DO SELF-TRANSCENDENCE, AND MEANING IN LIFE PREDICT THE INCREASE ON LIFE SATISFACTION?

An Investigation of the Relationship Between Self-Transcendence, Meaning in Life, and Life Satisfaction: A Cross-Sectional Study

MASTER THESIS

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Abstract

Previous research has shown a strong relationship between meaning in life and life satisfaction. Another contributor to life satisfaction was self-transcendence (ST), but this was not investigated much in the past. Empirical findings on ST and life satisfaction were predominantly studied in the nursing literature and in samples of old adults, and so far no study incorporated all variables (self-transcendence (ST), meaning in life, and life satisfaction) in healthy and young adults' populations. Therefore, it was initially hypothesized that (1) ST and meaning in life have a positive relationship. It was further hypothesized that (2), without high presence of meaning, search for meaning in life would predict decrease on life satisfaction. Finally, and mainly, (3) it was expected to find high self-transcendence, and high meaning in life would predict increase on life satisfaction. A cross-sectional survey design was conducted in a sample of Turkish and non-Turkish adults (N=617). All of the hypotheses were confirmed: (1) MANOVA found a significant relationship between ST and meaning in life ($p < .001$). (2) Search for meaning predicted decreased life satisfaction ($\beta = -.18$). (3) In the two hierarchical regression equations, the best fitting model for predicting life satisfaction was the linear combination of both domains of meaning in life, and self-transcendence ($\beta = .25$). Additional analysis found that search for meaning was positively associated with life satisfaction when individuals had presence of meaning in their lives. Limitations, and recommendations for well-being research, and also some implications to clinical populations were discussed.

Keywords: Self-transcendence; Meaning in life; Presence of meaning; Search for meaning; Life satisfaction; Well-being

Introduction

The main aim of clinical psychology is to promote psychological well-being. The causes and treatments of psychopathology and etiology of mental disorders have been studied comprehensively over centuries. Yet, according to a WHO report (2018), more than 300 million individuals are affected by depression globally, and by 2030 depression is estimated to be the major leading cause of disability (WHO, 2004). At its worst, approximately 800.000 people die from suicide every year (WHO, 2018) because hopelessness is significantly related to suicidality in individuals with depression (American Psychiatric Association, 2003; Beck, Steer, Beck, & Newman, 1993). Among psychiatric morbidity, also anxiety and related disorders are one of the most prevalent: as one-third of a population is affected by an anxiety disorder during the course of life. Clinical guidelines recommend using cognitive-behavioral therapy (CBT) for treatment. However contrary to its treatment success, relapse rates are substantially high.

Mental health is defined by not only with the absence of psychopathology, also with the presence of positive emotions and their contributing factors (Westerhof & Keyes, 2010). Given the epidemiology, prevalence rates, and estimates, our era is obviously in need of a more investigation of what constitutes, also sustain mental health -that is a state of *well-being*- seems necessary because the focus on psychopathology and its' treatments seems merely enough to prevent relapse. Exploring the possibly positive contributors towards psychological well-being might buffer individuals against psychopathology, and it might also constitute durable effects of CBT.

Dodge et al. (2012) stressed out that the particular focus on research on *what constitutes well-being* caused a lack of global consensus on the definition of well-being (Dodge, Daly, Huyton, & Sanders, 2012). However, the focus on well-being's incorporators is highly significant

especially in clinical psychology; for instance to booster evidence-based psychotherapies with positive interventions. Or from a non-clinical perspective; to build-up and/or to strengthen resilience towards the unexpectant nature of life itself. With the help of those empirically found incorporators, individuals can cope with adversities in acute situations. Thus from the clinical point; relapse rates could be diminished by preventive factors. The grow of research would gradually form well-being's *empirical* definition inductively, and systematically from a multidimensional perspective.

A question might arise from multidimensional nature of well-being. The reason of the varieties of conceptualizations might also be stemming from differences between cultural, individual characteristics (e.g. McGrath, 2015; Diener, Suh, Lucas, & Smith, 1999; Ryff, 1989).

The *hedonic view* (e.g Schwarz, Diener, & Kahneman, 1999) for instance define well-being as increased positive affect, and decreased negative affect. The initial positive psychology framework also had centralized happiness. According to Seligman's initial definition, individuals could achieve well-being by learned optimism, pursuing positive emotions, pleasure and gratification (2002, p. xiv, p.61).

By being an object to *subjective* individual experiences and interpretations (Campbell, 1976), there are variations in experiencing the state of well-being. Diener (1984) expanded Wilson's (1967) review on subjective well-being (SWB). It comprises of affective, and cognitive components. Both the negative and the positive subjective evaluations and judgments with one's satisfaction with his or her own life defines SWB's emotional, and cognitive levels. The affect aspect covers the presence of positive, and the absence of negative emotions. The cognitive aspect covers *life satisfaction* (LS), that is the perceived well-being (Diener & Ryan, 2009; Diener & Suh, 2000). In SWB, the optimal human functioning is associated with pleasure, life satisfaction

and perceived happiness. There are three intrinsic motivations related to increased well-being and satisfaction with life. Those motivations are; autonomy, competence, and relatedness to outer world (Oishi, Diener, Lucas, & Suh, 2009)..

Turning back to the inquiry of what constitutes mental health and buffer the state of well-being; research showed that one of the most prominent predictors of well-being is *meaning in life*. And the e*udaimonic* approach says that well-being can be achieved with meaning, purpose, motivation, flourishing, concern of others, and virtue. (e.g. Ryff & Singer, 1998; 2013). Meaningful situations connect the idiosyncratic self to others by providing a sense of coherence and purpose. By engaging in meaningful moments, an individual can acknowledge the importance of his life, and live accordingly (Smith, 2017; Yalom, 1980).

It is now well established from varieties of studies that meaning in life is considered as a cognitive contributor towards well-being. Strong correlations has been found between meaning in life, and life satisfaction (Diener, Suh, Lucas, & Smith, 1999; Ryff & Singer, 2013; Steger, Oishi, & Kashdan, 2009; Steger et al., 2006; Steger & Kashdan, 2007). Similar predictions regarding meaning in life's positive effect on life satisfaction was also supported by several studies (e.g. Dogan, Sapmaz, Tel, Sapmaz, & Temizel, 2012; Schulenberg et al., 2014). Also a study found that meaning in life is a resilience factor towards suicidal ideation (Kleiman & Beaver, 2013).

Meaning in life encompasses two dimensions: meaning-seeking, and its presence (Steger, Frazier, Oishi, & Kaler, 2006). Some research showed that search for meaning might have a relationship with depression and anxiety and cause less perception of meaning (Steger et al., 2009; Steger et al., 2006). However some research findings are on the contraries (Park, Park, & Peterson, 2010; Steger, Kashdan, Sullivan, & Lorentz, 2008), and some authors (MacKenzie & Baumeister, 2014; Steger, 2012; Wong, 2012) criticized the aforementioned findings on meaning and well-

being by stressing on the importance of cultural, and individual differences. For example Viktor Frankl's search for meaning in the concentration camp yielded him a sense to grasp the life even more. He tried to teach his perspective to his campmates however not everyone could have achieved this sense. So accounting to personality dispositions; a person who is more *approach-oriented* might have a high search and high presence of meaning, whereas a person who is more *avoidance-oriented* might have high search but low in the presence of meaning (Steger et al., 2008). Also, Kleiman and Beaver's (2013) research *-meaning as a resilience factor-* found both domains of meaning in life were, in fact, decreased the levels of suicidal ideation.

Self-transcendence, Meaning in life, Life satisfaction, Subjective well-being

One way to give meaning to circumstances is self-transcendence (ST) (e.g. Frankl, 1966; Seligman, 2002). ST is also suggested as a potential for well-being (Frankl, 1966; Reed, 2009). Not surprisingly there are several conceptualizations of ST. Roughly, ST is the overcoming of egoistic sense and its desires (Erikson, 1982); it is the engagement in non-individualistic interests by means of contemplation and awareness. Parallel with meaning in life, serving beyond the self is the essential characteristic of ST (Baumeister, 1991; Seligman, 2011). Theoretically, having ST as a trait is thought to contribute to meaning in life (Frankl, 1966), and life satisfaction (Peterson, Park, & Seligman, 2004; Wong, 2016).

ST is a dynamic and developmental process (Koller, Levenson, & Glück, 2017; Levenson, Jennings, Aldwin, & Shiraishi, 2005). Self-transcendence and neuroticism are negatively correlated (Levenson et al., 2005). For Levenson et al. (2005), to be a self-transcendental individual; the initial step is conveyed through self-awareness thus integration with the self (self-knowledge and integration; SI). Self-knowledge and integration requires a profound knowledge of an individual towards his or her personality characteristics, and thereby objectively attending to

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oneself. The second dimension of ST is non-attachment (NA). It is developing oneself (persona) by being independent of external sources. In the presence in the here-and-now growth (PG); that the individual lives each moment mindfully. It is where the person fosters growth within an awareness and has a strong will to learn from others, as well as from experienced losses. In such awareness, one accepts the impermanence of life as well. Peace of mind (PM) refers to a trait of tranquility where a person is able to regulate his or her emotions, at the same time being in peace with every aspect of one's life. Finally, ST is such a state where one perceives the self, the others, and the whole environment through overcoming one's egoistic boundaries. Self-transcendent individuals *non-judgementally* perceive the life and the beings in it; as they also feel connected to past and future eras (Koller et al., 2017).

Nursing literature appears to have a consensus on ST as an important resource for mental health and well-being (Reed, 2009). For instance, Matthews and Cook (2009) studied emotional well-being in female patients being treated for breast cancer. They found a partial mediation effect of ST on optimism and emotional well-being. Another study (Coward, 1991) showed parallel findings in women with advanced breast cancer. ST was found to have a direct positive affect on emotional well-being, and both reduced the illness distress in those cancer patients.

Vogler and colleagues (2017) philosophically hypothesized that self-transcendence provides a missing link in research on virtue, well-being, and meaning in life. Wong theoretically adhered (2016) Frankl by pronouncing that SWB can be reached by meaning-seeking, and self-transcendence. He also theorized (2014) that, one can only experience meaning in life by redirecting the self from its egoistic boundaries to a wider context (that is ST).

Studies on ST; and meaning in life have been more investigated in the nursing literature (e.g. Coward, 2003). The relationship of self-transcendence, and meaning in life on life satisfaction

has not received much attention within one framework in non-terminally ill and non-clinical, and non-older adult populations. And meaning in life has some mixed results in the literature with life satisfaction. For those reasons, the current study aimed to investigate its inquiry of '*how do self-transcendence, and meaning in life predict life satisfaction?'*. Therefore, (1) it was hypothesized that self-transcendence, and meaning in life have a positive relationship. In line with previous literature (2) it was also hypothesized that, without high presence of meaning, search for meaning in life would predict decrease on life satisfaction. Finally, and mainly, (3) it was expected to find high self-transcendence, and high meaning in life would predict an increase on life satisfaction.

Method

Procedure

The current study used a cross-sectional survey design for Turkish and English speaking participants. There were four questionnaires: demographics, Adult Self-Transcendence Inventory (ASTI), Meaning in Life Questionnaire (MLQ), and Satisfaction with Life Scale (SWLS). The data collection lasted for two months followed by analyses, and interpretation.

Participants

Participants were reached out through snowball sampling procedure. They attended the study via an online survey platform (Qualtrics). Invitations were made via online sources. Informed consent was given by voluntary participation. Turkish participants attended the Turkish version, and non-Turkish participants filled the English version of the questionnaires. Given the feedback from some of the attendees, the approximate time to administer the battery of questionnaires was 20 minutes. A total of 927 individuals attended the study. The study had a high

attrition rate by one-third. Specifically 301 participants dropped-out from the study, which yielded a pattern of respondent fatigue (Ben-Nun, 2008) because they dropped out mostly at the beginning of each questionnaire. The comparison of demographic values between the dropped out participants and the completers did not show a significant pattern, except the group of individuals educated less than high school. Their drop-out rate was higher than the completers (drop out $N=$ 15, completers $N=10$). Further, nineteen of the attendees disagreed with the consent. 626 participants completed the survey, and prior to conducting the main analyses, extreme outliers ($N=9$) were identified in the preliminary data screening and excluded from the analyses. Hence, the results and analyses discussed in this research comprise a sample of 617. Most of the participants were Turkish ($N=397$, see the Appendix for the country of origin of the attendants). Characteristics of the demographics revealed a high proportion of female attendance ($N=467$, 75.6%). The age range was between 18-71 years $(M=32, SD=.46)$. The majority were holding a degree higher than high school (82.8%). 19.2% of the sample currently had no occupation (either unemployed or retired).

Measurement instruments

    The Meaning in Life Questionnaire (MLQ; Steger, et al., 2006) is one of the most well-known tools to assess meaning. The MLQ is rated on a 7-point Likert-scale from '*absolutely true*' to '*absolutely untrue*'. The MLQ-search (MLQ-S) domain (5 items) measures whether the individual is seeking meaning in his life, and the MLQ-presence (MLQ-P) domain (5 items) assesses whether the respondent is considering his/her life as meaningful. Steger et al.'s MLQ (2006) demonstrated good internal consistencies on both sub-scales (ML-S: $\alpha = .86$; ML-P: $\alpha = .88$). The Turkish translation of MLQ (YAÖ) found to be internally consistent (ML-S: $\alpha = .83$;

ML-P: α = .77) (Akin & Taş, 2015). The current study had an acceptable (MLQ-P) and a good (MLQ- S) internal consistencies on the sub-scales (Table.1).

Table.1

Reliability Analysis of the Scales

$(\alpha = .)$

	Turkish Scales (N=362)	Original Scales (N=255)	Both Scales (N=617)
ASTI-SI	.68	.71	.71
ASTI-NA	.60	.62	.61
ASTI-PG	.22	.43	*.41
ASTI-PM	.12	.49	*.35
ASTI-ST	.47	.67	.59
ASTI-Total	.75	.79	.79
MLQ-P	.85	.90	.70
MLQ-S	.86	.81	.87
SWLS	.84	.85	.84

Notes.

α = Cronbach's alpha

*Sub-scales with $\alpha < .59$.

The revised version of *Adult Self-Transcendence Inventory* (ASTI; Koller, Levenson & Gluck, 2017) has five subscales representing the developmental process of ST. Respectively; SI, NA, PG, PM, and ST as referred in the introduction (Levenson, 2005; *dimensions of ST*). Respondents rated each item from 1 (*disagree strongly*) to 4 (*agree strongly*). Its reliability found to be satisfactory (α = .83). By having 34 items in total; ASTI has 10 alienation items. One of the authors of the scale (Judith Glück) recommended to the researcher to exclude items number 10 and 14 by their problematic functionality. Thus, the current study used 22 items. The ASTI was translated into Turkish by a translator fluent in English, then back-translated from Turkish to English by a bilingual who is familiar with the nature of the research. Results of the pilot testing

of both versions revealed similar responses. Collectively, the total scale has been found reliable in this study (Table.1). Given their unreliable Cronbach's alphas, the two sub-scales of ASTI (PG, PM) were excluded from further specific analyses. Similar alpha values found in Koller et al.'s (2017) reliability analyses (PM, NA, PG < .50); speculated the low variance between the items. Due to the construct validity, all subscales' means calculated in the total score.

The Satisfaction with Life Scale (SWLS; Diener, Emmons, Larsen, & Griffin, 1985) using a 7-point Likert scale (ranging from '*strongly disagree*' to '*strongly agree*'), participants were asked 5 questions to ascertain their perception of life satisfaction (i.e. scores between 0-20 indicates dissatisfaction with life; scores above 20 indicate a higher satisfaction with life). SWLS found to be internally consistent (α = .87). Its Turkish translation's alpha values ranging between .81 and .89 (Durak, Senol-Durak, & Gencoz, 2010). SWLS had a good reliability in the current study (Table.1). SWLS also found to be highly related to MLQ with distinct backgrounds in well-being research (Steger & Kashdan, 2007)

Statistical Analyses

Analyses were performed with SPSS software (version 24). Initially, Pearson correlations analyzed the zero-order relationship between the variables. Homoscedasticity and linearity checked with; Cook's distance, residual scatter plots, Variance Inflation Factor (VIF), and Mahalanobis distance. Multivariate analysis of variance (MANOVA) investigated the relationship between self-transcendence and meaning in life. Box's test checked the homogeneity of variance. Multiple regression analyzed the prediction of the domains of meaning in life (search, and presence) on life satisfaction. In order to investigate the variance on life satisfaction predicted by

self-transcendence, and the domains of meaning in life, two comparative hierarchical regression analyses utilized with enter and forward methods. For exploration purposes, additional analyses were performed.

Results

Zero-order relations between self-transcendence (ASTI-T; and its domains), meaning in life, and life satisfaction were assessed with Pearson correlations. Table 2 indicates the descriptive statistics, and the *r* values between correlation coefficients.

Table.2

Means, Standard Deviations, and Pearson Correlations (N = 617)

	M	*SD*	1	2	3	4	5	6	7
1. ASTI-SI	3.11	.53	-						
2. ASTI-NA	2.62	.56	.29**	-					
3.ASTI-ST	2.81	.46	.34**	.30**	-				
4. ASTI-T	2.86	.34	.71**	.68**	.68**	-			
5. MLQ-P	25.48	6.51	.40**	.21**	.33**	.39**	-		
6. MLQ-S	22.97	7.22	-.20**	-.10**	.13**	-.06	-.19**	-	
7. LS	23.10	6.22	.38**	.14**	.16**	.33**	.47**	-.17**	-

Notes.
Self-transcendence = ASTI-T (ASTI-Total). ASTI-SI = self-knowledge and integration (-subscale). ASTI-NA = non-attachment (-subscale). ASTI-ST = self-transcendence (-subscale). Presence of meaning = MLQ-P. Search for meaning = MLQ-S. Life satisfaction = LS.
***p < .001* (2-tailed).

Self-transcendence, and Meaning in Life (1). The first hypothesis was tested the association between self-transcendence and meaning in life by using repeated-measures, MANOVA. First, Box's test inspected the assumption of homogeneity of covariance between self-transcendence, and meaning in life (search, and presence). A non-significant effect was found (*Box's M* = 337.10, p > .60), indicating that the assumption was not violated.

The univariate analysis found that self-transcendence had a significant effect on the presence of meaning, $F(336, 1.79) = 53.19$, $p < .001$, whereas its effect was non-significant on search for meaning, $F(336, 1.03) = 53.01$, $p > .05$. Partially to the contrary with univariate effects, the multivariate effect of self-transcendence was significant on both domains of meaning, $F(1.368) = 672$, $p < .001$. Using Pillai's Trace, there was also a significant effect of self-transcendence on meaning in life, $V = 1.24$, $F = 1.37$, $df = (672)$, $p < .001$. Since both meaning domains are correlated constructs, the multivariate analysis' findings were therefore referred for the interpretation of the results, thus confirmed the current study's preliminary hypothesis by demonstrating that self-transcendence had a statistically significant relationship with meaning in life.

Multiple regression

In order to investigate the second, and the third hypotheses, two comparable hierarchical regression models examined self-transcendence, and meaning in life's prediction on life satisfaction. Preliminarily, an examination of the suitability of the data was checked for the regression analyses. Residual scatter plots showed a normal distribution of the data with homoscedasticity and linearity. This was verified by Cook's distance (Di < 0.5), tolerance and VIF scores (<1.2). Those series of tests demonstrated a pattern of no multicollinearity within the data.

Meaning in life, and Life Satisfaction (2). In the first regression model (Table 3; Model 1), (a) presence of meaning, (b) search for meaning, (c) self-transcendence were entered into the equation. The presence of meaning significantly predicted the variance in life satisfaction ($F = (1, 615) = 174.07$, $p < .05$.; ΔR^2 .21). The addition of search for meaning to the regression (Step 2) confirmed the second research hypothesis; search for meaning negatively regressed life satisfaction (β -.08).

Table.3

Summary of the two Hierarchical Regression Analyses: The predicting power of Meaning in Life, and Self-transcendence on Life Satisfaction (N=617)

Life Satisfaction	*B*	*SE B*	*β*	*t*
Step 1[a]				
Model 1.1:				
(Constant)	11.66	.89		13.05
MLQ-P	.44	.03	.47**	13.19
Model 2.1:				
(Constant)	5.68	1.97		2.21
ASTI-T	6.07	.68	.33**	8.86
Step 2[b]				
Model 1.2:				
(Constant)	13.74	1,25		10.95
MLQ-P	.43	.03	.45**	12.55
MLQ-S	-.07	.03	-.08*	-2.34
Model 2.2:				
(Constant)	4.05	1.83		2.21
ASTI-T	3.25	.68	.18**	4.73
MLQ-P	.38	.36	.39**	10.49
Step 3[c]				
Models 1 & 2:				
(Constant)	6.13	2.01		3.05
ASTI-T	3.27	.68	.18**	4.79
MLQ-P	.36	.03	.38**	9.91
MLQ-S	-.07	.03	-.08*	-2.45

Notes.
Presence of meaning: MLQ-P. Search for meaning: MLQ-S. Self-transcendence: ASTI-T.
ΔR^2 (adjusted R^2 change):
   [a]: Model 1.1: MLQ-P = .21; Model 2.1: ASTI-T = .11.
   [b]: Model 1.2: MLQ-P, MLQ-S = .22; Model 2.2: ASTI-T, MLQ-P = .24.
   [c]: Models 1 & 2: ASTI-T, MLQ-P, MLQ-S = .25.
p < .01, **p* < .001

Self-transcendence, Meaning in Life, and Life Satisfaction (3). In the second regression

model (Table 3; Model 2.1, 2.2), (a) self-transcendence, (b) presence of meaning, (c) search for

meaning was entered to test the prediction on life satisfaction. Self-transcendence predicted the

variance in life satisfaction by 11% ($F = (1, 615) = 78.56$, p < .01), indicated a highly significant change in the R^2. The addition of the presence of meaning regressed 13% increase in life satisfaction.

The final step of the two regression equations (Table 3; Step 3) confirmed the third and main hypothesis of the current research. Higher self-transcendence, and higher meaning in life significantly predicted the variance on life satisfaction, $F = 3, 613 = 70.09, p < .01$. The best fitting model for predicting high life satisfaction was a linear combination of both domains of meaning in life, and self-transcendence ($\beta = .25$).

Additional analyses

Demographic effects. ANOVA tested the demographic characteristics and the variables. No significant effect was found when testing of age and gender concerning the variables (e.g. gender-LS: Female; $M=23.25$, $SD=6.35$; Male; $M=22.95$, $SD=5.82$).

High on the search for meaning, and the presence of meaning. Out of 617 participants, 31.9% ($N=197$) showed high scores in both presence ($M=29.14$, $SD=3.48$), and search for meaning in life ($M=28.59$, $SD=3.17$); and within this group, 37% ($N=73$, $M=3.30$, $SD=.22$) had high levels of self-transcendence, and 57.3% ($N=113$) had high levels of life satisfaction ($M=28.18$, $SD=2.49$).

Discussion

The aim of this cross-sectional survey study was to investigate self-transcendence, and meaning in life's relationship on life satisfaction. Three hypotheses were tested: the multivariance analysis of variance confirmed the first hypothesis by finding a linear combination between self-transcendence, and meaning in life (both search and presence). Second, multiple regression found

that search for meaning predicted decreased life satisfaction, whereas the presence of meaning predicted substantial increase on the outcome. Hierarchical regression further analyzed the third, and the main hypothesis of this study: Given the outcome; self-transcendence, and meaning in life significantly predicted high levels of satisfaction with life. Consequently, the current study appears to found strong evidence regarding its predictions.

Literature has mixed interpretations on meaning-seeking, presence of meaning, and life satisfaction. Some research show that when individuals have meaning, search diminishes. Therefore, additional analysis aimed to explore this aligned with life satisfaction. Results revealed the existence of both presence, and search for meaning on one-third of the participants. Having meaning in life does not mean one stops searching for further meaning in one's life. Most of those group of individuals who both had high on search and high on the presence of meaning in their lives also had high life satisfaction. The vast majority of this group of individuals were from non-Western countries. Similar findings were on previous research also showed that individuals from non-Western cultures (e.g. Japan) could be more than confident about their meaning-seeking processes (Steger et al., 2008). Both domains of meaning in life are seemingly complementing each other towards life satisfaction. In order to understand one of the most significant contributors to well-being, the acknowledgment of meaning in life, and its variative functioning seems necessary (MacKenzie & Baumeister, 2014; Steger, 2012; Wong, 2012; 2014). That is why future research and methodology should consider i.e. as maybe individuals from different cultures are adapted to have instances in violations of their meanings, but this might not necessarily stay one put from having high levels of both domains of meaning in life and having an increased life satisfaction. Because probably, individuals who score high on search and low on presence of meaning in life are probably having troubles in their lives, and having greater stress therefore low

on life satisfaction. But this does not simply imply that search for meaning itself 'causes' distress. This seems a simple conclusion due to problems arising from methodological issues, and interpretation biases.

The findings were important on a couple aspects concerning mental health. First, by finding positive effect of the presence of meaning in life on life satisfaction as consistently with previous research (e.g. Diener, 1984; Diener et al., 1999; Ryff & Singer, 2013; Steger et al., 2006; Steger & Kashdan, 2007; Zika, 1992). Second; additional analysis are on contrary to several previous research (e.g. Steger et al., 2006; Steger, Oishi, & Kashdan, 2009), but also supporting (Park et al., 2010; Steger et al., 2008) an underemphasized aspect of meaning-seeking and life satisfaction. This finding specifically calls for an emphasis on the need of more research on search for meaning and well-being and also exert caution to further research interpretations. Third; significant relationship of self-transcendence with the search and the presence in meaning in life; supporting the premise of second wave positive psychology (PP.2.0: Lomas & Ivtzan, 2015; Wong, 2014; 2016). Fourth; by uniquely showing that life satisfaction -the cognitive domain of SWB- is increasing by both increased self-transcendence and meaning in life. This was not empirically studied before in a healthy and young adult sample.

The current study should be interpreted within its limitations. First, its cross-sectional design prohibits concluding time-dependent relationships. Since the mediating effect is not known it cannot be statistically concluded that high life satisfaction was a direct result of high meaning in life and high self-transcendence in general. The sample was lacking educational diversity, an overrepresentation of Turkish individuals (*N*=393), and little gender variation. However, this does not seem to have influenced the outcomes very much. A methodological issue might be the low

reliability of ASTI's subscales, but that is why the study did not include them in its data analyses. As suggested by Judith Gluck (author of ASTI), means were computed across all items. So instead of accounting subscales, the total score was measured. On the other hand, the findings should not be accounted wholly to SWB because the scale used in this study (SWLS) was limited to measure the cognitive component that is life satisfaction (Pavot & Diener, 1993). Further study can use an affect scale (e.g. PANAS; Watson, Clark, & Tellegen, 1988).

Although outliers were excluded from analyses, another limitation to this study might emerge from the self-report bias that influenced by factors like social desirability (Fisher & Katz, 2000). Although it was written in the consent form and the invitations, the researcher did get questions from few of participants about the anonymity. Some asked to get a 'personal feedback' (e.g. "*how well I did?, when I will get my results?*"). Additionally, the researcher got another kind of feedback from some participants, that they questioned their lives after finishing the study. Some were inspired and motivated by that... Therefore, it is noteworthy to consider those feedback from this perspective: Each scale was related to each other at some point by being concepts of well-being, and therein participants might have been likely to respond in a socially desirable way that was also intrinsically more valued. Since it is hard to make a statistical conclusion about this type of an effect, future studies validity could be increased by using a mixed methodology with a longitudinal design.

By keeping in mind, the possible limitations, the findings of this research appear to be generalizable to healthy adult populations.

To reach a consensus on a universal concept like well-being; researchers, (also authors of scales), and journal editors should consider cultural, and individual differences, and also the

adaptability of the measurement tools before coming to a conclusion, or even before conducting a study. Because there seems an indeed significant increase in psychological research about the endorsement of a low rate of *false-positive* results (see. Simmons, Nelson, & Simonsohn, 2011).

This combination of findings provide new empirical insights by designating the significant relationship of self-transcendence, and meaning in life on adults' life satisfaction. As well as its additional findings emerge intriguing questions on the extent of previous meaning and well-being research, and calls for caution, and for comprehensiveness for the researchers about the interpretation of results.

Although the participants were non-clinical, current study's findings have some significant suggestive clinical implications concerning the relapse rates of evidence-based treatments like CBT. Treatment planning can include (i) facilitation of the developmental process of self-transcendence (e.g. Socratic questioning leading to self-awareness; enhancing skills of self-regulation) and (ii) meaning making procedures (e.g. activity scheduling to engage in meaningful situations).

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Appendix

I.   Country of Origin of the Participants

Country	N
Albania	2
Australia	7
Austria	1
Azerbaijan	1
Bangladesh	1
Belgium	1
Brazil	2
Bulgaria	6
Canada	6
China	1
Colombia	1
Crimea	1
Croatia	1
Cyprus	9
Dutch Caribbean	1
Ecuador	1
England	11
Finland	3
France	2
Georgia	4
Germany	13
Greece	14
Hong Kong	1
Hungary	3
Iceland	1
India	27
Indonesia	1
Iran	5
Ireland	3
Italy	4
Japan	1

Country	N
Kazakhstan	1
Lebanon	1
Lithuania	3
Malaysia	3
Maldives	1
Mexico	3
Morocco	1
Namibia	1
Nepal	1
Netherlands	15
Norway	1
Pakistan	5
Peru	2
Philippines	5
Poland	3
Portugal	5
Romania	1
Russia	1
Saudi Arabia	1
Serbia	2
Singapore	2
South Africa	1
South Korea	1
Spain	13
Sweden	1
Switzerland	2
Turkey	393
Turkmenistan	1
Ukraine	2
United Kingdom	1
USA	19