains of life to encompass all the possible domains that affect overall life satisfaction. However, in the interest of efficiency, researchers must limit the number of assessed domains. The cost of this approach is that one might be inadvertently omitting a domain that significantly affects overall life satisfaction, whether for the majority of respondents or for a critical subset of the sample. Second, a related challenge concerns how to sum domain satisfactions into an overall life satisfaction score. Presumably, all domains should not be weighted equally in that summation. Satisfaction with one's family might be more important for life satisfaction than satisfaction with one's leisure activities. Further complicating this matter, the optimal weights of each domain might not be uniform across individuals. Some participants might value their family life over their work life, and the opposite could be true for others. These challenges should not discourage researchers from measuring domain satisfaction, as such measures are valuable to address particular research questions. However, issues arise when one wishes to infer overall life satisfaction from domain satisfactions.

When researchers wish to measure overall life satisfaction with more than one item, the SWLS is easily the most frequent choice. The SWLS has accumulated validity evidence in hundreds of studies and resulted in significant scientific advances—not only in well-being science but across a range of disciplines, from behavioral economics and organizational behavior to clinical psychology and leisure studies (Pavot & Deiner, 1993, 2008). Our aim is to put forward a new measure with some strengths that the SWLS, despite its virtues, nonetheless lacks.

In the most recent review of the SWLS, Pavot and Diener (2008) acknowledged that the fifth item of the scale ("If I could live my life over, I would change almost nothing") consistently has lower factor loadings than the other four items. Pavot and Diener (2008) explained that this item prompts one to consider the past, whereas the other items implicitly reference one's present life (e.g., "In most ways my life is close to my ideal"). In addition, the first four items of the SWLS are direct indicators of satisfaction with life (e.g., "I am satisfied with my life"), whereas the fifth item represents an indirect (although certainly not subtle) indicator (Paulhus & Vazire, 2007). It is possible for a person to be fully satisfied with his or her life at the time of assessment, yet (perhaps due to earlier hardship) wish that his or her past had been different. Faced with this circumstance, one might opt to delete the fifth item and proceed with a four-item scale using only the direct indicators of life satisfaction.

Yet, we believe the original choice to retain the fifth indirect item was preferable, and that increasing the number of such indirect items to balance the scale is a wiser alternative for several reasons. First, the inclusion of reverse-scored indirect indicators reduces acquiescence bias—a tendency by respondents to agree with items—that could affect the SWLS (Danner, Aichholzer, & Rammstedt, 2015; Pavot & Diener, 1993). Reverse-scored items, or negatively worded or negatively valenced items in a scale that also includes positively worded or positively valenced items, might produce a second factor due to method effects (DiStefano & Motl, 2009; Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). However, we believe it is preferable to

have both regularly scored positively valenced items and reverse-scored negatively valenced items. When all items are scored in the same direction, reflecting positively valenced attributes, the magnitude of method effects cannot be assessed. Conversely, with both negative and positive items, method effects can be tested and controlled for. Importantly, a second reason to include negative, indirect indicators is that life satisfaction is a construct that involves a broad range of subattitudes. Life satisfaction can be inferred not only from direct statements of life satisfaction, but also from statements regarding coveting others' lives, regrets about the past, and dreaming to remake one's life. These indirect indicators assess important elements of life satisfaction, and including such items increases bandwidth.

As reflected in the fifth SWLS item, satisfaction with one's life should not be understood merely as a matter of being willing to assent to explicit statements that one is satisfied. As noted earlier, other important components of overall life satisfaction include not regretting one's past decisions, not wanting to shift the path one's life is on, and not enviously wishing that one's life were more like the lives of others. A hypothetical respondent who answers near maximum on questions like "I am satisfied with my life" but who reports substantial regret about his or her choices, a desire to change life paths, and envy for his or her peers' seemingly superior lives should score only moderately in overall life satisfaction, rather than, as with the current SWLS, near the top of the scale. Presumably, the more that people endorse such indirectly negative thoughts, the less satisfied they are with their lives. Such statements represent affirmative indications that one is dissatisfied with one's life. To the extent that life satisfaction is an important construct worth measuring, it should involve both the positive affirmation that one is satisfied or content with one's life, as well as an absence of serious regret, desire to change, and envy of others' lives.

To this end, we sought to design a measure of life satisfaction, called the Riverside Life Satisfaction Scale (RLSS), meeting these desiderata:

1. It contains a balance of regularly scored and reverse-scored items.
2. It includes indicators of regret, envy, and desire to change, as well as more standard explicit measures of satisfaction, to reflect an appropriately broad understanding of the construct of life satisfaction.
3. It correlates highly with the existing SWLS, as well as other closely related measures.
4. It has a single dominant factor (i.e., unidimensionality) and high reliability coefficients.

We conducted three studies to select items for the RLSS, test its psychometric properties, and correlate the measure with other measures to test construct validity. Specifically, we correlated the RLSS with other well-being measures, Big Five personality traits, values, and demographic information.

Study 1

Method

Participants

We recruited participants ($N = 504$) from Prolific Academic™, a U.K.-based service similar to Amazon's MTurk that connects

online participants with researchers. We excluded participants who did not have English as a first language. We also excluded participants from the United States because U.S. Thanksgiving fell between our two assessments, and we did not want this holiday to affect test–retest reliabilities. Participants were largely from the United Kingdom (79%) and White (81%). They ranged from 18 to 67 years old ($M = 35.1$, $SD = 12.0$) and about half (51%) were female. Most of our participants were nonreligious (46%) or Christian (29%). The median education level was an undergraduate degree, and 52% of our sample were in a relationship. The median personal income was £10,000 to £19,999, and the median household income was £30,000 to £39,999. Approximately half (49%) of our sample was employed full-time and 24% were part-time employees.

Procedure

Prolific Academic users viewed a description of our study titled "Well-Being Survey" and were told they would receive £5 for completing the survey. Following consent, participants completed a series of measures.

Two weeks later, we recruited 200 participants who had completed the first assessment. These participants (final $N = 192$ after removing empty responses) responded to the same life satisfaction item pool as they had 2 weeks earlier.

Materials

All measures that follow were administered during the first assessment. Additional measures were administered but they are irrelevant to the current project.

Life satisfaction item pool. We developed 23 items to capture life satisfaction in two ways. First, we created nine items that were direct items about life satisfaction (e.g., "I am satisfied with my life overall" and "I like how my life is going"). Second, we created 14 indirect and reverse-scored items. These items assessed envy of others' lives, wishing one had made different decisions, and the desire to make changes to one's life. See Table 1 for the full list of items. Items were presented in a random order and rated on a 7-point Likert scale (see Appendix).

Satisfaction With Life Scale. Participants completed the SWLS (Diener et al., 1985), which primarily asks direct questions about life satisfaction (e.g., "In most ways my life is close to my ideal" and "I am satisfied with my life"), which are answered on a 7-point Likert scale. This five-item measure showed high reliability ($\omega_t = .92$).

Affect. Positive and negative affect were measured with a modified version of the Affect-Adjective Scale (Diener & Emmons, 1984), in which participants rated the extent to which they have felt specific emotions (e.g., "worried/anxious" and "pleased") over the past week on a 7-point Likert scale. Three low-arousal items ("peaceful/serene," "dull/bored," and "relaxed/calm") were added to the nine-item scale to ensure that both high and low arousal emotions were included. We calculated affect balance scores by reverse-scoring the negative affect items and then computing the mean of all affect items. McDonald's ω_t values for affect balance, positive affect, and negative affect, were .93, .93, and .87, respectively.

Happiness. Participants completed the Subjective Happiness Scale (Lyubomirsky & Lepper, 1999), which asks respondents about their happiness levels without defining happiness. For example, one item asks, "Compared with most of my peers, I consider myself:" with anchors of "less happy" and "more happy." This four-item measure used 7-point Likert scales and had a McDonald's ω_t of .90.

Psychological well-being. We used the 18-item version of the Psychological Well-Being Scale (Ryff & Keyes, 1995), which is thought to measure six aspects of eudaimonia (autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, and self-acceptance). Items are subjective in nature (e.g., "I tend to be influenced by people with strong opinions" and "Maintaining close relationships has been difficult for me") and rated on a 6-point Likert scale. Results with subscales should be interpreted with caution, as McDonald's ω_t values ranged from .50 to .89 across the six subscales. Using all items to create an overall score of psychological well-being yielded a ω_t of .85.

Big Five personality traits. We administered the Big Five Inventory–2 (BFI–2; Soto & John, 2017a), which measures each of the five traits with three facets and uses a 5-point Likert scale. McDonald's ω_t values ranged from .82 to .92 for the traits and .70 to .85 for the facets.

Demographic characteristics. Prolific Academic provided demographic information for our participants. Our analyses used the following variables: age (continuous), sex (dichotomous), education (ordinal, six levels), relationship status (dichotomous), personal income (ordinal, 12 levels), and household income (ordinal, 12 levels). The relationship status question included response options that were collapsed to form a more interpretable dichotomous variable. Participants who responded as being in a relationship or married were scored as a 1, and those who responded as being divorced, never married, separated, single, or widowed were scored as a 0.

Missing data. Demographic variables used in analyses featured a missingness rate of 17%, and no data were imputed. Other measures featured a missingness rate of 0.1% and were imputed with R's mice package using predictive mean matching with five iterations. For each missing cell, five cases that do not have missing values for that variable were found. One of those five cases was randomly selected, and the score of that case on that variable was imputed into the missing cell. Correlations between missingness on each demographic variable and missingness on all other demographic variables ranged from $r = .21$ to $r = .90$, with an average of $r = .41$. Correlations between missingness on each demographic variable and scores on each of our psychological variables ranged from $r = -.13$ to $r = .12$, with an average of $r = -.03$ and an average absolute value of $r = .05$.

Results

Life satisfaction item pool

The eigenvalues of the correlation matrix of our item pool suggested that the items were unidimensional (first six eigenvalues:

13.48, 1.44, 1.35, 1.03, 0.82, 0.65). We performed exploratory factor analysis using weighted least squares estimation on the polychoric correlation matrix to extract one general factor (see Table 1 for factor loadings). The one factor explained 58% of the shared variance among the items. We repeated the exploratory factor analysis with two factors (without rotation, to compare to the one-factor case). The χ^2 difference between the one-factor and two-factor solutions was significant, $\chi^2(22) = 1017.9$, $p < .001$. The two factors split the direct from the indirect items, explaining 63% of the shared variance among the items. The small increase in explained variance, in addition to the scree plot, suggests that our items reflected one latent construct.

From the item pool, we wished to select six items that would comprise the RLSS. We aimed for six items to achieve both a brief measure and item diversity. To select a final set of items for the RLSS, we examined item content and statistical parameters (i.e., factor loadings and item–total correlations). We selected three indirect items, such that one item each tapped into social comparison, a desire to change one's past life, and a desire to change one's future life. Next, we selected three direct items to balance the scale. We selected direct items that were not overly similar but still comparable to items of the SWLS. Table 1 indicates which items were selected. These items, which include both regularly scored direct and reverse-scored indirect statements, form the RLSS.

We performed confirmatory factor analyses (CFAs) in which items were treated as ordinal due to their nonnormal distributions (see Figure 1). Diagonally weighted least squares estimation and a mean- and variance- adjusted χ^2 were used. A one-factor CFA fit the RLSS items well, $\chi^2(9) = 86.9$, comparative fit index (CFI) = .997, Tucker–Lewis Index (TLI) = .994, root mean square error of approximation (RMSEA) = .131, 90% confidence interval (CI) [.107, .157], standardized root mean residual (SRMR) = .025 (see Table 2 for factor loadings). The RMSEA in this and other models might indicate worse fit than other fit statistics, because the RMSEA is positively biased in models with low degrees of freedom (Kenny, Kaniskan, & McCoach, 2015). We also conducted a two-factor CFA where latent variables were estimated for direct and indirect items and these two latent variables were correlated. This model did exhibit substantially better fit than the one-factor model, $\chi^2(8) = 20.2$, CFI = .999, TLI = .999, RMSEA = .055, 90% CI [.025, .086], SRMR = .011, but the two latent variables were correlated at $r = -.94$, 95% CI [−.96, −.92]. Finally, we fit a one-factor CFA with correlated residuals among the direct items. These correlations were constrained to be equal, and the addition of these correlations yielded a model with excellent fit, $\chi^2(8) = 19.7$, CFI = 0.999, TLI = .999, RMSEA = .054, 90% CI [.024, .085], SRMR = .011.

The six items of the RLSS were highly correlated (average interitem $r = .69$; $\omega_t = .93$). These statistics are comparable to those of the SWLS (average interitem $r = .68$; $\omega_t = .92$). The RLSS also exhibited a high test–retest correlation over a 2-week period ($r = .90$, 95% CI = [.87, .92]).

Using the ltm R package, we computed a test information function for the RLSS and SWLS with a generalized partial credit item-response theory model, in which items are treated as ordinal. The RLSS outperformed the SWLS, except at high levels of life satisfaction (see Figure 2).

Table 1. Life satisfaction item pool.

Item number	Item type	Factor loading	Item–total r	Item
1	Direct	.92	.86	I am satisfied with how my life has gone.
2	Direct	.91	.86	When I look over my life, I feel satisfied.
3	Direct	.93	.87	I am satisfied with my life overall.
4	Direct	.88	.82	My life is going very well right now.
5	Direct	.91	.86	I like how my life is going.
6	Direct	.92	.86	I am content with my life.
7	Direct	.9.	.88	I am satisfied with where I am in life right now.
8	Direct	.84	.82	I would be satisfied if my life continued to go down the path it is currently on.
9	Direct	.76	.73	When I think about what I want from life, I find nothing missing.
10	Indirect	.77	.77	If I could live my life over, I would change many things.
11	Indirect	.74	.73	I wish I had made different choices in my life.
12	Indirect	.5.	.5.	There are things about my friends' lives that I wish could be part of my life.
13	Indirect	.58	.58	I am envious of other people's lives.
14	Indirect	.75	.74	I would like to make changes to my life.
15	Indirect	.43	.42	I won't be truly satisfied with my life until I achieve certain goals.
16	Indirect	.83	.82	Sometimes I wish my life were very different.
17	Indirect	.72	.71	There are issues in my life that I really want to fix.
18	Indirect	.59	.59	I have the desire to switch lives with someone else.
19	Indirect	.75	.74	Those around me seem to be living better lives than my own.
20	Indirect	.81	.80	I want to change the path my life is on.
21	Indirect	.47	.47	I am considering moving and starting a new life.
22	Indirect	.67	.65	There are things I would do differently if I could make the choice again.
23	Indirect	.67	.66	When it comes to important life choices, I wish I hadn't made so many mistakes.

Note. Indirect items were reverse-scored prior to the factor analysis.
[a]Item selected for measure.

Associations between RLSS and other measures

Table 3 presents correlations between the RLSS and demographic variables, and Table 4 presents correlations between the RLSS and other psychological measures. As expected, the RLSS was highly correlated with the SWLS and, to a lesser
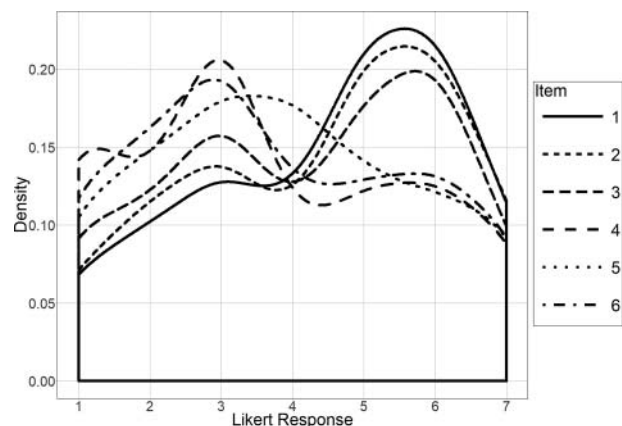

Figure 1. Kernel density estimates of the Riverside Life Satisfaction Scale items in Study 1.

Table 2. Standardized factor loadings of the Riverside Life Satisfaction Scale items.

Item	Study 1	Study 2	Study 3
I like how my life is going.	.95	.95	.93
I am content with my life.	.94	.95	.96
I am satisfied with where I am in life right now.	.96	.96	.92
If I could live my life over, I would change many things.	−.75	−.70	−.66
Those around me seem to be living better lives than my own.	−.75	−.74	−.70
I want to change the path my life is on.	−.83	−.82	−.79

extent, with other measures of well-being. Notably, the RLSS showed systematically stronger correlations with other measures than did the SWLS.

Study 2

Study 1 yielded a final set of RLSS items, as well as correlations between the RLSS and other psychological measures and demographic characteristics. Study 2 aimed to replicate these correlations with just the final set of RLSS items. In addition, Study 2 extended Study 1 by adding measures of weekly affect, socially desirable responding, and demand characteristics.

Method

Participants

Participants ($N = 303$) were recruited from Prolific Academic. We excluded those for whom English was not a first language. Participants were mostly White (73%) and from the United States (69%). They ranged from 18 to 70 years old ($M = 31.9$, $SD = 11.6$), and about half (45%) were female. Most of our participants were nonreligious (44%) or Christian (31%). The median education level was an undergraduate degree, and 37% were in a relationship. The median personal income was £10,000 to £19,999, and the median household income was £40,000 to £49,999. Approximately a third (37%) of our sample was employed full-time, and 30% were part-time employees.

Procedure

Prolific Academic users viewed a description of our study titled "Psychology Research Survey" and were told they would receive £4 for completing the survey. Following consent, participants completed a series of measures.

Materials

All measures listed here were administered to participants. Additional measures were administered that were used in analyses irrelevant to the current project.

RLSS. Participants were asked to rate their agreement with the six items we selected for the RLSS in Study 1. Again, these items showed high reliability ($\omega_t = .93$).

Measures from Study 1. As before, participants completed the SWLS (Diener et al., 1985), Subjective Happiness Scale (Lyubomirsky & Lepper, 1999), Psychological Well-Being Scale (Ryff & Keyes, 1995), and BFI–2 (Soto & John, 2017a). The SWLS and Subjective Happiness Scales both had ω_t values of .90.
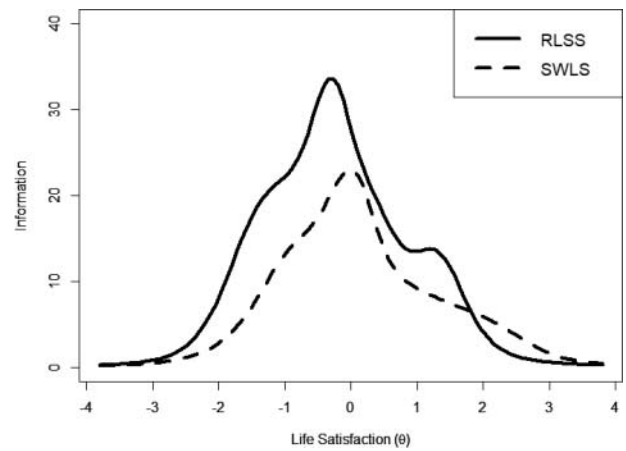
Figure 2. Test information functions of the Riverside Life Satisfaction Scale (RLSS) and the Satisfaction With Life Scale (SWLS) in Study 1.

Findings with subscales of the Psychological Well-Being Scale should be interpreted with caution, as McDonald's ω_t values ranged from .52 to .89 across the six subscales, and the overall scale had a ω_t of .84. McDonald's ω_t values for the traits and facets of the BFI–2 ranged from .84 to .93 and .72 to .88, respectively.

We used the same 12 items as in Study 1 to measure affect (adapted from Diener & Emmons, 1984). However, these items were administered twice—once toward the beginning of the survey and once toward the end. During the first assessment, participants were asked to "indicate the extent to which [they] typically feel this way." In the second assessment, participants were told to "indicate the extent to which [they] have felt this way in the past week (last 7 days)." Thus, the first assessment aimed to measure general affect, whereas the second assessment measured affect over the last week. Across the six scores (general and weekly affect balance, positive affect, and negative affect), McDonald's ω_t values ranged from .89 to .93.

Table 3. Correlations between the Riverside Life Satisfaction Scale and demographics in each study.

Construct	Study	N	r	95% CI lower bound	95% CI upper bound	p
Age	1	491	.05	−.04	.14	.24
Age	2	296	.10	−.02	.21	.10
Age	3	390	.10	−.00	.20	.05
Female status	1	488	.08	−.01	.17	.08
Female status	2	294	.06	−.06	.17	.32
Female status	3	391	.16	.06	.25	.002
Education	1	479	.13	.04	.22	.005
Education	2	293	.08	−.03	.20	.15
Education	3	389	.08	−.02	.18	.12
Relationship status	1	419	.34	.25	.42	<.001
Relationship status	2	255	.17	.04	.28	.008
Relationship status	3	369	.27	.17	.36	<.001
Personal income	1	313	.12	.01	.23	.03
Personal income	2	190	.33	.20	.46	<.001
Personal income	3	345	.09	−.02	.15	.10
Household income	1	310	.14	.03	.24	.02
Household income	2	214	.23	.10	.36	<.001
Household income	3	350	.13	.03	.23	.02

Note. For female status, 1 = female, 0 = male. For relationship status, 1 = in a relationship, 0 = not in a relationship.

Table 4. Correlations between the Riverside Life Satisfaction Scale and other psychological constructs in Study 1.

	Riverside Life Satisfaction Scale		Satisfaction With Life Scale		
	r [95% CI]	Dis. r	r [95% CI]	Dis. r	p
Riverside Life Satisfaction Scale	—	—	.88 [.86, .90]	.96	—
Satisfaction With Life Scale	.88 [.86, .90]	.96	—	—	—
Affect Balance	.72 [.68, .76]	.78	.67 [.62, .71]	.73	< .001
Positive Affect	.69 [.64, .73]	.74	.66 [.61, .70]	.71	.045
Negative Affect	−.62 [−.67, −.56]	−.69	−.55 [−.61, −.49]	−.62	< .001
Subjective Happiness	.71 [.67, .75]	.78	.67 [.62, .71]	.74	.003
Psychological Well-Being	.77 [.73, .81]	.87	.72 [.67, .76]	.81	< .001
Autonomy	.26 [.17, .33]	.34	.17 [.08, .25]	.23	< .001
Environmental mastery	.71 [.66, .75]	.87	.67 [.62, .72]	.83	.014
Personal growth	.31 [.23, .39]	.42	.27 [.19, .35]	.37	.058
Positive relations	.54 [.47, .60]	.68	.51 [.44, .57]	.65	.164
Purpose	.30 [.21, .37]	.43	.27 [.19, .35]	.40	.218
Self-acceptance	.88 [.86, .90]	.96	.86 [.83, .88]	.95	.036
Extraversion	.42 [.35, .49]	.47	.38 [.30, .45]	.42	.020
Sociability	.26 [.18, .34]	.30	.23 [.15, .31]	.26	.134
Assertiveness	.27 [.19, .35]	.31	.22 [.14, .31]	.26	.038
Energy level	.51 [.44, .57]	.62	.47 [.40, .54]	.58	.050
Agreeableness	.29 [.20, .37]	.33	.26 [.18, .34]	.30	.170
Compassion	.15 [.06, .23]	.18	.14 [.06, .23]	.18	.816
Respectfulness	.18 [.09, .26]	.22	.14 [.06, .23]	.18	.073
Trust	.34 [.26, .41]	.41	.31 [.23, .39]	.38	.206
Conscientiousness	.33 [.25, .41]	.37	.34 [.26, .42]	.38	.512
Organization	.19 [.10, .27]	.21	.20 [.11, .28]	.23	.496
Productivity	.34 [.26, .42]	.40	.36 [.28, .43]	.43	.328
Responsibility	.33 [.25, .40]	.40	.32 [.24, .40]	.40	.881
Negative emotionality	−.61 [−.66, −.55]	−.66	−.51 [−.57, −.44]	−.56	< .001
Anxiety	−.50 [−.57, −.44]	−.58	−.42 [−.49, −.34]	−.48	< .001
Depression	−.71 [−.75, −.67]	−.80	−.63 [−.68, −.58]	−.72	< .001
Emotional volatility	−.40 [−.47, −.32]	−.45	−.31 [−.38, −.22]	−.35	< .001
Open-Mindedness	.11 [.03, .20]	.13	.12 [.03, .20]	.13	.930
Aesthetic sensitivity	.04 [−.04, .13]	.05	.08 [−.01, .17]	.09	.086
Intellectual curiosity	.04 [−.05, .12]	.05	.02 [−.06, .11]	.03	.465
Creative imagination	.20 [.12, .29]	.24	.18 [.09, .26]	.22	.230

Note. Dis. r = disattenuated correlation using ω_t. p = p value of difference between paired disattenuated correlations. All correlations stronger than .08 are significant at the $p < .05$ level.

Socially desirable responding. Participants responded to a 16-item version of the Balanced Inventory of Desirable Responding (Hart, Ritchie, Hepper, & Gebauer, 2015). Items were rated on a 7-point Likert scale and included "I have not always been honest with myself" and "I always know why I like things." These items exhibited acceptable internal inconsistency ($\omega_t = .82$).

Demand characteristics. Participants completed the Perceived Awareness of the Research Hypothesis Scale (Rubin, 2016), which asks participants how confident they are that they know the research hypotheses, with items such as "I knew what the researchers were investigating in this research." This four-item scale uses a 7-point Likert scale and showed high internal consistency ($\omega_t = .91$).

Demographic characteristics. Prolific Academic provided the same demographic information for our participants as in Study 1.

Missing data. Demographic variables used in analyses featured a missingness rate of 15% and no data were imputed. Other measures featured a missingness rate of 0.2% and were imputed using predictive mean matching with five iterations.

Correlations between missingness on each demographic variable and missingness on all other demographic variables ranged from $r = .19$ to $r = .88$, with an average of $r = .40$. Correlations between missingness on each demographic variable and scores on each of our psychological variables ranged from $r = −.12$ to $r = .13$, with an average of $r = .004$ and an average absolute value of $r = .03$.

Results

RLSS CFAs

A one-factor CFA with diagonally weighted least squares estimation and a mean- and variance-adjusted χ^2 fit the RLSS items well, $\chi^2(9) = 94.3$, CFI = .995, TLI = .991, RMSEA = .177, 90% CI [.146, .210], SRMR = .038. See Table 2 for factor loadings. A two-factor CFA with correlated latent variables for direct and indirect items showed better fit than the one-factor model, $\chi^2(8) = 18.6$, CFI = .999, TLI = .999, RMSEA = .066, 90% CI [.026, .106], SRMR = .010, but the two latent variables were correlated at $r = −.90$ (95% CI = [−.93, −.86]). Finally, a one-factor CFA with correlated residuals (constrained to be equal) among the direct items fit the data very well, $\chi^2(8) = 18.3$, CFI = .999, TLI = .9949 RMSEA = .065, 90% CI [.025, .105], SRMR = .010.

Associations between RLSS and other measures

Table 3 presents correlations between the RLSS and demographic variables, and Table 5 presents correlations between the RLSS and other psychological measures. We found a similar pattern of correlations across demographic variables, the Big Five, components of psychological well-being, and other well-being measures. As in Study 1, the correlations between RLSS and other measures were systematically higher than correlations between the SWLS and those measures. Differences between correlations with weekly and general affect measures were negligible. The RLSS correlated significantly with the measure of socially desirable responding but nonsignificantly with the measure of experimenter demand.

Study 3

Study 2 provided results on the internal structure of the RLSS and correlations between the RLSS and other psychological measures and demographic characteristics. Study 3 aimed to replicate many of these results and explore possible correlations between values and life satisfaction.

Method

Participants

Participants ($N = 407$) were recruited from Prolific Academic. We excluded those who did not have English as a first language. Participants were mostly White (74%), from the United Kingdom (61%), and female (62%). They ranged from 18 to 70 years old ($M = 36.2$, $SD = 11.5$). Most of our participants were non-religious (44%) or Christian (35%). Their median education level was college or A levels, and a majority (64%) were in a relationship. The median personal income was £10,000 to

Table 5. Correlations between the Riverside Life Satisfaction Scale and other psychological constructs in Study 2.

	Riverside Life Satisfaction Scale		Satisfaction With Life Scale		
	r [95% CI]	Dis. r	r [95% CI]	Dis. r	p
Riverside Life Satisfaction Scale	—	—	.89 [.86, .91]	.97	—
Satisfaction with Life Scale	.89 [.86, .91]	.97	—	—	—
Affect Balance (general)	.73 [.68, .78]	.79	.69 [.63, .75]	.75	.019
Affect Balance (week)	.73 [.68, .78]	.79	.68 [.61, .73]	.74	.002
Positive Affect (general)	.68 [.61, .73]	.73	.68 [.62, .74]	.74	.820
Positive Affect (week)	.68 [.62, .74]	.74	.65 [.58, .71]	.71	.142
Negative Affect (general)	−.63 [−.70, −.56]	−.69	−.55 [−.63, −.47]	−.61	< .001
Positive Affect (week)	−.64 [−.70, −.56]	−.70	−.56 [−.63, −.48]	−.63	< .001
Subjective Happiness	.72 [.66, .77]	.79	.69 [.62, .74]	.76	.063
Psychological Well-Being	.74 [.68, .79]	.84	.69 [.62, .74]	.78	.003
Autonomy	.22 [.11, .32]	.29	.17 [.06, .28]	.24	.099
Environmental mastery	.69 [.62, .74]	.83	.67 [.60, .72]	.81	.235
Personal growth	.24 [.13, .34]	.31	.21 [.10, .32]	.28	.274
Positive relations	.43 [.33, .52]	.55	.39 [.29, .48]	.50	.085
Purpose	.27 [.17, .38]	.39	.20 [.09, .30]	.29	.005
Self-acceptance	.90 [.87, .92]	.99	.88 [.85, .90]	.98	.056
Extraversion	.47 [.38, .55]	.52	.42 [.32, .51]	.47	.039
Sociability	.38 [.28, .47]	.42	.35 [.24, .44]	.39	.186
Assertiveness	.29 [.18, .39]	.33	.25 [.14, .35]	.29	.128
Energy level	.48 [.39, .56]	.58	.43 [.33, .52]	.52	.036
Agreeableness	.29 [.19, .39]	.33	.27 [.17, .37]	.31	.374
Compassion	.19 [.08, .29]	.23	.16 [.05, .27]	.20	.360
Respectfulness	.16 [.05, .27]	.19	.16 [.05, .27]	.19	.837
Trust	.34 [.24, .44]	.41	.32 [.21, .41]	.39	.338
Conscientiousness	.37 [.27, .47]	.41	.36 [.25, .45]	.40	.507
Organization	.23 [.12, .34]	.27	.21 [.10, .32]	.25	.420
Productivity	.35 [.25, .45]	.42	.34 [.23, .43]	.40	.601
Responsibility	.38 [.28, .47]	.44	.37 [.27, .47]	.44	.752
Negative emotionality	−.61 [−.68, −.54]	−.66	−.56 [−.63, −.47]	−.61	.008
Anxiety	−.55 [−.62, −.46]	−.62	−.52 [−.60, −.43]	−.60	.256
Depression	−.68 [−.74, −.62]	−.76	−.60 [−.67, −.52]	−.68	< .001
Emotional volatility	−.41 [−.50, −.31]	−.45	−.36 [−.46, −.26]	−.40	.067
Open-Mindedness	.08 [−.04, .19]	.08	.03 [−.08, .14]	.04	.115
Aesthetic sensitivity	.02 [−.10, .13]	.02	.01 [−.10, .12]	.01	.764
Intellectual curiosity	.04 [−.08, .15]	.05	−.03 [−.14, .09]	−.03	.021
Creative imagination	.14 [.03, .25]	.16	.10 [−.02, .21]	.11	.108
Socially desirable responding	.32 [.21, .41]	.36	.29 [.18, .39]	.33	.216
Demand characteristics	.03 [−.08, .14]	.04	.04 [−.08, .15]	.04	.915

Note. Dis. r = disattenuated correlation using ω_t. p = p value of difference between paired disattenuated correlations. All correlations stronger than .11 are significant at the p < .05 level.

£19,999, and the median household income was £30,000 to £39,999. Almost half (45%) of our sample was employed full-time, and 24% were part-time employees.

Procedure
Prolific Academic users viewed a description of our study titled "Well-Being Survey 3″ and were told they would receive £2.5 for completing the survey. Following consent, participants completed a series of measures.

Materials
All measures here were administered to participants. Additional measures were administered that were used in analyses irrelevant to the current project.

Measures from Study 2. As in Study 2, participants completed the RLSS, the Balanced Inventory of Desirable Responding (Hart et al., 2015), and the Affect-Adjective Scale with general or typical instructions (adapted from Diener & Emmons, 1984). The RLSS and Balanced Inventory of Desirable Responding had ω_t values of .91 and .83, respectively. Affect balance, positive affect, and negative affect had ω_t values of .92, .92, and .89, respectively.

Big Five personality traits. We administered the Big Five Inventory–2 Extra-Short (i.e., BFI–2–XS; Soto & John, 2017b), which measures each trait with three items and uses a 5-point Likert scale. McDonald's ω_t values ranged from .58 to .80 for the traits.

Values. Participants completed the Schwartz Values Survey (Schwartz, 1992). Participants were presented with 58 values and rated the extent to which each was "a guiding principle in [their lives]" on a scale ranging from −1 (*opposed to my values*) to 7 (*of supreme importance*). Items included "Equality (equal opportunity for all)" and "Wealth (material possessions, money)." The 58 values were scored into 10 subscales with low ω_t values ranging from .31 to .57.

Demographics. Prolific Academic provided the same demographic information for our participants as in Studies 1 and 2.

Missing data. Demographic variables used in analyses featured a missingness rate of 6%, and no data were imputed. Other measures featured a missingness rate of 0.6% and were imputed using predictive mean matching with five iterations. Again, we correlated missingness on each demographic variable with missingness on all other demographic variables; these correlations ranged from r = .45 to r = .97, with an average of r = .62. Correlations between missingness on each demographic variable and scores on each of our psychological variables ranged from r = −.14 to r = .15, with an average of r = −.02 and an average absolute value of r = .06.

Results

RLSS CFAs
A one-factor CFA with diagonally weighted least squares estimation and a mean- and variance-adjusted χ^2 fit the RLSS items well, $\chi^2(9) = 101.3$, CFI = .994, TLI = .989, RMSEA = .159, 90% CI [.132, .187], SRMR = .036. See Table 2 for factor loadings. A two-factor CFA with correlated latent variables for direct and indirect items showed better fit than the one-factor model, $\chi^2(8) = 13.3$, CFI = 1.000, TLI = .999, RMSEA = .040, 90% CI [.000, .077], SRMR = .011, but the two latent variables were correlated at r = −.89 (95% CI [−.92, −.86]). Finally, a one-factor CFA with correlated residuals (constrained to be equal) among the direct items fit the data very well, $\chi^2(8) = 13.1$, CFI = 1.000, TLI = .999, RMSEA = .040, 90% CI [.000, .077], SRMR = .010.

Associations between RLSS and other measures
Table 3 presents correlations between the RLSS and demographic variables, and Table 6 presents correlations between the RLSS and other psychological measures. All three of the so-called conservation values (security, conformity, and tradition)

were significantly associated with life satisfaction. The only other value associated with life satisfaction was achievement.

Discussion

In three studies, we demonstrated that the RLSS retains the favorable qualities of the SWLS and brings additional benefits. Previous research has shown that the SWLS items exhibit a high degree of internal consistency (Diener et al., 1985; Pavot & Diener, 1993, 2008). In our studies, the SWLS and RLSS showed almost identical levels of internal consistency. The high reliability coefficients of the RLSS minimize the impact of attenuation. Furthermore, the RLSS displays a satisfactory degree of unidimensionality, thus matching another advantageous feature of the SWLS. Researchers will not need to employ techniques such as higher order or bifactor models to model the RLSS items. Our one-factor models that included equality constrained residual correlations among the direct items fit the data very well, as the direct items were correlated to a greater degree than suggested by the one common factor. These residual correlations might be a result of the narrow conceptual space of the direct life satisfaction items. Researchers might consider correlating the residuals among the direct items to improve model fit. We recommend constraining these correlations to be equal for parsimony.

Importantly, despite its broader scope, the RLSS retained these favorable psychometric properties (i.e., high internal consistency, tests–retest reliability, and unidimensionality) when compared to the SWLS. Whereas the SWLS has one indirect indicator of life satisfaction, half of the RLSS is devoted to indirect items. The indirect items of the RLSS assess important aspects of life satisfaction and help to account for acquiescence bias. Thus, the RLSS features greater bandwidth and less susceptibility to acquiescence bias than the SWLS. Notably, the indirect items are reverse-scored but not phrased using negations. The indirect items tap dissatisfaction with one's life without using phrases such as "not satisfied." Furthermore, Study 1 demonstrated the RLSS's temporal (i.e., test–retest) stability. Thus, we believe the RLSS preserves the advantageous qualities of the SWLS and improves on it by increasing its breadth and accounting for acquiescence bias.

Our three studies support the construct validity of the RLSS by correlating it with associated constructs, locating it in a nomological network (Cronbach & Meehl, 1955). As one would expect, the RLSS is highly correlated with other measures of well-being. However, disattenuated correlations between .68 and .97 in magnitude imply that there might be important differences between these constructs. The RLSS shows a pattern of associations with Big Five traits that mirrors previous research (Soto & John, 2017a; Steel, Schmidt, & Shultz, 2008). Our measure was also consistently associated with income (both personal and household), and respondents who reported being in a relationship were higher in life satisfaction. Conversely, sex and educational attainment were inconsistently associated with the RLSS. These results generally follow previous findings (Diener, Suh, Lucas, & Smith, 1999).

Previous research has found that job satisfaction and job dissatisfaction show different patterns of correlation with other constructs (Herzberg, 1966). However, in our measure of life satisfaction this was not possible due to the high correlation

Table 6. Correlations between the Riverside Life Satisfaction Scale and other psychological constructs in Study 3.

	r [95% CI]	p	Dis. r
Affect Balance	.75 [.70, .79]	<.001	.81
Positive Affect	.68 [.63, .73]	<.001	.74
Negative Affect	−.66 [−.71, −.60]	<.001	−.73
Extraversion	.28 [.19, .37]	<.001	.38
Agreeableness	.27 [.18, .36]	<.001	.37
Conscientiousness	.34 [.25, .43]	<.001	.44
Negative emotionality	−.46 [−.53, −.38]	<.001	−.54
Open-Mindedness	−.02 [−.12, .08]	.714	−.02
Values			
Conformity	.21 [.12, .30]	<.001	.36
Tradition	.16 [.06, .25]	.002	.25
Benevolence	.09 [−.01, .18]	.086	.13
Universalism	.06 [−.04, .16]	.220	.08
Self-direction	.01 [−.09, .11]	.808	.02
Stimulation	.07 [−.03, .16]	.175	.13
Hedonism	−.06 [−.15, .04]	.238	−.10
Achievement	.11 [.02, .21]	.022	.20
Power	.05 [−.05, .14]	.330	.07
Security	.10 [.00, .19]	.049	.17
Socially desirable responding	.39 [.30, .47]	<.001	.45

Note. Dis. r = disattenuated correlation using ω_t.

between latent factors representing life satisfaction and life dissatisfaction.

Regarding our findings with respect to Schwartz's (1992) values, some of the values showed small to moderate correlations with life satisfaction, unlike some previous research (Sagiv & Schwartz, 2000). However, it is difficult to interpret these correlations in the context of the low reliability of the values measure. Finally, the RLSS does seem to be affected by socially desirable responding but not experimenter demand. We believe it would be difficult to construct a self-report well-being measure that is unrelated to social desirability, as well-being is a socially desirable attribute. Indeed, previous research has found that many, if not all, well-being measures seem to be affected by social desirability (see Diener, 1994, for a review).

Potential limitations and future directions

The RLSS and SWLS were found to correlate between $r =$ .85 and $r =$ .90. When this correlation is disattenuated (i.e., adjusted to account for the error in each measure), it rises to $r =$ .95 or above. These high correlations are to be expected when two measures of the same construct use the same method (i.e., self-report). Indeed, correlations among the same traits as measured by the original Big Five Inventory (i.e., BFI) and BFI–2 correlate between $r =$ .87 and $r =$ .94 (Soto & John, 2017a), and these correlations would exceed 1 if they were disattenuated with Cronbach's α (Soto & John, 2017a, Table 2; Srivastava & John, 1999, Table 4.3). However, the BFI–2 certainly improves on the BFI; likewise, we believe the RLSS improves on the SWLS. By including more negative, indirect items, the RLSS reduces acquiescence bias and reflects a somewhat broader and arguably more meaningful conception of life satisfaction, which includes absence of envy, regret, and desire to change one's life path. However, the high correlations between the RLSS and SWLS suggest that many researchers would reach similar conclusions with either measure, just as researchers

would reach similar conclusions with the BFI and BFI–2. Yet, when compared to the SWLS, the RLSS displayed significantly higher correlations with other measures.

Our inclusion of indirect indicators of life satisfaction traded fidelity (i.e., specificity) for bandwidth (i.e., breadth). This is evidenced by the lower factor loadings of the indirect indicators, when compared to the direct items. In particular, internal consistency criteria might increase when the fourth item of our measure (i.e., the item with the lowest factor loading) is removed. However, removal of this item would trade bandwidth for fidelity. The merits of this trade depend on the research objective. As a measure gains fidelity and loses bandwidth, it provides a more precise estimate of a narrower concept. As a result, measures that prioritize fidelity over bandwidth predict narrower sets of constructs, but feature higher predictive ability of those constructs. The fidelity–bandwidth trade-off is inherent in psychological measurement, and we sought to achieve a good balance. However, if investigators are more concerned with fidelity and less concerned with bandwidth, they might consider using the SWLS or the three direct items in the RLSS.

Finally, future research could extend the data presented in this article testing the validity and reliability of the RLSS. Specifically, future directions include examining test–retest correlations over longer durations, as well as correlating the RLSS with constructs not measured in our studies (e.g., gratitude, optimism, self-esteem, mindfulness).

Final remarks

Since its creation in 1985, the SWLS has been the predominant measure of life satisfaction. We introduce here an alternative measure of life satisfaction, the RLSS. Unlike the SWLS, our measure includes multiple indirect indicators of life satisfaction, which increase its bandwidth. Specifically, the content of the items reflects a potentially interesting and slightly broader conception of what life satisfaction consists of, including lack of envy and absence of desire to change. Notably, this increase in bandwidth does not appear to sacrifice reduced internal consistency, and the RLSS retains the unidimensionality of the SWLS. The RLSS should be granted due consideration when choosing a measure of life satisfaction.

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References

Cronbach, L. J., & Meehl, P. E. (1955). Construct validity in psychological tests. *Psychological Bulletin*, 52, 281–302. doi:10.1016/B978-1-4832-0087-3.50007-3

Danner, D., Aichholzer, J., & Rammstedt, B. (2015). Acquiescence in personality questionnaires: Relevance, domain specificity, and stability. *Journal of Research in Personality*, 57, 119–130. doi:10.1016/j.jrp.2015.05.004

Diener, E. (1984). Subjective well-being. *Psychological Bulletin*, 95, 542–575. doi:10.1037/0033-2909.95.3.542

Diener, E. (1994). Assessing subjective well-being: Progress and opportunities. *Social indicators research*, 31(2), 103–157. doi:10.1007/BF01207052

Dinner, E. (2013). The remarkable changes in the science of subjective well-being. *Perspectives on Psychological Science*, 8, 663–666. doi:10.1177/1745691613507583

Diener, E., Diener, M., & Diener, C. (1995). Factors predicting the subjective well-being of nations. *Journal of Personality and Social Psychology*, 69, 851–864. doi:10.1037/0022-3514.69.5.851

Diener, E., & Emmons, R. A. (1984). The independence of positive and negative affect. *Journal of Personality and Social Psychology*, 47, 1105–1117. doi:10.1037/0022-3514.47.5.1105

Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The Satisfaction With Life Scale. *Journal of Personality Assessment*, 49, 71–75. doi:10.1207/s15327752jpa4901_13

Diener, E., Suh, E. M., Lucas, R. E., & Smith, H. L. (1999). Subjective well-being: Three decades of progress. *Psychological Bulletin*, 125, 276–302. doi:10.1037/0033-2909.125.2.276

DiStefano, C., & Motl, R. W. (2009). Further investigating method effects associated with negatively worded items on self-report surveys. *Structural Equation Modeling*, 13, 440–464. doi:10.1207/s15328007sem1303_6

Hart, C. M., Ritchie, T. D., Hepper, E. G., & Gebauer, J. E. (2015). The balanced inventory of desirable responding short form (BIDR-16). *Sage Open*, 5, 1–9. doi:10.1177/2158244015621113

Herzberg, F. I. (1966). *Work and the nature of man*. Oxford, England: World Publishing.

John, O. P., & Srivastava, S. (1999). The Big Five trait taxonomy: History, measurement, and theoretical perspectives. *Handbook of personality: Theory and research*, 2, 102–138.

Kenny, D. A., Kaniskan, B., & McCoach, D. B. (2015). The performance of RMSEA in models with small degrees of freedom. *Sociological Methods & Research*, 44, 486–507. doi:10.1177/0049124114543236

Lucas, R. E., & Donnellan, M. B. (2012). Estimating the reliability of single-item life satisfaction measures: Results from four national panel studies. *Social Indicators Research*, 105, 323–331. doi:10.1007/s11205-011-9783-z

Lyubomirsky, S., & Lepper, H. S. (1999). A measure of subjective happiness: Preliminary reliability and construct validation. *Social Indicators Research*, 46, 137–155. doi:10.1023/A:1006824100041

Michalos, A. C. (1980). Satisfaction and happiness. *Social Indicators Research*, 8, 385–422. doi:10.1007/BF00461152

Oishi, S. (2006). The concept of life satisfaction across cultures: An IRT analysis. *Journal of Research in Personality*, 40, 411–423. doi:10.1016/j.jrp.2005.02.002

Paulhus, D. L., & Vazire, S. (2007). The self-report method. In R. W. Robins, R. C. Fraley, & R. F. Krueger (Eds.), *Handbook of research methods in personality psychology* (pp. 224–239). New York, NY: Guilford.

Pavot, W., & Diener, E. (1993). Review of the satisfaction with life scale. *Psychological Assessment*, 5, 164–172. doi:10.1037/1040-3590.5.2.164

Pavot, W., & Diener, E. (2008). The satisfaction with life scale and the emerging construct of life satisfaction. *The Journal of Positive Psychology*, 3, 137–152. doi:10.1080/17439760701756946

Pavot, W., Diener, E., & Suh, E. (1998). The Temporal Satisfaction With Life Scale. *Journal of Personality Assessment*, 70, 340–354. doi:10.1207/s15327752jpa7002_11

Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88, 879–903. doi:10.1037/0021-9010.88.5.879

Rubin, M. (2016). The Perceived Awareness of the Research Hypothesis Scale: Assessing the influence of demand characteristics. *Figshare*. doi:10.6084/m9.figshare.4315778.v2

Ryff, C. D., & Keyes, C. L. M. (1995). The structure of psychological well-being revisited. *Journal of Personality and Social Psychology*, 69, 719–727. doi:10.1037/0022-3514.69.4.719

Sagiv, L., & Schwartz, S. H. (2000). Value priorities and subjective well-being: Direct relations and congruity effects. *European Journal of Social Psychology*, 30, 177–198. doi:10.1002/(SICI)1099-0992(200003/04)30:2%3C177::AID-EJSP982%3E3.0.CO;2-Z

Schwartz, S. H. (1992). Universals in the content and structure of values: Theoretical advances and empirical tests in 20 countries. *Advances in*

Experimental Social Psychology, *25*, 1–65. doi:10.1016/S0065-2601(08)60281-6

Simms, L. J. (2008). Classical and modern methods of psychological scale construction. *Social and Personality Psychology Compass*, *2*, 414–433. doi:10.1111/j.1751-9004.2007.00044.x

Shin, D. C., & Johnson, D. M. (1978). Avowed happiness as an overall assessment of the quality of life. *Social Indicators Research*, *5*, 475–492. doi:10.1007/BF00352944

Soto, C. J., & John, O. P. (2017a). The next Big Five Inventory (BFI-2): Developing and assessing a hierarchical model with 15 facets to enhance bandwidth, fidelity, and predictive power. *Journal of Personality and Social Psychology*, *113*, 117–143. doi:10.1037/pspp0000096

Soto, C. J., & John, O. P. (2017b). Short and extra-short forms of the Big Five Inventory–2: The BFI-2-S and BFI-2-XS. *Journal of Research in Personality*, *68*, 69–81. doi:10.1016/j.jrp.2017.02.004

Steel, P., Schmidt, J., & Shultz, J. (2008). Refining the relationship between personality and subjective well-being. *Psychological Bulletin*, *134*, 138–161. doi:10.1037/0033-2909.134.1.138

Suh, E., Diener, E., Oishi, S., & Triandis, H. C. (1998). The shifting basis of life satisfaction judgments across cultures: Emotions versus norms. *Journal of Personality and Social Psychology*, *74*, 482–493.

Tucker, K. L., Ozer, D. J., Lyubomirsky, S., & Boehm, J. K. (2006). Testing for measurement invariance in the Satisfaction With Life Scale: A comparison of Russians and North Americans. *Social Indicators Research*, *78*, 341–360. doi:10.1007/s11205-005-1037-5

Appendix: Riverside Life Satisfaction Scale (RLSS)

Please rate your agreement with each of the statements below. Use the 7-point scale provided.

1 = Strongly disagree
2 = Moderately disagree
3 = Slightly disagree
4 = Neither agree nor disagree
5 = Slightly agree
6 = Moderately agree
7 = Strongly agree

1. I like how my life is going.
2. If I could live my life over, I would change many things.
3. I am content with my life.
4. Those around me seem to be living better lives than my own.
5. I am satisfied with where I am in life right now.
6. I want to change the path my life is on.