VALIDATION OF THE REVISED SENSE OF PURPOSE SCALE WITH EMERGING ADULTS

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This study focused on the validation of the Revised Sense of Purpose Scale (SOPS-2) with emerging adults. We used a sample of 681 college students aged between 18 and 25 years old. The results provided evidence for the factorial validity of the SOPS-2 designed to measure awareness of purpose, awakening to purpose, and altruistic purpose. The SOPS-2 can be used as a valid and reliable measure of sense of purpose among those in the age group of 18–25 years.

The developmental period from 18 to 25 years of age—during which many young people leave the dependency of childhood and adolescence and explore future life directions—has been designated as emerging adulthood (Arnett, 2000). According to Arnett (2000), "emerging adulthood is a time of life when many different directions remain possible, when little about the future has been decided for certain, when the scope of independent exploration of life's possibilities is greater for most people than it will be at any other period of the life course" (p. 469). The time period of emerging adulthood also overlaps with the phase of late adolescence (18 to 20 years). The explorations of late adolescence and emerging adulthood can cause feelings of rejection, fear of failure, lack of confidence, disappointment, and disillusionment, resulting in at-risk behaviors (Arnett, 2000). According to Damon (2008), the difference between young people who feel directionless and stalled in their development and those who feel engaged and motivated can be explained by whether they have found a compelling sense of purpose in life. Research has also shown that a strong sense of purpose contributes to emerging adults' identity commitment, hope, positive affect, and future well-being (Burrow, O'Dell, & Hill, 2010; Hill, Burrow, Brandenberger, Lapsley, & Quaranto, 2010; Hill, Edmonds, Peterson, Luyckx, & Andrews, 2016).

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Although purpose in emerging adulthood has been positively associated with several indicators of positive development, existing measures of purpose are limited in their conceptual clarity, time sensitivity, and psychometric research. Thus, validating a conceptually and empirically sound measure of sense of purpose among those in the age group of 18 to 25 years, could contribute to the literature on the nature, role, and development of sense of purpose among emerging adults. The aim of this study was to validate the Revised Sense of Purpose Scale (SOPS-2; Yukhymenko & Sharma, 2017) with emerging adults aged 18 to 25 years. SOPS-2 consists of three subscales: awareness of purpose, awakening to purpose, and altruistic purpose subscales. These subscales were informed by Bronk's (2013) emphasis of both the *presence of* and *search for* purpose as well as Damon, Menon, and Bronk's (2003) conceptualization of purpose that emphasizes a beyond-the-self aim. Damon et al. (2003) defined purpose as a "stable and generalized intention to accomplish something that is at once meaningful to the self and of consequence to the world beyond the self" (p. 121). Many scholars, including Damon (2008), have used the terms "purpose" and "sense of purpose" interchangeably. We consider "purpose" as the ultimate goal of life and "sense of purpose" as subjective sense of whether one has a purpose in life and the extent to which one is aware of his/her purpose; in this manuscript we have used the terms interchangeably.

REVIEW OF EXISTING MEASURES OF PURPOSE AND THEIR LIMITATIONS

Several instruments have been designed to measure purpose. For example, Crumbaugh and Maholick (1964) developed the Purpose in Life test to measure the degree to which individuals experience a sense of purpose in life. The Purpose in Life test is critiqued for being confounded with variables unrelated to purpose, such as sense of responsibility and mood (Zika & Chamberlain, 1992). Reker and Peackock (1981) developed the Life Attitude Profile. This scale includes a subscale titled life purpose scale, which has nine items that focus on the concepts of zest for life, fulfillment, contentment, and satisfaction as well as purpose in life (Reker & Peackock, 1981), and, hence, could capture any of these constructs (Steger, Frazier, Oishi, & Kaler, 2006). Most recently, Bundick et al. (2006) developed the Revised Youth Purpose Survey to measure purpose among younger participants. However, as of now, this survey lacks empirical evidence for psychometric soundness (Bronk, 2013).

In addition to being confounded with other variables, lacking psychometric evidence, and not being based on a clear conceptualization of purpose, a key limitation of current measures is that they all are time-insensitive and only assess the absolute presence or absence of sense of purpose, instead of recent changes in sense of purpose (Scheier et al., 2006). According to Card (2017), when exploring constructs related to character development, it is critical to use measures that are sensitive to potential changes across development or an intervention. Sharma (2015) addressed these limitations of existing purpose measures by developing and validating the Sense of Purpose Scale.

THE REVISED SENSE OF PURPOSE SCALE (SOPS-2)

Based on an integrative literature review, Sharma (2015) generated an initial pool of items and conducted a pilot study to test these items, resulting in 28 items and three factors to measure sense of purpose. Based on the pilot study and further literature review, Sharma (2015) performed content and construct validation to test a revised 30-item scale with a sample of volunteer undergraduate students aged 18–28 years who were enrolled in two large public universities located on the East

Coast of the United States (Sharma, 2015). The results from further exploratory factor analysis of the Sense of Purpose Scale showed that 17 items loaded on three factors of sense of purpose (awareness of purpose, altruistic purpose, and awakening to purpose) and explained a total of 52.3% of the variance (Sharma, Yukhymenko-Lescroart, & Kang, 2017).

Yukhymenko-Lescroart and Sharma (2017) subsequently conducted a multistudy to revise and validate the Sense of Purpose Scale, creating the Revised Sense of Purpose Scale (SOPS-2). The multistudy included a total sample of 1,210 adults across four substudies (mean age ranged from 32.75 to 49.71 years) and provided evidence of reliability and validity. The authors specifically: (a) conducted content validation of the scale, (b) tested its multidimensional factorial structure by using confirmatory factor analysis (CFA), and (c) evaluated convergent and divergent validity of the SOPS-2 subscales with respect to presence of meaning, search for meaning, compassion, positivity, humility, moral identity, self-esteem, pride, and regret. The resulting SOPS-2 contains 14 items and is a multidimensional scale with three subscales: awareness of purpose, awakening to purpose, and altruistic purpose.

The awareness of purpose subscale assesses the extent to which individuals are clear and confident about their purpose in life (Sharma et al., 2017). In contrast, the awakening to purpose subscale consists of items with stems such as "I am gaining," "I am awakening," and "recent activities are helping" to assess changes in an individual's clarity about their purpose in life as well as the efforts being made to awaken to that purpose (Sharma et al., 2017). The altruistic purpose subscale assesses the "desire to make a positive difference in the world" (Sharma et al., 2017, p. 8). In accordance with Damon et al.'s (2003) conceptualization of purpose that emphasizes an intention to accomplish something of consequence to the world beyond the self, this subscale was designed to capture the intention to positively contribute to society. It is important to note that Damon et al. (2003) emphasized that the dimension of impacting the world beyond the self might not be always altruistic in nature. In fact, the concept of "beyond the self" could refer to a positive or negative impact on society. However, research has shown that compared to other types of purpose, altruistic purpose contributes to more positive developmental outcomes (Bronk & Finch, 2010), well-being (Hill, Burrow, O'Dell, & Thornton, 2010), and life satisfaction (Bronk & Finch, 2010). Therefore, Sharma et al. (2017) emphasized the importance of assessing aspirations to make a positive difference in the society and included an altruistic purpose subscale in the SOPS-2.

RATIONALE FOR VALIDATING SOPS-2 IN EMERGING ADULTS

There are several reasons to believe that the factorial, criterion, and discriminant validity of SOPS-2 would look different for emerging adults than older adults. One of the reasons is that during emerging adulthood, young people are still in the process of exploring who they are and their long-term aspirations. Although Erikson (1950), the stage of identity versus role confusion (12 to 18 years) as a milestone of adolescence, Arnett (2000) has argued that societal changes have led to youth making important life decisions and continuing to develop a sense of identity in emerging adulthood (18 to 25 years). During the stage of identity vs. role confusion, adolescents explore their values, beliefs, goals, sense of self, and purpose in life (Erikson, 1968). Burrow et al. (2010) found that, in alignment with Marcia's (1996) theory of four identity statuses, there are four profiles of youth purpose: achieved, foreclosed, uncommitted, and diffused. The findings also showed that youth with greater purpose exploration scored higher on identity exploration. Though this research was primarily focused on adolescents, we would assume similar pattern for emerging adults who are

also undergoing identity development processes. However, more empirical studies are required to analyze the relationship between identity stages and sense of purpose among emerging adults.

Erikson (1950) indicated that the stage intimacy vs. isolation was a key feature of adulthood (18 to 40 years). During the stage of intimacy vs. isolation, emerging adults aspire to form intimate, loving, and lasting relationships with others (Erikson, 1950). Erikson (1968) stated that to establish healthy intimate relationships, it is important to have a strong sense of self. For young adults, higher scores on identity achievement have been related to greater autonomy and affiliation (Orlofsky, Marcia, & Lesser, 1973). Therefore, supporting emerging adults to develop a strong sense of purpose and identity might also support their ability to develop healthier relationships.

In sum, purpose has a unique relationship to the developmental milestones of emerging adulthood. Similar to adolescents, emerging adults are still developing a strong sense of who they are and making critical future decisions (Arnett, 2000; Erikson, 1968). Thus, sense of purpose in emerging adulthoods might differ from older adults who are more likely to have already explored and identified their purpose in life.

PURPOSE OF THE PRESENT STUDY

The first objective of this study was to test factorial validity of the SOPS-2 with a sample of 18 to 25 year old college students. To determine whether factorial validity of the scale was established, we conducted a CFA. A CFA is appropriate when the structure of the scale is known. In the study with adults, Yukhymenko-Lescroart and Sharma (2017) showed that the 14-item SOPS-2 consists of three factors (5-item awareness of purpose, 5-item altruistic purpose, and 4-item awakening to purpose), which provided the rationale for conducting CFA in this study.

The second purpose of this study was to establish criterion validity of the SOPS-2. Following Sharma et al. (2017) and Yukhymenko-Lescroart and Sharma (2017), we tested criterion validity of the SOPS-2 by exploring associations between the three SOPS-2 subscales and the two subscales of the Meaning in Life Questionnaire (MLQ, Steger et al., 2006), the presence of meaning and the search for meaning, and the Santa Clara Compassion Scale (Hwang, Plante, & Lackey, 2008). We selected these two scales because the literature suggests that meaning and purpose are closely related but distinct constructs. For instance, Baumeister (1991) suggested that to experience a sense of meaning in life, people fulfill four basic needs: purpose, value, efficacy, and self-worth. Also, altruistic purpose is closely related to feelings of generosity and compassion (Mariano & Savage, 2009). Therefore, a significant correlation between these scales and SOPS-2 subscales would provide evidence for convergent validity. In this study, we expected to see similar patterns of correlations between these measures as they were reported in previous studies (Sharma et al., 2017; Yukhymenko-Lescroart & Sharma, 2017). We hypothesized that all correlations would be positive and significant, and that altruistic purpose would be most strongly correlated with compassion; awareness of purpose would be most strongly correlated with presence of meaning; and awakening to purpose would be most strongly correlated with search for meaning.

The third aim of this study was to test measurement invariance across demographic groups that could be related to differences in experience of purpose. For example, in the context of gender, Crose, Nicholas, Gobble, and Frank (1992) suggested that men might develop sense of purpose through work and achievement, whereas women's life purpose might be more relationship oriented. With regard to academic year or age, Moran (2009) found that the clarity as well as beyond the self nature of purpose increases from the period of adolescence to young adulthood. According to

Watt (2015), people often seek answers to existential questions on meaning and purpose in the context of race. Based on a phenomenological study, Sharma and De Alba (2018) found that participants' cultural background and ethnic identity informed the nature of their purpose in life. For example, participants from minority backgrounds described their purpose in the context of a desire to prove stereotypes against their group wrong and become role models for other minority youth. We sought to explore the measurement invariance across these groups to determine whether the SOPS-2 could be used to explore differences in purpose experiences by demographic groups.

METHODS

Participants

The participants were recruited from a public institution, which is designated as a Hispanic Serving Institution and an Asian American Native American Pacific Islander-Serving Institution. We sent an email requesting all the department assistants to forward a survey link to all the part-time and full-time students in their departments. A sample of 681 participants (76.4% female) aged between 18 and 25 years old (M = 21.2, SD = 2.1) provided responses to the set of scales. Participants identified their race and ethnicity as Hispanic or Latino (41.4%), White (28.8%), Asian or Pacific Islander (15.7%), Black or African American (3.1%), and "other" or multiethnic (10.9%), which reflects the student body at this institution as suggested by the Office of Institutional Effectiveness. The sample included 585 undergraduate students (83.4%), particularly, 115 freshmen (16.9%), 107 sophomores (15.7%), 175 juniors (25.7%), and 171 seniors (25.1%), as well as 102 graduate students (15.0%) and 11 "other" (students pursuing teaching credentials). Compared to the student body at this university, females were overrepresented in our sample, $\chi^2(1, N = 673) = 96.65$, $p < .001$. Additionally, seniors were underrepresented and juniors and postbaccalaureate students were overrepresented in our sample, $\chi^2(4, N = 681) = 36.42$, $p < .001$.

Measures

Sense of Purpose Scale. Participants completed the SOPS-2 (Yukhymenko-Lescroart & Sharma, 2017), designed to measure awareness of purpose (five items, *My purpose in life is clear*), altruistic purpose (five items, *I seek to help others*), and awakening to purpose (four items, *I am gaining clarity about my life's purpose*). The reliability of these subscales will be reported in the results section.

As reported by Sharma et al. (2017), the first factor, titled awareness of purpose, captures the extent to which people are aware of their purpose in life and moving toward fulfillment of their life's purpose. This scale has items such as "my purpose in life is clear" that assesses how clear or certain people are of their purpose in life. The second factor, titled altruistic purpose, captures participants' aspiration to make a positive difference in the world or the altruistic nature of their purpose in life. This scale has items such as "I seek to help others" that also examine people's general orientation toward benevolent behavior. The items of the third factor, titled awakening to purpose, were developed with the goal of assessing whether participants are actively engaging in the process of exploring their life's purpose and formulating long-term goals that resonate with their purpose. An example from these items is "I am gaining clarity about my life's purpose." Participants indicated their agreement with each item on a 7-point scale ranging from 1 *(strongly disagree)* to 7 (*strongly agree*).

Meaning in Life Questionnaire. We used the Meaning in Life Questionnaire (MLQ; Steger et al., 2006) to measure the construct of meaning. Steger et al. (2006) defined meaning in life as "the sense made of, and significance felt regarding, the nature of one's being and existence" (p. 81). The MLQ has two subscales: presence of meaning (MLQ-P) and search for meaning (MLQ-S). The MLQ-P subscale consists of five items, such as "*My*

life has a clear sense of purpose." The MLQ-S subscale consists of five items, such as "*I am seeking a purpose or mission for my life*." The alpha coefficients for the presence of meaning subscale in this study was .92, and for the search for meaning subscale was .88. Participants indicated their agreement with each item on a 7-point scale ranging from 1 *(absolutely untrue*) to 7 *(absolutely true).*

Santa Clara Brief Compassion Scale. We administered the Santa Clara Brief Compassion Scale (Hwang et al., 2008), an abbreviated version of Sprecher and Fehr's (2005) Compassionate Love Scale. Sprecher and Fehr (2005) defined compassionate love as love that encompasses "feelings, cognitions, and behaviors that are focused on caring, concern, tenderness, and an orientation toward supporting, helping, and understanding the other(s)" (p. 630). The Santa Clara Brief Compassion Scale consists of five items such as "*I tend to feel compassion for people, even though I do not know them*." The alpha coefficient for the scale in this study was .88. Participants indicated their agreement with each item on a 7-point scale ranging from 1 *(not at all true of me)* to 7 *(very true of me)*.

Procedure

After receiving approval according to university procedures and policies, we sent emails to instructors in the departments of education and counseling, asking them to forward the invitation to participate in the anonymous online survey to their students. The online anonymous survey comprised of the ethical guidelines associated with present study, informed consent, above-mentioned scales, and questions related to participants' demographic background. There was no compensation for participating in this study.

Data Analysis

First, we performed CFA to confirm the factorial structure of the SOPS-2 scale. We followed the recommendations of Hu and Bentler (1999) and evaluated the model fit based on a combination of several indices, including root-mean square error of approximation (RMSEA), standardized root mean square residual (SRMR), comparative fit index (CFI), and Tucker-Lewis index (TLI). Hu and Bentler (1999) recommended a cutoff value close to .95 for CFI and TLI, close to .08 for SRMR, and close to .06 for RMSEA. Additionally, we explored the chi-square to degrees of freedom ratio, which we compared to the conservative cutoff of 2.0. We also examined item loadings following Hair, Black, Babin, and Anderson (2010), who recommended that the standardized loadings should be .50 or above (ideally .70 or above).

Next, we examined construct validity based on reliability, extracted variance, and correlations between factors, as outlined in Hair et al. (2010, p. 673). First, reliability was assessed based on construct reliability (CR) using the formula of McDonald's (1970) omega (also see Hair et al., 2010, p. 687). The CR value of .70 or higher suggests good internal reliability (Hair et al., 2010, p. 687). We also supplemented reliability analyses with interitem correlations (IIC) for each subscale. Second, we explored the values of average variance explained (AVE), which shows the degree that a latent variable is explained by its observed variables. The AVE values of .50 or greater indicate convergent validity. AVE values greater than the square of the correlation between the two factors indicate discriminant validity.

To further assess factorial validity of the SOPS-2, we engaged in a series of tests of measurement invariance. Measurement invariance suggests that items of a scale are unbiased and that the response to items depends on the value of the variable rather than the group membership. We tested invariance for groups across gender (male and female), race/ethnicity (White, Hispanic/Latino, and Other), and academic year (freshman, sophomore, junior, senior, and graduate). First, we established baseline models for each subgroup, followed by a sequence of more restrictive models. Invariance testing was performed for equality of factor patterns (configural invariance), fac-

tor loadings (metric invariance), and item intercepts (scalar invariance). Measurement invariance was established when the model fit of each progressively restricted model did not change considerably compared to the preceding model. Following recommendations in the literature (Chen, 2007), we compared the models based on changes in CFI, TLI, and RMSEA. While our sample size was large (i.e., more than 300), our subgroups were not equal, therefore, we used the following cutoff values: a change of less than .005 for CFI, supplemented by a change of less than .01 in RMSEA and .025 in SRMR for testing metric invariance and a change of less than .005 for CFI, supplemented by a change of less than .01 in RMSEA and .005 in SRMR for testing scalar invariance (Chen, 2007).

Finally, we examined criterion validity of the data based on the correlations between the SOPS-2 subscales with the three latent factors of presence of meaning in life, search for meaning in life, and compassion, using a CFA model. We expected to see positive correlations, particularly, relatively higher correlations between awareness of purpose and presence of meaning, between awakening to purpose and search for meaning, and between altruistic purpose and compassion. The analyses were performed in Mplus 8.0 (Muthen & Muthen, 1998–2017), using maximum likelihood estimation method with robust standard errors.

RESULTS

Confirmatory Factor Analysis

The 14 SOPS-2 items were specified as indicators of their intended factors of awareness of purpose (five items), altruistic purpose (five items), and awakening to purpose (four items). The results showed a good model fit to the data: $\chi^2(74, N = 681) = 171.24, p < .001, \chi^2/df = 2.31$, scaling correction factor = 1.418, CFI = .977, TLI = .972, RSMEA = .044, 90% CI [.035, .053], SRMR = .034. Modification indices did not indicate any revisions to the model, which would substantially improve the model fit and be conceptually justified. Item loadings were all significant and ranged from .85 to .90 for awareness of purpose, from .72 to .81 for altruistic purpose, and from .66 to .84 for awakening to purpose. Table 1 shows factor loadings.

TABLE 1
Factor Loadings for the SOPS-2 Items, $N = 681$

Subscale and Items	*Estimate*	*SE*
AWR: My purpose in life is clear.	0.85	0.02
AWR: I am certain about my life's purpose.	0.90	0.02
AWR: I feel confident about my life's purpose.	0.90	0.01
AWR: I can describe my life's purpose.	0.86	0.02
AWR: I have a clear understanding of my life's purpose.	0.87	0.02
ALT: I aspire to make a positive difference in my community.	0.81	0.02
ALT: I seek to help others.	0.74	0.03
ALT: I seek to serve society in many ways, large and small.	0.80	0.02
ALT: I want to spend my life making a positive impact on others.	0.79	0.02
ALT: I make efforts to promote other people's well-being.	0.72	0.03
AWK: I am awakening to my life's ultimate goal.	0.82	0.02
AWK: I am gaining clarity about my life's purpose.	0.84	0.02
AWK: I am gaining understanding about the deeper purpose of my life.	0.83	0.02
AWK: Recent activities are helping me to awaken to my life's purpose.	0.66	0.03

Notes: *SE* = standard error; AWR = awareness of purpose; ALT = altruistic purpose; AWK = awakening to purpose.

Construct Validity: Reliability, Extracted Variance, and Correlations

Construct reliability values were reasonable and all above the recommended value of .70: .94 for awareness of purpose, .88 for altruistic purpose, and .87 for awakening to purpose, indicating good reliability of each subscale. Interitem correlations (IIC) were between .72 and .81 (IIC: $M = .77$, $SD = .03$) for awareness of purpose, between .56 and .67 (IIC: $M = .60$, $SD = .04$) for altruistic purpose, and between .55 and .69 (IIC: $M = .62$, $SD = .06$) for awakening to purpose.

The latent correlations were $r(679) = .51$, $p < .001$, 95% CI [.43, .59] between awareness of purpose and altruistic purpose, $r(679) = .80$, $p < .001$, 95% CI [.75, .86] between awareness of purpose and awakening to purpose, and $r(679) = .57$, $p < .001$, 95% CI [.50, .64] between awakening to purpose and altruistic purpose.

The values of average variance extracted (AVE) were at or above the recommended norm of .50: .77 for awareness of purpose, .60 for altruistic purpose, and .50 for awakening to purpose. Comparing the AVE values to squared correlations showed that the squared correlation between awareness of purpose and altruistic purpose (.26) was lower than the corresponding AVE values (.77 and .60). The squared correlation between awareness of purpose and awakening to purposes (.64) was lower than the AVE value for the awareness subscale (.77) but slightly higher than the AVE value for the awakening subscale (.62). Finally, the squared correlation between awakening and altruistic purpose (.32) was lower than the corresponding AVE values (.62 and .60).

Because the correlation between awareness of purpose and awakening to purpose was high, an alternative 2-factor model was tested, in which items of awareness and awakening were specified as indicators of the same factor. The results showed that this model had a marginal fit: $\chi^2(76, N = 681) = 461.86, p < .001, \chi^2/df = 6.08$, scaling correction factor = 1.434, CFI = .909, TLI = .891, RSMEA = .086, 90% CI [.079, .094], SRMR = .060, which was also a significantly worse fit compared to the model presented in Table 1: $\chi^2 (2, N = 681) = 207.79$, $p < .001$. These results suggested that the 3-factor model was more appropriate for these data.

Factorial Validity: Measurement Invariance

To explore measurement invariance by gender (male and female), race/ethnicity (White, Hispanic/Latino, and Other), and academic year (freshman, sophomore, junior, senior, graduate), the measurement models were first established separately for each of these groups. The models showed reasonable fits to the data for these groups (see Table 2). All factor loadings were significant. Examination of modification indices did not reveal any changes justified conceptually. Therefore, measurement invariance was examined starting with the least restrictive model (configural).

Table 2 shows the results for model fit for each group as well as configural, metric, and scalar measurement invariance across gender (male and female), three groups of race/ethnicity (White, Hispanic/Latino, and Other), and academic year (freshman, sophomore, junior, senior, graduate). The data showed that the SOPS-2 was invariant across these subgroups as indicated by changes of less than .005 for CFI, less than .01 for RMSEA between configural and metric models and between metric and scalar models. The change in SRMR values were less than .025 for invariance testing across gender and race/ethnicity, and slightly over for testing metric across the academic year (i.e., .027). The changes in SRMR values were all less than .005 for testing scalar invariance. These results showed that factor loadings (configural), factor patterns (metric), and item intercepts (scalar) were generally equivalent for students of different academic year, for both genders, and for different race/ethnic backgrounds; thus, establishing the factorial validity of the scale.

TABLE 2
Measurement Invariance Across Gender, Educational Level, and Race/Ethnicity ($N = 681$)

Model	χ^2	*df*	χ^2/df	*CFI*	*RMSEA*	*90% CI*	*SRMR*
			Gender				
Males, $n = 153$	107.75	74	1.46	.967	.055	[.030, .076]	.046
Females, $n = 520$	168.15	74	2.27	.972	.049	[.040, .059]	.036
Configural invariance	279.39	148	1.89	.971	.051	[.042, .061]	.038
Metric invariance	298.17	159	1.88	.969	.051	[.042, .060]	.057
Scalar invariance	314.88	170	1.85	.968	.050	[.042, .059]	.059
			Race/Ethnicity				
Hispanic/Latino, $n = 276$	121.75	74	1.65	.974	.048	[.032, .063]	.039
White, $n = 192$	97.59	74	1.32	.981	.041	[.012, .061]	.049
Other, n =199	114.35	74	1.55	.971	.052	[.032, .071]	.050
Configural invariance	333.55	222	1.50	.975	.048	[.037, .058]	.046
Metric invariance	363.45	244	1.49	.973	.047	[.037, .057]	.070
Scalar invariance	397.77	266	1.50	.971	.047	[.037, .057]	.073
			Academic Year				
Freshman, $n = 115$	131.99	74	1.78	.940	.083	[.059, .105]	.052
Sophomore, $n = 107$	119.12	74	1.61	.942	.075	[.049, .100]	.059
Junior, $n = 175$	107.34	74	1.45	.973	.051	[.027, .071]	.047
Senior, $n = 171$	89.86	74	1.21	.985	.035	[0, .059]	.041
Graduates, n = 102	116.38	74	1.57	.951	.075	[.047, .100]	.059
Configural invariance	563.03	370	1.52	.961	.062	[.052, .073]	.050
Metric invariance	596.25	414	1.44	.963	.057	[.047, .067]	.077
Scalar invariance	643.99	458	1.41	.962	.055	[.045, .065]	.080

Notes: Configural = invariance of factor patterns; metric = invariance of factor loadings; scalar = invariance of item intercepts.

Criterion Validity

Criterion validity was established based on the correlations between the SOPS-2 subscales with the three latent factors of presence of meaning in life, search for meaning in life, and compassion, using a CFA model. The 14 items were specified as indicators of the intended factors of awareness of purpose, altruistic purpose, and awakening to purpose; additionally, the five presence of meaning in life items, the five search for meaning in life items, and the five compassion items were specified as indicators of their intended factors. The 6-factor model showed an adequate fit to the data: $\chi^2(362, N = 681) = 931.60$, $p < .001$, $\chi^2/df = 2.57$, scaling correction factor = 1.224, CFI = .949, TLI = .943, RSMEA = .048, 90% CI [.044, .052], SRMR = .051. The factor loadings ranged from .74 to .91 for presence of meaning, .74 to .80 for search for meaning, and .64 to .86 for compassion.

Table 3 shows latent correlations among the variables. As expected, presence of meaning was positively and most strongly correlated with awareness of purpose, $r(681) = .93$,[1] $p < .001$. Presence of meaning was also positively correlated with awakening to purpose, $r(681) = .79$, $p < .001$, and altruistic purpose, $r(681) = .55$, $p < .001$. Also as predicted, search for meaning in life was positively correlated with awakening to purpose, $r(681) = .31$, $p < .001$, and altruistic purpose, $r(681) = .25$, $p = .003$. Search for meaning did not significantly correlate with awareness of purpose. Finally, as expected, compassion was positively and most strongly correlated with altruistic purpose, $r(681) = .69$, $p < .001$. Compassion was also positively correlated with awareness of pur-

TABLE 3
Latent Correlations Among Measured Variables ($N = 681$)

	1	*2*	*3*	*4*	*5*
1. Awareness of purpose	—				
2. Altruistic purpose	.51*** [.44, .59]	—			
3. Awakening to purpose	.80*** [.75, .86]	.57*** [.50, .64]	—		
4. Presence of purpose	.93*** [.91, .95]	.55*** [.48, .62]	.79*** [.74, .85]	—	
5. Search for purpose	.03 [–.07, .13]	.25** [.16, .34]	.31*** [.21, .42]	.04 [–.06, .14]	—
6. Compassion	.33*** [.24, .42]	.69*** [.62, .76]	.39*** [.30, .47]	.38*** [.29, .46]	.22*** [.13, .32]

Notes: The 95% confidence intervals for latent correlations are shown in parentheses. *$p < .05$. **$p < .01$. ***$p < .001$.

TABLE 4
Descriptive Statistics for Sense of Purpose by Academic Year

	Awareness of Purpose M (SD)	*Altruistic Purpose M (SD)*	*Awakening to Purpose M (SD)*
Freshman	5.11 (1.25)	5.93 (0.84)	5.15 (1.04)
Sophomore	5.31 (1.31)	5.95 (0.83)	5.35 (1.06)
Junior	5.08 (1.40)	6.06 (0.74)	5.21 (1.02)
Senior	5.30 (1.19)	6.05 (0.75)	5.26 (1.03)
Graduate students	5.67 (1.09)	6.29 (0.64)	5.66 (0.92)
Total	5.27 (1.28)	6.05 (0.77)	5.31 (1.03)

pose, $r(681) = .33$, $p < .001$, and awakening to purpose, $r(681) = .39$, $p < .001$.

The Effects of Age and Academic Year

Finally, we examined the effects of age and academic year on the sense of purpose in life to explore whether students at the beginning of their college experience responded similarly to those who were at the end of their experience. Age was slightly but positively correlated with awareness of purpose, $r(679) = .09$, $p = .024$, and with altruistic purpose, $r(679) = .13$, $p = .001$, but not with awakening to purpose, $r(679) = .07$, $p = .078$.

Table 4 shows means and standard deviations on the sense of purpose subscales across academic year. Analysis of variance with post hoc tests showed that graduate students reported stronger awareness of sense of purpose ($F(5, 665) = 4.06$, $p = .003$), altruistic purpose ($F(5, 665) = 3.70$, $p = .005$), and awakening to purpose ($F(5, 665) = 4.36$, $p = .002$) compared to their undergraduate counterparts.

DISCUSSION

The SOPS-2 showed a conceptually and empirically sound three-factor structure based on several diagnostics of model evaluation, including item loadings, modification indices, and omega reliabilities. The SOPS-2 factorial validity was established by demonstrating reasonable fit indices that did not change substantially across the models measuring invariance of factor loadings, patterns, and variances, suggesting generalizability of the scale for those in the age group of 18 to 25 years of both genders, undergraduate and graduate student status, and different racial/ethnic backgrounds.

Criterion validity was evident based on associations between the subscales (awareness of purpose, awakening to purpose, and altruistic purpose) and scales that assessed presence of meaning, search for meaning, and compassion. The patterns of correlations were generally similar to those reported in the previous scale development studies (Sharma et al., 2017; Yukhymenko-Lescroart & Sharma, 2017). The findings regarding the correlation between the presence of meaning and awareness of purpose confirmed that meaning and purpose are related constructs, as indicated by their positive correlations, but also distinct from each other, as demonstrated by discriminant validity results. The positive association between altruistic purpose and compassion reinforced the findings of previous studies, such as Mariano and Savage's (2009) study that revealed greater generosity and empathy among people who reported a strong sense of purpose. The positive correlation between search for meaning and awakening to purpose supported the potential of the awakening to purpose subscale to assess whether individuals have recently begun to explore and gain clarity about their purpose. However, longitudinal studies are needed to clarify whether the measure is indeed time-sensitive and can evaluate changes in sense of purpose. Also, that the awakening to purpose subscale was more closely related to presence of meaning than the search for meaning suggests that awakening to purpose may reflect a process of strengthening clarity about purpose in life rather than searching for life's ultimate purpose.

Implications for Practice

Many scholars have demonstrated the positive role that sense of purpose plays in influencing peopless, wellness, and life satisfaction (Bronk, Hill, Lapsley, Talib, & Finch, 2009). In contrast to such correlational studies demonstrating positive associations of purpose with positive outcomes, there is a dearth of research on the extent to which young people recognize a purpose in life (Burrow et al., 2010) and interventions to enhance their sense of purpose. A notable exception is an intervention study from Bundick (2011), who explored whether engaging in an intensive session that encouraged participants to reflect upon and discuss their purpose in life enhanced their sense of purpose. Bundick (2011) found no support for the hypothesis that one-time discussion on purpose could increase the degree to which participants became aware of their purpose in life; however, such discussion was found to strengthen the dimension of goal-directedness 9 months later. Bundick (2011) concluded that even a one-time intensive reflection on and discussion about purpose could act as a triggering event that could impel people to later reflect upon their purpose in life.

Unfortunately, it is difficult to measure effectiveness of purpose interventions with existing measures because normative trajectories of purpose development have not been clearly established. The awakening to purpose subscale was designed to assess recent changes in sense of purpose. The present study has provided empirical support for the awakening to purpose subscale and its potential to assess whether people have recently begun to explore and gain clarity about their life's purpose. However, more research is needed to investigate the time-sensitivity and effectiveness of this subscale in assessing changes in sense of purpose.

Limitations and Future Directions

The results of the present study should be interpreted in light of the following limitations. First, the sample consisted of only undergraduate and graduate students. The nature and development of sense of purpose among university students might be different from that of noncollege attending emerging adults, which could potentially affect the validity of the SOPS-2 among the broader 18 to 25 years old age group. Emerging adulthood might not be a universal experience due to the alternative transition experiences that some

young people from nonindustrialized and marginalized populations might experience (Lee & Waithaka, 2017). Very often, young people belonging to low-income or minority groups have less human capital than their more privileged peers and, thus, do not have the opportunity to freely explore life choices. As a result, they may face challenges related to school attendance, career success, and future earning prospects (Lee & Waithaka, 2017). They are also more likely to assume adult role statutes in terms of parenting, entering full-time labor force, and establishing independent households. To determine whether these differences impact the nature of purpose, future research should investigate the SOPS-2 in a noncollege attending sample.

While the current study provided evidence for factorial validity for both female and males as evident in the results for measurement invariance, future studies should target a more balanced sample of males and females. In addition, sample characteristics associated with convenience sampling that were not assessed may have affected results, such as the reasons students elected to participate and the majors and departments of the participants. As research on purpose continues, more rigorous sampling methodology would allow results to be more broadly interpretable.

The SOPS-2 has been previously validated with adults and was validated with emerging adults in the current study. While the SOPS-2 is valid for use with those who are 18 years or older, its validity and reliability has not yet been explored with younger participants. Since purpose and identity are reinforcing and overlapping constructs (Bronk 2011), and the development of purpose is closely related to the development of identity (Burrow et al., 2010), we suspect that participants younger than 18 years of age who are still exploring their identity may not respond to items on awareness of purpose and awakening to purpose differentially. We further speculate that the two processes—awakening to one's purpose and awareness of one's purpose—are likely to occur concurrently for younger adolescents. However, future research is needed to explore this supposition. Because the time period of emerging adulthood overlaps with late adolescence, it would be interesting to explore the similarities and distinctions regarding sense of purpose among late adolescents and emerging adults. Ultimately, it would be informative to investigate questions of change and developmental trajectories of sense of purpose across development from adolescence through adulthood. Along the lines of understanding purpose development, research is needed to establish the utility of the awakening to purpose subscale in assessing the changes in sense of purpose.

Future studies should also explore the relationship between sense of purpose and other developmental outcomes (e.g., grit, self-esteem, persistence, identity achievement). Intervention studies should explore causal relationships between sense of purpose and related variables. Most importantly, given the positive role of purpose, the SOPS-2 could be used to assess the effectiveness of intervention studies designed to enhance purpose.

CONCLUSIONS

The results of the present study confirmed a three-factor structure of the SOPS-2 based on several diagnostics of model evaluation. The SOPS-2 measures awareness of purpose, awakening to purpose, and altruistic purpose, which are important dimensions of the construct of sense of purpose that have not been included in previous instruments. This study has added to the evidence for the factorial, criterion, and discriminant validity of SOPS-2 among those in the age group of 18 to 25 years.

NOTE

1. To explore discriminant validity between the factors of presence of meaning in life and awareness of purpose, we compared two models: a 2-factor model, in which the five items of awareness of purpose

and the five items of presence of meaning were specified to represent their intended factors, and a 1-factor model, in which the 10 items of awareness of purpose and meaning in life were specified to represent a single factor. The two models were compared using a chi-square difference test for the Satorra-Bentler scaled chi-square (Satorra, 2000). The fit of 2-factor model was very good: $\chi^2(34, N = 681) = 77.46$, $p < .001$, $\chi^2/df = 2.28$, scaling correction factor = 1.545, CFI = .988, TLI = .985, RSMEA = .043, 90% CI [.031, .056], SRMR = .016. The fit of 1-factor mode was acceptable but, compared to the two-factor model, it was worse: $\chi^2(35, N = 681) = 208.91$, $p < .001$, $\chi^2/df = 5.97$, scaling correction factor = 1.574, CFI = .953, TLI = .940, RSMEA = .085, 90% CI [.074, .097], SRMR = .026. The results of the chi-square difference test showed that the two-factor model had a significantly better fit than the alternative one-factor model, $\chi^2 (1, N = 681) = 81.70$, $p < .001$, suggesting that the two factors of awareness of purpose and search for meaning were not completely redundant.

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