The Psychological Record, 2012, 62, 719–734

EXISTENTIAL ATTITUDES AND EASTERN EUROPEAN ADOLESCENTS' PROBLEM AND HEALTH BEHAVIORS: HIGHLIGHTING THE ROLE OF THE SEARCH FOR MEANING IN LIFE

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*Although the role of existential attitudes in adolescent health-related behavior has received increased attention recently, historically it has been underinvestigated in the field. The present study focuses on existential attitudes related to meaning in life and hopelessness. Relations of presence of meaning, search for meaning, and hopelessness with past and anticipated future involvement in problem- and health-enhancing behaviors were examined in a cross-sectional study of Eastern European (Transylvania, Romania) adolescents (*N = *426, 42.1% males;* M *age = 16.5 year, range 15–18 years). Results indicated that these existential variables were significantly related to higher levels of healthy behaviors and lower levels of problem behaviors (hopelessness inversely). Among these existential factors, the search for meaning in life was the most significant contributor factor for adolescent behavior. As an overall conclusion, results point to the significant role that the search for meaning in life may play in the relation with adolescents' problem and health behaviors.*

Key words: adolescence, meaning in life, health and problem behaviors

Although most of the attention paid to existential aspects of human life has focused on adults and the elderly, several recent arguments have been made for the centrality of existential issues in adolescents' lives (Burrow & Hill, 2011; Damon, Menon, & Bronk, 2003; Hacker, 1994; Steger, Bundick, & Yeager, 2012). These arguments call attention to the correspondence of existential issues with the most important developmental tasks of these formative years, namely, the shaping of an individual world view in conjunction with the development of an identity (Erikson, 1968). Descriptions of the early stages of identity formation as a process of exploration that precedes commitment (Marcia, 1966) underscore conceptual similarities with the existential process of searching for meaning in life

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(Steger, 2009). It has been proposed that the identity formation process supports the foundation of meaning in life (Steger, Frazier, Oishi, & Kaler, 2006).

Search for Meaning in Life as Promoter of Adolescents' Identity Development

Adolescence can be seen as a time during which the individual must go through a process of rebalancing the old with the new (Kegan, 1982). Part of this is the transformation from the ideological views that comes with childhood to a perception of the world that accompanies the increase in cognitive abilities and social awareness that, for many, comes with being an adult (Fitzgerald, 2005). To attain identity achievement, adolescents need to be able to create a comprehensive image of the world around them and integrate the myriad, and sometimes contradictory, information generated by different sources in their environment (Marcia, 1966). The need to evaluate and reconsider one's own internal and external life experiences often pushes adolescents to search for an authentic self and may stimulate an exploration of potential sources of meaning in life (DeVogler & Ebersole, 1983). This search for meaning in life is sometimes seen as an adaptive way of coping with difficult existential circumstances and is thought to lead to psychological growth (Halama, 2000; Schaefer & Moos, 1992). Particularly for adolescents, interpreting, planning, and managing one's own life and engaging in a quest for deeper meaning may be an important part of day-to-day life (Fry, 1998; Pager, 1996; Pasupathi, Staudinger, & Baltes, 2001).

Some scholars (e.g., Steger et al., 2006) argue that the development of meaning in life runs parallel to the development of identity. They argue that, as appears to be the case with identity, people may be at different stages of meaning development. Whereas the stages of identity development are defined by people's levels of exploration and commitment, stages of meaning development may be defined by a parallel pair of variables—the search for and the presence of meaning in life. Thus, people may experience meaning diffusion (low presence, low search), meaning foreclosure (high presence, low search), meaning moratorium (low presence, high search), or meaning achievement (high presence, high search). Exploration, therefore, is thought to play an important role for both identity and meaning formation as well as for other life experiences (Fjelland, Barron, & Foxall, 2007). Although there may be some tension accompanying exploration, Berman, Weems, and Stickle (2006) argued that it is more likely that distress or confusion about identity-related issues rather than a healthy exploration of them risk fostering negative existential concerns among adolescents. This analysis points toward the possibility that the search for meaning in life could serve a promoting rather than a disturbing influence on identity formation and adolescent optimal functioning.

Under ideal conditions, exploration accompanies the process of commitment as adolescents make choices with important identity-relevant implications. The making of identity-relevant choices is important in the cycle of identity formation, but no specific choice is considered to be an endpoint, nor is the process thought to terminate completely (Luyckx, Schwartz, Goossens, Soenens, & Beyers, 2008). In-depth exploration often accompanies adolescents' engagement with their commitments in life and implies that identity formation is an ongoing evaluative process, especially in the formative years of adolescence (Meeus, 1996). The search for meaning in life is thought to encompass people's efforts to discern their identity, their commitments in life, and their strivings in life. If exploration is seen as a typical and potentially healthy aspect of adolescent identity formation, then the search for meaning in life should also appear typical and healthy in adolescents' lives. As Kiang and Fuligni (2010) argued, the "search for meaning constitutes a perturbation that may be essentially normative and perhaps even necessary in order to achieve an ultimate sense of meaning" (p. 1261).

In order to test these ideas, it is necessary to examine the relationship between important existential factors, such as the search for meaning in life, to key indicators of adolescent functioning. In the present study, we focused on adolescent problem behaviors and health behaviors.

Meaning in Life and Problem and Health Behaviors in Adolescence

Psychological theory has long distinguished between the presence of meaning in life and the search for meaning. Most research attention has been paid to the presence of meaning in life, which is defined as "the sense made of, and significance felt regarding, the nature of one's being and existence" (Steger et al., 2006, p. 81). In contrast, the search for meaning is defined as "the strength, intensity, and activity of people's desire and efforts to establish and/or augment their understanding of the meaning, significance, and purpose of their lives" (Steger, Oishi, & Kashdan, 2009, p. 200). Initially, in Frankl's (1963) writings, the search for meaning was viewed as a promotional motivational force directed to finding personal meaning and purpose for life. In contrast to Frankl's approach, later meaning-in-life theorists argued for a dysfunction-guided definition, suggesting that the search for meaning is the expression of existential frustration (Baumeister, 1991; Klinger, 1998).

Among adults, the presence of meaning in life is consistently linked to greater well-being and lower psychological distress, and, indeed, it has been considered to be a fundamental component of well-being (for reviews, see Ryff & Singer, 1998; Steger, 2009). The presence of meaning in life also seems to be a good indicator of optimal personality functioning in adolescence (Shek, 1992). However, relatively few studies focused on the role of meaning in life in adolescent problem and health behaviors. Researchers who have examined this topic have demonstrated a strong inverse relationship between meaning in life and aggressive behavior in school (Shek, Ma, & Cheung, 1994) and a positive relationship between meaning in life and academic achievement (Al-Yagon & Margalit, 2006), perhaps driven by the higher value placed on academic success by adolescents who report a high presence of meaning in life (Kiang & Fuligni, 2010). Outside of academic settings, a strong positive relationship was demonstrated between meaning in life and protective health behaviors, such as healthy eating and physical activity (Brassai, Piko, & Steger, 2011).

In terms of the search for meaning, research among adults has more often supported the dysfunctional view of search for meaning, with negative relations between search for meaning and presence of meaning (along with other well-being indicators; e.g., Steger, Kashdan, Sullivan, & Lorentz, 2008). At the same time, this dysfunctional form of searching for meaning appears to be more prevalent in Western cultures, as cross-cultural research confirmed a positive link between the search for meaning and presence of meaning among Japanese university students (Steger, Kawabata, Shimai, & Otake, 2008). More relevant to the present study, recent investigations have suggested that search of meaning among adolescents—compared to adults and the elderly—is positively associated with indicators of optimal human functioning, such as satisfaction with life (Bronk, Hill, Lapsley, Talib, & Finch, 2009) and that this relationship increasingly appears negative in successively older age groups (Steger et al., 2009). Finally, in line with notions of the potentially positive role of exploration (Berman et al., 2006), although searching for meaning is associated with less positive human functioning among those who report having little meaning in their lives, this relation is tempered and sometimes reversed among people who report having high levels of meaning in life among both American (Park, Park, & Peterson, 2010; Steger, Kashdan, et al., 2008; Steger, Oishi, & Kesebir, 2011) and non-American (Cohen & Cairns, in press; Kiang & Fuglini, 2010; Steger, Kawabata, et al., 2008) samples. Thus, the relationship between search and presence of meaning appears to be influenced by age and culture.

Some research suggests that hope may be one of the reasons why meaning in life is linked to better functioning, health, and well-being (e.g., Steger, Kashdan, et al., 2008), as hopelessness is characterized by negative emotions and anticipation of a failed future (Beck, 1963). Whereas the correlation between meaningfulness and hope is strongly positive (Shek, 1993), the opposite is true for hopelessness (Grygielski, 1984). Without hope, stressful life events could culminate in the feeling that problems are too difficult to overcome, leading to escapist and avoidant activities rather than active coping. Hopeless youth more often engage in aggressive-antisocial behavior (Bolland, 2003) and appear less likely

to follow health-protective behaviors (AbuSabha & Achterberg, 1997). Both a lack of hope and a lack of meaning are associated with an involvement in problem or health risk behaviors (Newcomb & Harlow, 1986). In addition to independent effects, the combination of hopelessness and meaninglessness is also related to more aggressive behavior among adolescents (DuRant, Cadenhead, Pendergrast, Slavens, & Linder, 1994).

Based on these previous results, the aim of the present study was to analyze the possible association between existential attitudes and engagement in problem and health behaviors using an Eastern European, cross-sectional adolescent sample. Most studies on the role of meaning in life in adolescent optimal functioning have been focused on substance use or internalizing problem behavior (Greaves, 1974; Hutzell, & Finck, 1994; Kinnier, Metha, Keim, & Okey, 1994; Nicholson et al., 1994; Padelford, 1974; Sayles, 1994; Wolf, Olenick-Shemsesh, Addad, Green, & Walters, 1995). This has led to a relative neglect of potential relationships between existential attitudes and externalizing problem behaviors, such as aggressive behavior and irresponsible academic or work behavior. Indeed, some studies found support for a two-factor structure of problem behaviors, defining externalizing problem behaviors through substance use, school problems, sexual intercourse, running away, and arrest, besides internalizing problem behaviors such as depression (Brack, Brack, & Orr, 1994). Other studies also supported the covariation of school problems or academic failure with other externalizing problem behaviors (Duncan, Duncan, & Strycker, 2000; Maggs, Almeida, & Galambos, 1995; Reitz, Dekovic, & Meijer, 2005). Part of the aim of the present study was to remedy this gap in the literature and test the theoretical links between existential attitudes and externalizing behaviors (DuRant et al., 1994; Kim, Lee, Seungkook, & Puig, 2005; Shek, Ma, & Cheung, 1994).

Research on existential attitudes and adolescent optimal functioning has neglected other behaviors, as well. The disposition of most research has focused on establishing links between existential anxiety and meaninglessness and the perceived loss of control in life (Berman et al., 2006; Harlow, Newcomb, & Bentler, 1986; Phillips, 1980), which may explain the focus on substance use. However, existential attitudes like hope and meaning in life have well-established links with adolescent optimal functioning (DeWitz, 2005; Ho, Cheung, & Cheung, 2010; Rathi & Rastogi, 2007; Shek, 1992, 2001), begging the question of what specific behaviors well-functioning adolescents engage in to achieve greater health and well-being. In the present study, we focused on health-promoting behaviors to provide an antidote to the overwhelming focus on adolescent problem behaviors. Too little evidence is available yet for the association between meaning in life and health-enhancing behavior (Brassai et al., 2011). However, more study results attest to one positive association between meaning in life and health-enhancing behaviors based on the related concept of sense of coherence. Adolescents who report a greater sense of coherence in life—and hence view challenges as meaningful and worth confronting—engage in higher levels of health-promoting behaviors (Bronikowski & Bronikowska, 2009; Kuuppelomäkia & Utriainen, 2003; Öztekin & Terez, 2009; Sollerhed, Ejlertsson, & Apitzsche, 2005). We sought to extend this research to the existential attitudes of hope and meaning in life.

Thus, the present study examines adolescents' current judgments of meaning in their lives, their general expectations about the future, and their engagement in a quest for future meaning in their lives, providing a richer picture of the role of these existential attitudes in adolescent problem and health behaviors. The present research draws upon developmental theories that open the possibility for a positive role of searching for meaning. Therefore, our first hypothesis was that search for meaning may be a promotional factor of optimal personality functioning in adolescence, and a positive relation should be observed between search for meaning and presence of meaning; an inverse relation should be observed between search for meaning and hopelessness. Second, consistent with this perspective and previous research on meaning, hope, and health and problem behaviors, we hypothesized inverse relations between both search of meaning and presence of meaning and the problem and health behaviors assessed in the present study. Likewise, we hypothesized the opposite pattern of relations between hopelessness and problem and health behaviors.

Finally, we hypothesized that these relations will obtain both for past behavior frequency and expected future involvement.

Method

Participants

Data were collected in 2009 from students enrolled in the secondary schools of the Middle Transylvanian Region (Hungarian ethnic majority), Romania. Multistage sampling (choosing towns > high schools > classes) was used to get a sample consisting of 500 students. The sampling was based on randomly selected classes from each randomly selected high school. Of 500 questionnaires sent out, 432 valid questionnaires were returned. Respondents were 15 to 18 years old (M_{age} = 16.5, *SD* = 1.3), and 42.1% of the sample were male.

Materials

Problem behaviors. Problem behaviors were measured by two subscales of the Cognitive Appraisal of Risky Events–Revised questionnaire (CARE-R; Fromme, Katz, & D'Amico, 2000), namely aggressive/antisocial behavior (AAB; e.g., "Damaging/destroying public property") and irresponsible academic/work behavior (IAWB; e.g., "Failing to do assignments"). Items are rated on a 7-point scale from 1 (*absolutely untrue*) to 7 (*absolutely true*). Both past frequency of involvement ("How many times have you participated in this activity in the past 6 months?") and future expectation of involvement ("How likely is it that you will engage in each of these activities in the next 6 months?") were assessed for both subscales. Alpha coefficients ranged from .69 to .88.

Health behaviors. Health behaviors were measured using the healthy eating behavior (EB) and physical activity (PA) subscales of Jessor, Costa, and Turbin's (2003) Survey of Personal and Social Development. Each health-protective behavior was measured using three questions, rated on a 7-point scale from 1 (*absolutely untrue*) to 7 (*absolutely true*). Items include "Eating healthy snacks like fruit instead of candy," from the Healthy Eating Behavior subscale, and "Practicing different physical activities," from the Physical Activity subscale. Both past frequencies and expected future involvements were assessed for both subscales. Alpha coefficients ranged from .78 to .81.

Meaning in life. Meaning in life was measured by the Meaning in Life Questionnaire (Steger et al., 2006). The 10-item questionnaire includes two 5-item subscales: Presence of Meaning (MLQ-P) and Search for Meaning (MLQ-S). The Presence subscale assesses the degree to which individuals feel that their life is full of meaning (e.g., "I have a good sense of what makes my life meaningful"). The Search subscale assesses individuals' motivation and desire to find or deepen the meaning in their lives (e.g., "I am always searching for something that makes my life feel meaningful"). Items are rated on a 7-point scale ranging from 1 (*absolutely untrue*) to 7 (*absolutely true*); thus, scores could range from 7 to 35 on each subscale.

Hopelessness. Hopelessness was measured with the Hopelessness subscale from Lester's (2001) Helplessness, Hopelessness, Haplessness Inventory. The scale contains 10 items (e.g., "I don't expect to get what I really want"), which are rated on a 6-point scale, from 1 (*strongly disagree*) to 6 (*strongly agree*). Total item scores ranged from 10 to 60; high scores indicate high hopelessness. Internal consistency of the questionnaire in American youth samples was $\alpha = .80$ (Lester &Walker, 2007).

All the scales were translated from English into Hungarian and back-translated by bilingual translators. The two factor structure of the MLQ was confirmed via confirmatory (CFA) and exploratory (EFA) factor analyses. The two factors together explain 57.6% of the total variance (25.7% for MLQ-P and 31.9% for MLQ-S); factor loadings varying from .67 to .82, λ^2 goodness-of-fit (34) = 172.86, $p < .000$, CFA= .96, RMSEA = .10. Internal

consistency of the two scales in the present study (presence α = .81; search α = .79) was similar to those reported in other samples (presence α = .81; search α = .84; Steger et al., 2006). Similarly, the psychometric properties of Lester's (2001) Hopelessness scale were satisfactory, λ^2 goodness-of-fit (4) = 13.67, $p < .001$, CFA= .93, RMSEA = .09, Cronbach's alpha = .76.

Procedure

Self-administered questionnaires were used as a method of data collection. Trained mental health educators distributed the questionnaires to students prior to the start of class. Parental permissions were obtained prior to the start of the study. Students were given a brief explanation of the objectives of the study and instructions for filling out the questionnaire. Participation in the study was voluntary, and confidentiality was ensured. The response time ranged from 35 to 40 minutes. Completed questionnaires were placed in sealed envelopes and collected from each of the participating schools.

Results

First, we presented the descriptive statistics for the dependent and independent variables and the correlation between them. As shown in Table 1, mean scores for MLQ-S exceeded those for MLQ-P in this sample ($M = 22.9$, $SD = 6.50$ vs. $M = 25.0$, $SD = 5.90$), and the correlation between them was positive (Pearson's $r = .43$, $p < .001$). Hopelessness was negatively correlated with both the presence of meaning ($r = -.35$, $p < .001$) and search for meaning variables ($r = -.38$, $p < .001$). Existential variables correlated with the problem and health behaviors with medium effect sizes (from $r = |.25|$ to $r = |.39|$). The magnitude of correlations among the behavioral variables varied widely (from $r = |.10|$ to $r = |.68|$).

Table 1
Pearson Correlation Coefficients and Descriptive Statistics

	1	2	3	4	5	6	7	8	9	10	11
1 Presence of meaning	—										
2 Search for meaning	.43a***	—									
3 Hopelessness	−.35***	−.38***	—								
4 Aggressive/past	−.28***	−.26***	.31***	—							
5 Aggressive/future	−.29***	−.29***	.29***	.68***	—						
6 Academic/past	−.28***	−.27***	.29***	.44***	.53***	—					
7 Academic/future	−.29***	−.29***	.28***	.35***	.47***	.58***	—				
8 Eating/past	.29***	.32***	.13*	−.19**	−.21***	−.19*	−.13*	—			
9 Eating/future	.29***	.32***	.10*	−.21**	−.23***	−.15**	−.15**	.62***	—		
10 Sport/past	.29***	.30***	.11*	−.21**	−.20***	−.15**	−.17**	.44***	.47***	—	
11 Sport/future	.39***	.32***	.11*	.20**	−.21***	−.10*	−.19**	.49***	.40***	.65***	—
M	22.90	25.00	25.68	14.15	13.36	7.35	8.02	21.40	19.72	14.28	12.49
SD	6.50	5.90	5.90	4.78	3.87	2.17	3.05	7.30	6.87	5.16	4.96

Note. $N = 432$.
[a] Pearson's *r*
*$p < .05$, **$p < .01$, ***$p < .001$.

After analyzing the linearity of the relationship between dependent and independent variables (plots of the observed vs. predicted values) and the normality of distribution (with Shapiro–Wilk statistics), we applied logarithmic transformation to decrease the deviation. The role of existential attitudes (i.e., MLQ-P, MLQ-S, hopelessness) in predicting problem and health behaviors were assessed using hierarchical multiple regression analysis. Hopelessness was entered in Step 1, followed by MLQ-P in Step 2 and MLQ-S in Step 3, to enable an appraisal of each variable's individual effects. There was no significant multicollinearity (variance inflation factor from 1.199 to 1.964), nor significant outliers (standard residuals from −1.89 to 2.73). Levels of autocorrelation were sufficient (Durbin–Watson statistics from 1.8 to 2.1).

Tables 2 and 3 present the results for hierarchical multiple regression analysis, in which past frequencies and expected future involvement, respectively, of problem behaviors are the dependent variables. All three existential variables were significant predictors for both aggressive/antisocial behavior and irresponsible academic/work behavior. Each variable made roughly the same contribution to explaining past involvement in aggressive/antisocial and irresponsible academic/work behaviors. With regard to expected future engagement in these behaviors, however, hopelessness was not a significant predictor when the two meaning in life variables were included in the model. In contrast, both presence of meaning in life and search for meaning in life had moderate, inverse relations with expected future involvement in aggressive/antisocial and irresponsible academic/work behaviors. There did not seem to be any particular difference in the magnitude of relations between the existential variables and the two categories of problem behaviors (aggressive/antisocial vs. irresponsible academic/work). Together, the two meaning in life variables explained a similar amount of variance in expected future behaviors (19%–21%) as the three existential variables explained in past frequency (19%–22%).

Table 2
Role of Existential Attitudes Predicting Past Frequency of Problem Behaviors—Hierarchical Multiple Regression Analysis

	Aggressive/antisocial behavior		Irresponsible academic/work behavior	
Predictors	β	*SE*	β	*SE*
Step 1				
Hopelessness	.28***	.03	.23***	.02
ΔR^2	***.11****		***.11****	
Step 2				
Hopelessness	.25***	.03	.22***	.02
Presence of meaning	−.24***	.03	−.21***	.02
ΔR^2	***.06****		***.06****	
Step 3				
Hopelessness	21***	.03	.19***	.01
Presence of meaning	−22***	.03	−.19***	.02
Search for meaning	−18***	.04	−.16***	.02
ΔR^2	***.02****		***.02****	
Constant	*27.92***		*23.21***	
R^2	***.22*****		***.19*****	

Note. Changes in the *R* square is based on the hierarchical *F* test.
β = standardized beta regression coefficients.
SE = standard error.
*$p < .05$. **$p < .01$. ***$p < .001$.

Table 3
Role of Existential Attitudes Predicting Expected Future Involvement in Problem Behaviors—Hierarchical Multiple Regression Analysis

	Aggressive/antisocial behavior		Irresponsible academic/work behavior	
Predictors	β	*SE*	β	*SE*
Step 1				
Hopelessness	.10*	.04	.11*	.03
ΔR^2	***.04****		***.04****	
Step 2				
Hopelessness	.08	.05	.08	.05
Presence of meaning	−.21***	.04	−.20***	.03
ΔR^2	***.07****		***.07****	
Step 3				
Hopelessness	.07	.05	.07	.03
Presence of meaning	−20***	.03	−.19***	.03
Search for meaning	−22***	.03	−.21***	.03
ΔR^2	***.10****		***.08****	
Constant	*20.21***		*19.36***	
R^2	***.21*****		***.19*****	

Note. Changes in the *R* square is based on the hierarchical *F* test.
β = standardized beta regression coefficients.
SE = standard error.
*p < .05. **p < .01. ***p < .001.

Tables 4 and 5 present the results for hierarchical multiple regression analysis in which past frequencies and expected future involvement, respectively, of health behaviors are the dependent variables. Although all three existential variables were significantly related to past frequency of both healthy eating and physical activity, the effect sizes were small. There was little reduction in the magnitude of βs from step to step, suggesting that each variable makes relatively independent contributions to explaining past health behaviors. Only presence of meaning and search for meaning were significantly related to expected future involvement in health behaviors, with moderate effect sizes. There did not seem to be any particular difference in the magnitude of relations between the existential variables and the two categories of problem behaviors (healthy eating vs. physical activity). Together, the two meaning in life variables explained a similar amount of variance in expected future behaviors (22%) as the three existential variables explained in past frequency (20%–21%).

Discussion

Existential factors that have long been assumed to hold importance for adults and the elderly are increasingly being shown to have relevance to adolescents as well (Fitzgerald, 2005; Hacker, 1994). In particular, connections are being drawn between existential factors and the specific developmental tasks facing adolescents as they refine and develop their identities (Steger et al., 2012). This developmental stage presents those who once were children with the overarching challenge of becoming adults (Erikson, 1968). The early stages of identity formation have been described as a process of exploration that precedes commitment (Marcia, 1966). This description underscores conceptual similarities with the existential process of searching for meaning in life (Steger, 2009), and the processes of identity formation and the foundation of meaning in life are thought to unfurl together (Steger et al., 2006). In placing search for meaning in life in a developmental context, Marcia's emphasis on exploration appears to provide a key link. Exploration can be viewed as an enduring preoccupation for novelty and the extension of one's own internal and external life experience. Exploration, for example, can exist alongside

Table 4
Role of Existential Attitudes Predicting Past Frequency of Health Behaviors—Hierarchical Multiple Regression Analysis

	Healthy eating		Physical activity	
Predictors	β	*SE*	β	*SE*
Step 1				
Hopelessness	−.14***	.06	−.14***	.04
ΔR^2	***.04****		***.04****	
Step 2				
Hopelessness	−.13**	.06	−.13**	.04
Presence of meaning	.17***	.06	.18***	.04
ΔR^2	***.07****		***.06****	
Step 3				
Hopelessness	−.10**	.06	−.11**	.04
Presence of meaning	.16***	.06	.17***	.04
Search for meaning	.18***	.07	.19***	.05
ΔR^2	***.10****		***.10****	
Constant	*25.82*		*23.99***	
R^2	***.21*****		***.20*****	

Note. Changes in the *R* square is based on the hierarchical *F* test.
β = standardized beta regression coefficients.
SE = standard error.
*p < .05. **p < .01. ***p < .001.

Table 5
Role of Existential Attitudes Predicting Expected Future Involvement in Health Behaviors—Hierarchical Multiple Regression Analysis

	Healthy eating		Physical activity	
Predictors	β	*SE*	β	SE
Step 1				
Hopelessness	−.04	.24	−.04	.23
ΔR^2	***.00***		***.00***	
Step 2				
Hopelessness	−.03	.24	−.04	.23
Presence of meaning	.22***	.06	.22***	.04
ΔR^2	***.11****		***.10****	
Step 3				
Hopelessness	−01	.25	−.02	.22
Presence of meaning	.19***	.06	.21***	.04
Search for meaning	.25***	.07	.25***	.05
ΔR^2	***.11*****		***.12*****	
Constant	*28.19*		*28.57****	
R2	***.22*****		***.22*****	

Note. Changes in the *R* square is based on the hierarchical *F* test.
β = standardized beta regression coefficients.
SE = standard error.
*p < .05. **p < .01. ***p < .001.

commitment, such as when adolescents make a choice but are still tempted to search for alternatives (e.g., “commitment making”; Luyckx et al., 2008), or when they feel the need to reconsider their choices (e.g., “reconsideration of commitment”; Meeus, 1996). Thus, as

is the case with the simultaneous existence of searching for meaning and being confident in its presence (Steger et al., 2006), adolescents can be exploring their identities while still being committed to their notion of who they are. It seems highly likely that adolescents will be more open to possibilities for self-improvement—even if they are content with their current identity maturation (King & Hicks, 2006)—when they have hope in positive future outcomes. Thus, hope helps complete the foundation of healthy existential factors that can support adolescents as they mature, as they reflect on their personal goals or projects, and as they pursue their desire for meaningful lives (Emmons, 2003; Little, Salmela-Aro, & Phillips, 2006; Steger et al., 2012).

The present study provided the first examination of three key existential variables—hopelessness, presence of meaning, and search for meaning—in relation to adolescent problem and health behaviors. Previous studies suggest that meaning in life is a protective factor, associated with lower levels of aggressive and antisocial behaviors (Shek et al., 1994) and academic failure (Al-Yagon & Margalit, 2006) and with higher levels of healthy behaviors, such as healthy eating and physical activity (Brassai et al., 2011). Hope, too, had been identified as playing a positive role in health (AbuSabha & Achterberg, 1997) and a protective role against problem behaviors (Bolland, 2003; DuRant et al., 1994; Newcomb & Harlow, 1986). The present study confirms these previous findings and extends them to adolescents' expected future involvement in both health and problem behaviors. These results suggest that adolescents may struggle to develop beneficial behavioral repertoires in the absence of some certainty that one's life has meaning and that the future has good things in store (Steger et al., 2006).

While previous studies have focused only on the presence of meaning in life, our results point in novel ways to the role that searching for meaning in life might play. While evaluating the role of meaning in life, we cannot ignore the effort people put toward the search for meaning (Frankl, 1963). In the present study, search for meaning in life was positively correlated with presence of meaning and negatively correlated with hopelessness. This is opposite to the pattern of relations typically observed for search for meaning in later developmental periods (cf. Steger et al., 2006). At the same time, our findings are in line with theoretical predictions about searching for meaning as an active mobilizing, meaning-making attitude, functioning along the lines of identity exploration (Steger, 2009), particularly in adolescence (Bronk et al., 2009; Cohen & Cairns, 2012), and in Eastern cultural contexts (Kiang & Fuglini, 2010; Steger, Kawabata, et al., 2008). The present results confirm our hypothesis that youth are capable of searching for more meaning in their lives in a manner that is not driven by a loss or by lack of meaning but rather as part of a healthy developmental process of fulfilling their own personal potential. Under ideal circumstances, the search for meaning should be a natural, healthy part of life—a deep, intrinsic motivation for finding opportunities and challenges and for understanding and organizing one's experiences (Steger et al., 2011). The present results lend some support to this notion, with important links to the ways in which adolescents engage in health and problem behaviors.

One of the unique aspects of this study is the use of an Eastern European sample. Although this unique sample may limit the generalizibility of our findings, the fact that there is convergence with other research (e.g., Bronk et al., 2009) helps to allay these concerns. Eastern European populations show many similarities with both Western (European) and Eastern (Asian) ways of viewing the self, potentially representing a blend of individualistic and collectivistic self-construals. Thus, given the moderator role of Eastern versus Western cultures in the experience of the search for and presence of meaning in life, it may be important to replicate the present findings using comparative analyses between Eastern European and Asian adolescents, or between Eastern European and more individualistic Western European adolescents. Another limitation of the present study is the cross-sectional design. We have referred to developmental processes to understand why search for meaning may be a positive factor in adolescents' lives. However, the lack of longitudinal data collection renders it impossible to assess these unfolding processes. In addition, we have not assessed any of the variables, such as changes in identity status, that could

shed light on those identity-formation processes. Despite this limitation, this is the first study to gauge the independent relations of hope, presence of meaning, and search for meaning on important behavioral variables that are intrinsically linked to adolescents' health and successful social integration. Although we propose that seeking and experiencing meaning act to reduce the risk of problem behaviors and act to increase engagement in healthy behaviors, it may be equally likely that engaging in problem behaviors reduces healthy behaviors, which in turn degrades the experience of meaning in life. Understanding the direction and longitudinal durability of such dynamics would provide opportunities to intervene in supporting adolescents' development.

The longstanding philosophical and psychological appreciation of the importance of meaning in life is increasingly being affirmed by empirical findings. The present study adds to these efforts by linking meaning to developmental theories and contributes a much-needed expansion of the cultural landscape of meaning research. These results suggest that the human search for meaning is complex, holding different implications for well-being at different times in the life span.

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