BRIEF REPORT

EMPIRICAL CONTRIBUTIONS OF THE PAST IN ASSESSING MULTIDIMENSIONAL WELL-BEING

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The purpose of this brief report was to provide a preliminary evaluation of the empirical contributions of an individual's perceptions of the past in the practical assessment of multidimensional well-being. Dimensions of well-being assessed with the I COPPE Scale were interpersonal, community, occupational, physical, psychological, economic, and overall. Four hundred twenty-six participants provided responses to the I COPPE Scale and several comparison instruments. Two practical methods for creating I COPPE composite scores were compared and differed by only the inclusion (i.e., Method 1) or exclusion (i.e., Method 2) of an indicator of past well-being. Multiple-group structural equation modeling framework was used and method (i.e., Method 1 and Method 2) was the grouping variable. An individual's perceptions of the past offered negligible empirical contributions over and above an individual's perceptions of the present and future in the practical assessment of multidimensional well-being. Method 2 performed as well as Method 1. © *2014 Wiley Periodicals, Inc.*

Assessment of subjective well-being (SWB) is an important area of research in community and positive psychology (e.g., Schueller, 2009). Following the view that people construct their future outlook of SWB based on their past and present experiences (Method 1; Kilpatrick & Cantril, 1960), some measures of well-being examine life satisfaction across three distinct time points: past, present, and future (e.g., Pavot, Diener, & Suh, 1998). Another well-established method of constructing measures of SWB includes only present

Data in this brief report also were used in Prilleltensky et al. (2013).

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and future (Method 2; Healthways, Inc., 2009). Method 2 (present, future) can be viewed as a simpler version of Method 1 (past, present, and future). Both methods are used often for producing observed composite measures of SWB (e.g., Healthways, Inc.; Pavot et al., 1998). A formal empirical comparison of these two methods for constructing composite measures of SWB has yet to be reported in the literature.

A comparison of these two methods for assessing SWB can be conceptualized within a more general theory of SWB: The 3P Model (Durayappah, 2011). The 3P Model synthesized previous research and emphasized the importance (and measurement) of three temporal states: past (an individual's evaluation), present (an individual's experience), and prospect (an individual's expectation). According to the 3P Model, the past is important to an individual's SWB because it allows an individual to reminisce about (e.g., Bryant, 2003), be grateful for (e.g., Park, Peterson, & Seligman, 2004), and assign meaning in life (e.g., Steger, Kashdan, Sullivan, & Lorentz, 2008) based on previous experiences in life. Within the current study, Method 1 (past, present, and future) was more fully consistent with core tenets of the 3P Model than was Method 2 (present and future). Method 2 tacitly suggested that at least in some instances an individual's perceptions of the past may offer negligible empirical contributions over and above an individual's perceptions of the present and future in the practical assessment of SWB.

The I COPPE Scale was designed to focus respondents on their past, present, and future to obtain a comprehensive measure of SWB (Prilleltensky et al., 2013). The conceptual framework of the I COPPE Scale is based on the growing consensus that SWB is influenced by life satisfaction across various life domains (e.g., Chmiel, Brunner, Martin, & Schalke, 2012). Specifically, wellness cannot happen without the combined presence of well-being in six important domains: Interpersonal, Community, Occupational, Physical, Psychological, and Economic (Rath & Harter, 2010). These domain names (sans overall) make up the "I COPPE" acronym in the I COPPE Scale. Promoting well-being in one domain supports the promotion of well-being in all the others (Prilleltensky & Prilleltensky, 2006). The I COPPE Scale integrates and synthesizes disparate models, facets, and measures of SWB into a single instrument.

The "long" form of the I COPPE Scale has 21 items (a past, present, and future item for each of the seven domains) based on the Cantril (1965) ladder method of the Self-Anchoring Striving Scale. The long form represents Method 1 in the present study. The term "ladder" is used to denote a vertical visual analogue with interval numbered steps at each rung. Respondents are asked to rate themselves on the construct somewhere on the ladder. Conceptually, the self-anchoring scaling method taps the respondent's internal reference of what he or she considers to be the "best" and "worst" levels of satisfaction in a global or specific domain of their lives now, in the past, and in the future (Kilpatrick & Cantril, 1960). Psychometric evidence has also been provided for a reduced version of the self-anchoring method (i.e., omitting the past–Method 2), though not for the I COPPE Scale, by Healthways, Inc. (2009). Thus, a "short" form of the I COPPE Scale could omit the seven past items and create composite measures of SWB following Method 2.

The purpose of this brief report was to provide a preliminary evaluation of the empirical contributions of an individual's perceptions of the past in the practical assessment of multidimensional well-being with the I COPPE Scale. Pursuing this purpose was important due to the differences in the literature regarding the perceived, but yet to be formally tested, utility of including (Method 1) or excluding (Method 2) an individual's perceptions of the past in addition to an individual's perceptions of the present and future. Accomplishing this purpose could inform initial guidelines for administering (e.g.,

long or short form) and scoring (e.g., Method 1 or Method 2, respectively) the I COPPE Scale for subsequent use by well-being researchers.

Research Questions

Three specific research questions were investigated.

Research Question 1. What was the internal reliability for each I COPPE composite score under Method 1 and Method 2?
Research Question 2. Was the correlation matrix and the mean vector for I COPPE composite scores invariant by method?
Research Question 3. Were correlations between I COPPE composite scores and scores derived from relevant comparison instruments invariant by method?

METHOD

Participants and Procedures

Participants were 426 (214 women, 212 men; White 82.6%, African American 7.3%, Hispanic 3.1%, Asian 2.8%, Native American 2.1%, and other 2.1%) English-speaking adults who resided in the United States. These voluntary online respondents ranged from 20 to 88 years of age (mean *[M]* = 50.86, standard deviation *[SD]* = 13.57) and legally consented to participate by electronically signing the study consent form approved by our academic institution's internal review board. Upon full completion of the one-time survey battery, each respondent received a credit of $1 from the panel recruitment company that directed participants to this study's anonymous and secure survey website. A full review of the procedures is available in Prilleltensky et al. (2013). Data in this brief report also were used but at a different level (i.e., item-level) and for a different purpose in Prilleltensky et al. (2013). Aims of Prilleltensky et al. were to develop the I COPPE Scale and to examine its factorial and convergent validity within the latent variable framework.

Measures

I COPPE Scale. The scale comprised 21 items (three of which measure the overall domain). Each of the seven dimensions was measured with a unique item stem that referenced three different time periods: past, present, and future. For example, the item stem for the three physical domain items was, "When it comes to your physical health and wellness, on which number . . . ?" Responses followed Cantril's (1965) ladder scale (past: Did you stand a year ago?; present: Do you stand now?; future: Will you stand a year from now?) ranging from 0 (*worst your life can be*) to 10 (*best your life can be*).

Two methods were used for creating I COPPE composite scores and differed by only the inclusion (i.e., Method 1) or exclusion (i.e., Method 2) of an indicator of past well-being. In Method 1, and within each dimension, three items were summed and divided by three consistent with Kilpatrick and Cantril (1960). In Method 2, and within each dimension, two items (i.e., the past item was omitted) were summed and divided by two consistent with Healthways, Inc. (2009).

Comparison measures. A comparison composite for each dimension of well-being measured by the I COPPE Scale was provided by an established scale. The Social Connectedness Scale-Revised (Lee, Draper, & Lee, 2001) provided the comparison measure for interpersonal well-being. The Brief Sense of Community Scale (Peterson, Speer, & McMillan, 2008) provided the comparison measure for community well-being. The Abridged Job in General Scale (Stanton et al., 2002) provided the comparison measure for occupational well-being. The Short-Form Health Survey (Ware, Kosinski, & Keller, 1996) provided the comparison measure for physical well-being. The Flourishing Scale (Diener et al., 2009) provided the comparison measure for psychological well-being. The Personal Financial Well-being Scale (Prawitz et al., 2006) provided the comparison measure for economic well-being. The Satisfaction with Life Scale (Diener, Emmons, Larsen, & Griffin, 1985) provided the comparison measure for overall well-being.

Investigating the Research Questions

Research Question 1. Cronbach's (1951) alpha, α, was estimated for each of the seven I COPPE composite scores under both Method 1 and Method 2.

Research Questions 2 and 3. Multiple-group structural equation modeling (Sörbom, 1974) was used and method was the grouping variable (g). The form of the model was as follows:

$$\boldsymbol{y}^{g}_{p\text{x}1} = \boldsymbol{\nu}^{g}_{p\text{x}1} + \boldsymbol{\Lambda}^{g}_{p\text{x}m}\boldsymbol{\eta}^{g}_{m\text{x}1} + \boldsymbol{\varepsilon}^{g}_{p\text{x}1} \tag{1}$$

The baseline model was saturated, degree of freedom *[df]* = 0, and 119 parameters (14 intercepts, ν, equal to I COPPE composite and comparison measure means; 14 pattern coefficients, λ; and 91 correlations among the 14 continuous latent variables, ψ, equal to observed correlation matrix for I COPPE and comparison measure composites) were freely estimated in each group. Measurement error, θ, was fixed to 0. The variance for each latent variable was fixed to 1. Both the syntax and a diagram for each model is available upon request to the lead author.

To investigate the second research question, a simpler model, $\Delta df = 28$, constrained the seven I COPPE means and the 21 correlations among the seven I COPPE composites to equality by group. To investigate the third research question, a simpler model, $\Delta df = 7$, constrained the seven correlations among I COPPE composites and the relevant comparison measure to equality by group. Models were fit in Mplus 7 (Muthén & Muthén, 1998–1998) under maximum likelihood robust (MLR) estimation. Nested models were compared with the change in the likelihood ratio χ^2 (robust) test, $\Delta\chi^2_R$.

RESULTS

Research Question 1

As displayed in Table 1, α for each I COPPE composite was ≥ .87 and never decreased under Method 2 as compared to Method 1. The reason that α never decreased under Method 2 was that within each composite the largest bivariate correlation between relevant

Table 1. Reliability for I COPPE Well-Being (WB) Composite Scores by Method and Item-Level Correlations and Means

	α		*Item-level correlations*			*Item-level means (standard deviations)*		
	Method 1	*Method 2*	*Present with future*	*Past with present*	*Past with future*	*Past*	*Present*	*Future*
I COPPE WB measures								
1. Overall_WB	.87	.89	.80***	.71***	.57***	6.21 (2.08)	6.25 (2.14)	6.82 (2.25)
2. Interpersonal_WB	.91	.92	.84***	.80***	.69***	7.24 (2.21)	7.33 (2.24)	7.63 (2.22)
3. Community_WB	.93	.94	.88***	.83***	.74***	6.60 (2.21)	6.63 (2.21)	6.88 (2.29)
4. Occupational_WB	.92	.93	.86***	.79***	.71***	6.10 (2.86)	6.16 (2.95)	6.64 (2.93)
5. Physical_WB	.89	.89	.80***	.77***	.59***	6.52 (2.13)	6.53 (2.17)	6.98 (2.30)
6. Psychological_WB	.89	.91	.83***	.73***	.65***	6.74 (2.26)	6.89 (2.36)	7.38 (2.30)
7. Economic_WB	.87	.87	.77***	.72***	.57***	5.83 (2.42)	5.75 (2.55)	6.38 (2.58)

***$p < .001$.

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pairs of I COPPE items always was between the present and future items (see Table 1). Interestingly, the same rank ordering between the three pairs of bivariate correlations emerged within each composite: the largest correlation was between the present and future items, while the smallest correlation was between the past and the future items. Thus, the inclusion of an individual's past perception of well-being appeared to offer no additional empirical contribution with regard to the internal consistency of I COPPE composite scores.

Research Question 2

Table 2 provided the correlation matrix and the mean vector of I COPPE composite scores by method. The simpler model did not exhibit statistically significantly worse fit than the baseline model, $\Delta\chi^2_R(28) = 2.34$, $p \approx 1.00$, which provided evidence for the invariance of the correlation matrix and the mean vector of I COPPE composite scores by method. (Constraining the mean vector to equality in isolation also did not exhibit statistically significantly worse fit than the baseline model, $\Delta\chi^2_R\ (7) = 0.97$, $p = .971$). Thus, the inclusion of an individual's past perception of well-being appeared to offer no additional empirical contribution with regard to means for, or correlations among, I COPPE composites. The simpler model served as the baseline model for Research Question 3.

Research Question 3

Table 2 provided the correlation matrix between I COPPE composite scores and comparison measures by method. The simpler model did not exhibit statistically significantly worse fit than the baseline model, $\Delta\chi^2_R\ (7) = 0.28$, $p = 1.00$, which provided evidence for the invariance of the correlations between I COPPE composites scores and scores derived from relevant comparison instruments invariant by method. Thus, the inclusion of an individual's past perception of well-being appeared to offer no additional empirical contribution with regard to correlations between I COPPE composite scores and relevant comparison measures.

DISCUSSION

The purpose of this brief report was to provide a preliminary evaluation of the empirical contributions of an individual's perceptions of the past in the practical assessment of multidimensional well-being with the I COPPE Scale. More specifically, two practical methods for creating I COPPE composite scores were compared. These methods differed only by the inclusion (i.e., Method 1) or exclusion (i.e., Method 2) of an indicator of past well-being. Method 2 ("short" form of I COPPE Scale) appeared to perform as well as Method 1 ("long" form of I COPPE Scale). There are limits, however, to the preliminary evidence provided.

The I COPPE Scale was designed to focus respondents on their past, present, and future to obtain a comprehensive measure of SWB (Prilleltensky et al., 2013). However, within the broader SWB literature, there are differing views regarding the utility of including or excluding an individual's perceptions of past well-being, in addition to an individual's perceptions of present and future well-being. These differing views give rise

Table 2. Descriptive Statistics for I COPPE Well-Being (WB) Composite Scores by Method 1 and Method 2

	I COPPE composites						
	1	*2*	*3*	*4*	*5*	*6*	*7*
I COPPE WB measures	*Interfactor correlation matrices*						
1. Overall_WB	—						
2. Interpersonal_WB	.57(.58)***	—					
3. Community_WB	.60 (.61)***	.52 (.53)***	—				
4. Occupational_WB	.70 (.72)***	.47 (.49)***	.53 (.52)***	—			
5. Physical_WB	.74 (.74)***	.41 (.42)***	.49 (.50)***	.59 (.59)***	—		
6. Psychological_WB	.75 (.77)***	.56 (.57)***	.60 (.60)***	.67 (.68)***	.68 (.70)***	—	
7. Economic_WB	.73 (.73)***	.46 (.47)***	.59 (.60)***	.63 (.64)***	.59 (.59)***	.64 (.65)***	—
M	6.43 (6.54)	7.40 (7.48)	6.71 (6.76)	6.30 (6.40)	6.68 (6.76)	7.00 (7.13)	5.99 (6.07)
SD	1.92 (2.08)	2.05 (2.14)	2.09 (2.17)	2.69 (2.83)	1.98 (2.12)	2.09 (2.22)	2.24 (2.41)
Comparison measures	Correlation matrices						
Overall, α = .92	.71 (.72)***	.54 (.53)***	.53 (.53)***	.60 (.60)***	.59 (.58)***	.68 (.67)***	.65 (.64)***
Interpersonal, α = .95	.45 (.49)***	.44 (.44)***	.51 (.51)***	.41 (.44)***	.37 (.39)***	.54 (.54)***	.41 (.41)***
Community, α = .93	.40 (.38)***	.27 (.26)***	.58 (.58)***	.32 (.31)***	.29 (.28)***	.38 (.36)***	.44(.42)***
Occupation, α = .91	.46 (.48)***	.25 (.26)***	.37 (.37)***	.57 (.58)***	.40 (.41)***	.44 (.45)***	.45 (.47)***
Physical, α = .92	.32 (.30)***	.09 (.10)	.11 (.12)*	.26 (.26)***	.58 (.58)***	.19 (.19)***	.15 (.15)**
Psychological, α = .92	.59 (.63)***	.47 (.48)***	.52 (.52)***	.56 (.59)***	.52 (.55)***	.62 (.64)***	.53(.54)***
Economic, α = .95	.51 (.51)***	.29 (.27)***	.41 (.40)***	.45 (.47)***	.37 (.35)***	.48 (.47)***	.70 (.70)***

Note. M = mean; SD = standard deviation.
*$p < .05$. **$p < .01$. ***$p < .001$.

to two different sets of guidelines regarding administration (e.g., long or short form) and scoring (e.g., Method 1 or Method 2, respectively) of the I COPPE Scale.

Results from the current study suggest that an individual's perceptions of the past, at least in some circumstances, may offer negligible empirical contributions over and above an individual's perceptions of the present and future in the practical assessment of multidimensional well-being. Thus, in circumstances similar to those observed in this study, administering the short form of the I COPPE Scale (i.e., omitting past items) and scoring responses consistent with the approach taken by Healthways, Inc. (2009) appears reasonable and efficient. This is not to say that administering the long form of the I COPPE Scale, and scoring it consistent with the approach taken by Kilpatrick and Cantril (1960), is unreasonable, but rather may be less efficient.

The potential lack of efficiency in Method 1 as compared to Method 2 may be due to the fact that the most salient temporal state for an individual's SWB may be the present (Durayappah, 2011), which is common to both methods. According to the 3P Model (Durayappah, 2011), "The present seems to be the most important temporal state for our happiness because most often thoughts of the present steal our attention and thus are the most salient and accessible" (p. 688). The present may be especially important (at least in some cases) to an individual's SWB because it allows an individual to experience related emotions (e.g., Diener, Suh, Lucas, & Smith, 1999), engagement activities (e.g., Peterson, Park, & Seligman, 2005), and a host of intrapersonal psychological variables (e.g., Ryan & Deci, 2000) in real-time. It should be noted, however, that within the same paragraph, Durayappah (2011) warns that "present thoughts alone cannot equate to global evaluations of life satisfaction" (p. 688).

Primary limits for evidence provided in this brief report include a particular measure of SWB, sample characteristics, a nonexhaustive comparison of possible methods to form composites, and the comparison measures included. The I COPPE Scale is one of many instruments designed to measure SWB. The results in this report with regard to the empirical contribution of the past may not generalize to other related instruments, especially those with a stronger focus on time (e.g., The Temporal Satisfaction with Life Scale; Pavot et al., 1998). The United States-based sample in this study was predominately middle-aged and White. The results in this report with regard to the empirical contribution of the past may not generalize to other groups, especially with regard to mean differences by age groups (Pavot et al., 1998) and/or systematic differences in temporal preference (Durayappah, 2011). We compared only two methods for forming composites. Future research that compares other theoretically meaningful ways to form composites (e.g., omitting the future) may be worthwhile.

Finally, the comparison instruments used in the current study represent only a small fraction of the possible theory-based variables with which SWB may be expected to relate. Clearly there may be circumstances where including the past items may prove to be crucial (e.g., studies of immigration and studies childhood trauma). This study should be viewed as an initial and preliminary step in the practical assessment of multidimensional SWB.

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