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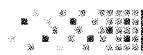
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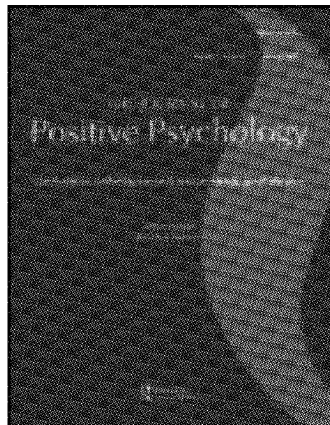
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Craig J. Bryan ^a, William B. Elder ^b, Mary McNaughton-Cassill ^c, Augustine Osman ^c, Ann Marie Hernandez ^d & Sybil Allison ^d

^a National Center for Veterans Studies, 260 S. Central Campus Dr., Room 205, Salt Lake City, UT, 84112, USA

^b Department of Education, The University of Utah, Salt Lake City, UT, USA

^c Department of Psychology, University of Texas at San Antonio, San Antonio, TX, USA

^d Department of Psychiatry, University of Texas Health Science Center, San Antonio, TX, USA

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Meaning in life, emotional distress, suicidal ideation, and life functioning in an active duty military sample

Craig J. Bryan^{a*}, William B. Elder^b, Mary McNaughton-Cassill^c, Augustine Osman^c, Ann Marie Hernandez^d and Sybil Allison^d

^aNational Center for Veterans Studies, 260 S. Central Campus Dr., Room 205, Salt Lake City, UT 84112, USA; ^bDepartment of Education, The University of Utah, Salt Lake City, UT, USA; ^cDepartment of Psychology, University of Texas at San Antonio, San Antonio, TX, USA; ^dDepartment of Psychiatry, University of Texas Health Science Center, San Antonio, TX, USA

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The present study examined the relationship of meaning in life with emotional distress, suicidal ideation, and life functioning in a sample of 273 active duty Security Forces personnel assigned to two US Air Force bases. Results of regression analyses indicated that stronger meaning in life was significantly associated with less severe emotional distress ($p < 0.001$, $\Delta R^2 = 0.047$) and suicidal ideation ($p = 0.043$, $\Delta R^2 = 0.017$), and better functioning at work and in intimate relationships, nonfamily relationships, and recreational activities ($p < 0.001$, $\Delta R^2 = 0.073$). Meaning in life showed stronger associations with outcomes relative to other predictors and covariates and explained the relationship between belonging and life functioning. Findings suggest that meaning in life is associated with less emotional distress and suicide risk, and greater success and performance across multiple domains in life among military personnel.

Keywords: meaning in life; military; suicide; suicidal ideation; functioning; social support

Research in positive psychology has identified protective factors that enable people and communities to thrive despite adversity. One such concept, meaning in life, plays a critical role in determining the stressfulness of an event and helping one cope with stress and trauma (Frankl, 1992). Making meaning transforms the significance individuals attribute to themselves, their experiences, and their environment (Brewin & Power, 1997; Lerner & Blow, 2011). Research to date has demonstrated the positive association between meaning in life and psychological well-being (Fox & Leung, 2009; Halama & Dedova, 2007; Holahan, Holahan, & Suzuki, 2008; Owens, Steger, Whitesell, & Herrera, 2009). Having a strong sense of meaning in life does not indicate that an individual will emerge from stressful or traumatic situations without symptoms; however, determining an event's significance to one's values is instrumental to determining whether a memory becomes a significant trauma (Park & Ai, 2006). In general, individuals have fewer significant detrimental mental health symptoms if they are able to integrate stressful experiences into a system of values and beliefs (Joseph & Linley, 2005). In the case that there is a discrepancy between the individual's sense of values and the meaning attributed to the event, there will be distress. The greater

this discrepancy, the greater the distress created by the event until the two can be reconciled, or until an individual can modify his or her system of life meaning (Park & Folkman, 1997). This suggests that individuals evaluate and interpret the gains of these experiences in terms of personal skills, relationships, life philosophy, and growth.

Despite numerous investigations on the relationship between meaning in life and mental health, our understanding of the role of meaning in life on daily functioning is extremely limited. Studies conducted among older populations (Danhauer, Carlson, & Andrykowski, 2005; Halama, 2003; Takkinen & Ruoppila, 2001), as well as individuals with AIDS (Schwartzberg, 1993), cancer (Jim & Andersen, 2007), and substance dependency (Waisberg & Porter, 1994) suggest that meaning in life and physical health functioning are highly intertwined. For example, older adults who find greater meaning in life following adverse events, such as illness or trauma, display better mental and physical outcomes (Pinquart, 2002). Additionally, cancer patients with a higher sense of meaning in life demonstrate better social functioning, support networking, and a lessened effect on physical impairment (Jim & Andersen, 2007). Multiple theories have been proposed

*Corresponding author. Email: craig.bryan@utah.edu

to explain this association between physical functioning and finding significance in challenging events. First, individuals may redefine their meaning in life after physically and/or emotionally overcoming negative experiences (Joseph & Linley, 2005). Second, those with a greater sense of meaning in life may engage in healthier behaviors in order to meet the objectives (e.g. maintaining relationships) that drive their sense of meaning (Linley & Joseph, 2004, 2011).

Although evidence indicates that meaning is associated with daily functioning for physically afflicted persons and older adults, how might meaning in life affect daily functioning within a healthy population that regularly faces adversity in physically demanding environments? Unfortunately, research has not yet addressed this issue, although a growing body of research supports the notion that daily functioning in the general population is affected by poor mental health, which is related to meaning in life. For example, individuals with anxiety and depression, even those with subclinical level symptoms, report lower productivity, poorer overall work performance, and more absenteeism from work when compared to healthy employees (Adler et al., 2006; Kessler & Frank, 1997; Lim, Sanderson, & Andrews, 2000; Plaisier et al., 2010; Stewart, Ricci, Chee, Hahn, & Morganstein, 2003). In fact, long-term absenteeism and impaired work performance of depressed and anxious workers has been shown to contribute to 80% of the economic costs of those in the 18–65 age bracket (Smit et al., 2006). Depression and anxiety can contribute to increased sleep problems, low energy levels, poor concentration, and avoidance of possible triggers at work, including avoiding crowded places or social situations, which disrupt daily functioning. Positive functioning may depend on specific psychological characteristics; however, not much is known about which how these characteristics differentially contribute to life functioning among active duty military personnel, for whom rates of psychiatric illness and associated problems have risen dramatically during the past decade (Ramchand, Acosta, Burns, Jaycox, & Pernin, 2011). Additional research that explores the relationships among meaning in life, emotional distress, and life functioning in military samples could, therefore, provide important clues for clinical interventions and prevention strategies.

The primary aim of the current study was to investigate the relations between aspects of meaning in life and daily functioning in a nonclinical sample of military personnel with both combat and peacekeeping experiences. Insight into how life meaning is associated with better daily functioning may provide opportunities for preventive strategies among military personnel faced with significant daily stressors. It was specifically hypothesized that a stronger sense of meaning in life

would be significantly associated with less severe emotional distress and suicidal ideation, and better life functioning beyond the variance accounted for by covariates. We then explored the relationship of meaning in life with separate domains of life functioning (i.e. work, family relationships, nonfamily relationships, and recreation) to determine if meaning in life was relatively more salient to certain domains than others, although no priori hypotheses were established for these additional analyses.

Methods

Participants

Participants included 273 active duty Airmen (81.7% male, 18.3% female) ranging in age from 19 to 50 years ($M=25.90$, $SD=5.90$). Racial distribution was 67.8% Caucasian, 20.5% African-American, 2.2% Native American, 0.7% Asian, 0.4% Pacific Islander, and 8.4% 'other.' Hispanic ethnicity was additionally endorsed by 15.0% of the sample. Participants had been in the military for an average of 6.44 years ($SD=5.37$; range: 0–26) and had deployed an average of 2.21 times ($SD=1.60$, range: 0–8), with 92.3% having deployed at least once to either Iraq or Afghanistan. Rank distribution was 47.9% junior enlisted (E1–E4), 38.4% noncommissioned officer (E5–E6), 7.5% senior noncommissioned officer (E8–E9), and 2.8% officer (O1–O5).

Procedures

Data were collected in large groups from two active duty Air Force Security Forces units located at two military installations located in the southern USA. Airmen gathered in auditoriums located on their respective installations, where the purposes of the study (i.e. 'to identify factors related to occupational performance and well-being') were explained and informed consent was obtained from personnel in the absence of military leadership to minimize potential coercion. Survey packets were distributed to Airmen volunteering to participate, who completed them anonymously while in the auditoriums, then returned them upon completion. Surveys were organized in the following order: demographics, historical and past life events, current social support and meaning in life, recent emotional distress and suicide risk, and recent life functioning. Airmen were provided food and refreshments in appreciation for their participation. Data were manually entered into an electronic database by research assistants and cleaned for quality assurance purposes. This study was approved by the University of Texas at San Antonio's Institutional Review Board and the Air Force's Office of Research Oversight and Compliance.

Instruments

Meaning in life questionnaire (MLQ)

The Presence subscale of the MLQ (Steger, Frazier, Oishi, & Kaler, 2006) is a 5-item measure of the perceived presence of meaning in one's life. The scale assesses the extent to which respondents feel their lives are currently full of meaning (e.g. 'I understand my life's meaning'). Participants respond to each item on a 7-point Likert-scale ranging from 1='absolutely untrue' to 7='absolutely true,' with higher scores indicating greater meaning in life. The scale has high internal consistency (0.82) and correlates with measures of mood and personality traits in the expected directions (Steger et al., 2006). For the current sample, estimate of internal consistency reliability for scores on the MLQ presence of meaning subscale was 0.90 (95% CI=0.87–0.92; average interitem correlation [AIC]=0.64).

Anxiety depression distress inventory-27 (ADDI-27)

The General Distress subscale of the Anxiety Depression Distress Inventory (ADDI-27; Osman et al., 2011) was used to assess the severity of negative emotions. The ADDI-27 is a shortened version of the widely used Mood and Anxiety Symptom Questionnaire-90 (MASQ-90; Watson & Clark, 1991) and is based on the tripartite model of affect that differentiates between depression, somatic anxiety, and general distress (Clark & Watson, 1991). The scale is composed of nine mood descriptors (e.g. sad, worthless, disappointment, and hopeless), which respondents rate on a scale ranging from 1 ('not at all') to 5 ('extremely'). The General Distress subscale has excellent factor structure, correlates very strongly ($r=0.87$) with the Distress scale of the longer MASQ-90, and has larger correlations with other measures of general distress than with depression and anxiety scales, consistent with the tripartite model (Osman et al., 2011). Reliability estimates >0.80 have been found across samples. For the current sample, estimate of internal consistency reliability for scores on the ADDI-27 General Distress scale was 0.93 (95% CI=0.91–0.94; AIC=0.60).

Behavioral health measure (BHM)

The Life Functioning Scale of the BHM (Kopta & Lowry, 2002) is a 4-item subscale of the BHM-20 (Kopta & Lowry, 2002) that measures performance and daily functioning across multiple areas of life, including work and school (e.g. performance and attendance), intimate relationships (e.g. support, communication, and closeness), nonfamily relationships (e.g. communication, closeness, and level of activity), and life enjoyment (e.g. recreation, life appreciation, and leisure activities).

Respondents are asked to indicate how they 'have been getting along in the following areas of your life over the past two weeks' in the above four areas on a scale ranging from 0 ('terribly') to 4 ('very well'). The scale has good internal consistency (>0.72) across multiple samples, correlates very highly ($r_s>0.76$) with other measures of mental health symptoms and daily functioning, including the Behavior and Symptom Identification Scale-32 (BASIS-32; Eisen, Dill, & Grob, 1994) daily living/role functioning, and the Outcomes Questionnaire-45 (OQ-45; Lambert, Kahler, Harmon, Burlingame, & Shimokawa, 2011) social role functioning scales, and is able to differentiate between clinical versus community samples (Kopta & Lowry, 2002). These basic properties have been previously replicated in an Air Force Security Forces sample (Blount et al., 2010). For the current sample, estimate of internal consistency reliability for scores on the LFS was 0.86 (95% CI=0.82–0.89; AIC=0.61).

Beck scale for suicidal ideation (BSSI)

The BSSI (Beck, Steer, & Ranieri, 1998) was used to assess the intensity of thoughts and intentions about suicide. The scale consists of 19 groups of statements that measure increasing levels of suicide risk on a scale from 0 to 2. Item scores are summed to provide an overall indicator of suicidal ideation severity. The BSSI also includes an item that asks if the respondent has never attempted suicide, attempted suicide once, or attempted suicide two or more times. The BSSI has strong psychometric properties, including good internal consistency and predictive validity for suicide (Beck et al., 1998). For the current sample, estimate of internal consistency reliability for scores on the BSSI was 0.91 (95% CI=0.87–0.93; AIC=0.35).

Interpersonal support evaluation list (ISEL)

The Belonging and Tangible subscales from the ISEL (Cohen, Mermelstein, Kamarek, & Hoberman, 1985) were used to measure two different functions of social support. The belonging subscale measures the availability of others for recreational or leisure activities (e.g. someone with whom one can go to a movie, invite over to one's house), whereas the tangible subscale measures the availability of concrete or material support when in need (e.g. someone from whom one can borrow money, obtain a ride to the airport, or receive assistance for a medical problem). Each subscale is comprised of eight statements that are rated on a 4-point scale from 1 ('definitely false') to 4 ('definitely true'), which are summed to provide overall availability of each type of social support. Both subscales have demonstrated good reliability and validity (Cohen et al., 1985). For the current sample, estimate of internal consistency reliability

for scores on the ISEL tangible scale was 0.88 (95% CI=0.85–0.91; AIC=0.42); for scores on the ISEL belonging scale, it was 0.78 (95% CI=0.73–0.81; AIC=0.26).

Deployment risk and resilience inventory (DRRI)

The Combat Experiences Scale (CES) and the Aftermath of Battle Scale (ABS) from the DRRI (King, King, & Vogt, 2003) were used to measure combat (CES) and aftermath (ABS) exposure. The CES asks participants to endorse (either ‘yes’ or ‘no’) if they have experienced a range of combat-specific events, such as direct exposure to firing a weapon, being fired upon, witnessing injury and death, and going on special missions and patrols. The ABS asks participants about the experience of a range of events associated with the outcome or consequences of combat, such as observing or handling human remains, dealing with prisoners of war, and seeing devastated communities and homeless refugees. Each scale is summed separately to provide indicators of combat and aftermath exposure. Both scales are reliable (>0.85) and correlate in the expected directions with measures of psychological distress among Iraq veterans (Vogt, Proctor, King, King, & Vasterling, 2008). For the current sample, estimate of internal consistency reliability for scores on the DDRI-CE ($k=23$) scale was 0.88 (95% CI=0.76–0.86; AIC=0.17); for the DRRI-ABS scale scores ($k=15$), the estimate was 0.91 (95% CI=0.88–0.93; AIC=0.40).

Data analysis

Generalized multiple regression with robust maximum likelihood estimation was utilized to test the associations of meaning in life with outcome variables (i.e. emotional distress, suicidal ideation, and life functioning) while controlling for covariates. Because outcome variables demonstrated different distributional properties and skew,

regression models were specified for various distributions (i.e. linear, Poisson, and negative binomial (NB)) and then compared for optimal fit based on the deviance score and the Akaike’s Information Criterion, using the smaller-is-better approach to determine goodness of fit. Analyses were conducted in two steps. In the first step, all covariates were entered simultaneously, and, in the second step, meaning in life was added to the model. Covariates were selected based on their established or hypothesized relationships with each outcome. To determine if meaning in life was differentially related to separate domains of life functioning, separate regression models were constructed for each of the four items that contribute to the LFS.

Results

Means, standard deviations, and intercorrelations of all variables are displayed in Table 1. A stronger sense of meaning in life was positively correlated with older age, greater belonging, and tangible support, but was negatively correlated with more severe emotional distress, previous suicide attempt, and recent suicidal ideation. Daily functioning was negatively correlated with higher levels of combat exposure and aftermath exposure and with more severe emotional distress, past suicide attempts, and recent suicidal ideation. Daily functioning was positively correlated with a stronger sense of belonging and tangible support. As would be expected, measures of psychological symptoms were positively intercorrelated and were negatively correlated with measures of social support. Relative to female participants, males had deployed more frequently and reported somewhat more intense combat and aftermath exposure. Males also tended to report slightly less severe depression and lower likelihood of suicide attempts in the past.

Table 1. Means, standard deviations, and intercorrelations of all variables ($n = 273$).

	1	2	3	4	5	6	7	8	9	10	11	12
1 Gender	–											
2 Age	–0.29**	–										
3 Deployments	–0.18**	0.64**	–									
4 Combat	–0.19**	0.17**	0.39**	–								
5 Aftermath	–0.25**	0.29**	0.42**	0.76**	–							
6 Emotional distress	0.14**	–0.15**	–0.03	0.23**	0.26**	–						
7 Suicide attempt	0.14**	–0.07	–0.10	–0.05	–0.06	0.17**	–					
8 Suicidal ideation	0.04	0.00	–0.10	0.07	0.04	0.28**	0.27**	–				
9 Belonging	0.09*	–0.01	0.02	–0.11	–0.14*	–0.45**	–0.13**	–0.30**	–			
10 Tangible support	0.05	0.03	0.05	–0.10	–0.09	–0.38**	–0.09*	–0.24**	0.74**	–		
11 Meaning in life	–0.02	0.16**	0.06	–0.12	–0.11	–0.49**	–0.12**	–0.26**	0.47**	0.40**	–	
12 Life functioning	0.06	0.04	0.00	–0.16*	–0.18**	–0.54**	–0.13**	–0.24**	0.57**	0.51**	0.56**	–
<i>M</i>	–	22.72	2.18	4.45	5.26	19.40	–	0.38	31.44	34.17	26.31	3.01
<i>SD</i>	–	5.57	1.60	4.15	4.53	8.01	–	2.15	4.66	5.35	6.95	0.83

Notes: * $p < 0.05$, ** $p < 0.01$.

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Is a stronger sense of meaning in life associated with less emotional distress?

To determine if meaning in life was associated with less emotional distress, the ADDI General Distress score was entered as the outcome, meaning in life was entered as the predictor, and the following variables were entered as covariates: gender, age, number of deployments, combat exposure, aftermath exposure, past suicide attempt, belonging, and tangible support. The Poisson regression model yielded the best data fit. In the first step, more severe emotional distress was significantly associated with female gender ($B=0.123$, $SE=0.062$, $p=0.050$), past suicide attempts ($B=0.264$, $SE=0.103$, $p=0.010$), and less belonging ($B=-0.029$, $SE=0.007$, $p<0.001$), for a total R^2 of 0.327. In the second step, meaning in life was added to the model and was significantly associated with less severe emotional distress ($B=-0.016$, $SE=0.004$, $p<0.001$). Meaning in life accounted for 4.7% of variance ($p<0.001$) in emotional distress beyond the variance accounted for by all covariates, for a total R^2 of 0.374. Comparison of standardized beta coefficient values suggested that meaning in life had the relative strongest relationship with emotional distress. Results of the final regression model are displayed in Table 2.

Is a stronger sense of meaning in life associated with less severe suicidal ideation?

To determine if meaning in life was associated with severity of suicidal ideation, the BSSI total score was the outcome variable, meaning in life was entered as the predictor, and the following variables were entered as covariates: gender, age, number of deployments, combat exposure, aftermath exposure, past suicide attempt, emotional distress, belonging, and tangible support. The NB regression model yielded the best data fit. In the first step, more severe suicidal ideation was significantly associated with male gender ($B=-1.419$, $SE=0.721$,

$p=0.049$), older age ($B=0.082$, $SE=0.040$, $p=0.038$), fewer deployments ($B=-0.681$, $SE=0.293$, $p=0.020$), and more severe emotional distress ($B=0.108$, $SE=0.033$, $p=0.001$), for a total R^2 of 0.202. In the second step, meaning in life was added to the model and was significantly associated with less severe suicidal ideation ($B=-0.154$, $SE=0.064$, $p=0.016$). Meaning in life accounted for 1.4% of variance ($p=0.043$) in suicidal ideation beyond the effects of all covariates, for a total R^2 of 0.216. Comparison of standardized beta coefficient values suggested that meaning in life had the relative strongest relationship with severity of suicidal ideation. Results of the final regression model are displayed in Table 2.

Is a stronger sense of meaning in life associated with better life functioning?

To determine if meaning in life was associated with life functioning, the BHM Life Functioning Scale was entered as the outcome, meaning in life was entered as the predictor, and the following variables were entered as covariates: gender, age, number of deployments, aftermath exposure, combat exposure, suicide attempt, recent suicidal ideation, emotional distress, belonging, and tangible support. In the first step, life functioning was significantly associated with less severe emotional distress ($B=-0.027$, $SE=0.007$, $p<0.001$), more tangible support ($B=0.040$, $SE=0.012$, $p=0.001$), and more belonging ($B=0.036$, $SE=0.015$, $p=0.014$), for a total R^2 of 0.491. In the second step, meaning in life was added to the model and was significantly associated with better life functioning ($B=0.042$, $SE=0.007$, $p<0.001$). Meaning in life accounted for 7.3% of variance in life functioning beyond the variance accounted for by all covariates, for a total R^2 of 0.564. Comparison of standardized beta coefficient values suggested that meaning in life had the relative strongest relationship with life functioning.

Table 2. Final generalized multiple regression models predicting emotional distress, suicidal ideation, and life functioning.

	Emotional distress ($R^2=0.374$)				Suicidal ideation ($R^2=0.216$)				Life functioning ($R^2=0.564$)			
	<i>B</i>	SE	β	<i>p</i>	<i>B</i>	SE	β	<i>p</i>	<i>B</i>	SE	β	<i>p</i>
Gender	0.104	0.060	0.104	0.083	-1.718	0.740	-0.577	0.020	0.020	0.098	0.027	0.841
Age	0.008	0.005	0.048	0.102	0.091	0.041	0.535	0.025	-0.001	0.008	-0.006	0.895
Deployments	-0.021	0.021	-0.034	0.306	-0.609	0.292	-0.973	0.037	-0.020	0.035	-0.019	0.561
Aftermath	0.013	0.007	0.058	0.080	-0.168	0.156	-0.756	0.283	-0.009	0.013	-0.042	0.507
Combat	0.010	0.008	0.042	0.180	0.097	0.111	0.391	0.384	0.006	0.014	0.007	0.672
Suicide attempt	0.187	0.129	0.187	0.145	0.680	1.022	0.680	0.506	0.107	0.312	0.101	0.732
Suicidal ideation	-	-	-	-	-	-	-	-	-0.013	0.020	-0.026	0.521
Emotional distress	-	-	-	-	0.072	0.036	0.569	0.043	-0.028	0.006	-0.218	<0.001
Tangible support	-0.008	0.006	-0.046	0.172	-0.052	0.126	-0.299	0.679	0.033	0.010	0.196	0.001
Belonging	-0.018	0.007	-0.090	0.015	-0.052	0.125	-0.260	0.680	0.019	0.012	0.074	0.123
Meaning in life	-0.016	0.004	-0.111	<0.001	-0.154	0.064	-1.089	0.016	0.042	0.007	0.314	<0.001

Note: Bold values indicate statistically significant effects.

With the addition of meaning in life, the relationship of belonging and life functioning became nonsignificant, suggesting mediation. We, therefore, used the bootstrapping approach described by Preacher and Hayes (2008) to test the indirect relationship of belonging on life functioning through meaning in life; bias corrected and accelerated confidence intervals were calculated based on 10,000 resamples. Results indicated that the indirect relationship was significant ($B=0.020$, $SE=0.006$, 95% $CI=0.010-0.034$), confirming that the relationship of belonging with better life functioning was statistically explained by stronger meaning in life. Results of the final regression model are displayed in Table 2.

Is meaning in life associated with specific domains of life functioning?

For the purposes of guiding more rigorous future research, we next explored the possibility that meaning in life might be more salient for certain domains of life than others. We repeated the previous regression analyses, but replaced the aggregated life functioning score with each of the scale's four individual items, each of which measures a different aspect of life functioning: work performance, intimate relationships, nonfamily social relationships, and recreational or leisure activities. Results indicated that a stronger sense of meaning in life was significantly associated with better work performance ($B=0.031$, $SE=0.009$, $p=0.001$), stronger relationships with family members ($B=0.056$, $SE=0.008$, $p<0.001$) and nonfamily members ($B=0.029$, $SE=0.010$, $p=0.003$), and more satisfaction with recreational or leisure activities ($B=0.050$, $SE=0.011$, $p<0.001$).

Discussion

Results of this study indicated that a stronger sense of meaning in life is significantly associated with less severe emotional distress, less severe suicidal ideation, and better functioning across multiple domains of life (i.e. work performance, relationships, and enjoyment of recreational or leisure activities) among active duty military personnel. Critically, results remained robust even when controlling for other variables shown to contribute to outcomes, such as emotional distress, social disconnectedness, and intensity of exposure to deployment-related trauma (Castro & McGurk, 2007; Killgore et al., 2008; Vogt et al., 2008). The consistency of these findings across multiple outcomes suggests that military personnel with a clear sense of meaning in life may experience less emotional distress, whereas a weaker sense of meaning in life may be associated with productivity loss.

Low meaning in life has been previously associated with higher stress levels (Joseph & Linley, 2005), which in turn was associated with greater impairment in life

functioning (e.g. Adler et al., 2006; Kessler & Frank, 1997; Lim et al., 2000; Plaisier et al., 2010; Stewart et al., 2003). Our results similarly found that a weaker sense of meaning in life was associated with more severe emotional distress (including suicidal ideation) and greater functional impairment among military personnel across multiple domains of life. It is possible that this association is related to greater hardiness, which is a personality trait associated with high commitment to work and life activities, a greater feeling of control, and openness to change and challenges in life (Bartone, 1999). Among military personnel, hardiness is similarly associated with lower emotional distress and stress reactions (Vogt, Rizvi, Shipherd, & Resick, 2008) and contributes to perceived meaningfulness of work, which in turn contributes to greater personal growth and benefits following a deployment (Britt, Adler, & Bartone, 2001). Additional research is needed, however, to further test and confirm the relationships among meaning in life, hardiness, emotional distress, and life functioning over time.

The finding that a stronger sense of meaning in life was associated with less severe suicidal ideation has considerable implications in light of rising suicide rates among military personnel during the past decade (e.g. Department of Defense, 2011). Although several studies have identified risk factors associated with increased risk for suicidal ideation and behaviors among military personnel, such as depression, posttraumatic stress, guilt, and combat exposure (e.g. Bryan, Clemans, & Hernandez, 2013; Bryan, Morrow, Etienne, & Ray-Sannerud, 2013; Griffith, 2012), there is a dearth of research focused on identifying protective factors that contribute to *decreased* suicide risk within military samples. Previous studies with nonmilitary samples have previously demonstrated a negative association of meaning in life with suicidal ideation (Dogra, Basu, & Das, 2011; Heisel & Flett, 2008), as well as a moderating effect of meaning in life on the relationship of dysfunctional coping (Edwards & Holden, 2001) and depression (Heisel & Flett, 2004) with suicidal ideation; but, to our knowledge, this is the first study that shows a direct association of stronger meaning in life with less severe suicidal ideation among military personnel. These results have implications for suicide prevention and treatment with military personnel.

Specifically, helping suicidal patients come to identify and understand their personal sense of meaning in life, and how this is critical to daily life functioning even when definite answers cannot be found (Debats, 1996), may serve to reduce emotional distress and suicide risk. Maladaptive coping behaviors, such as suicide-related behaviors, alcohol or substance abuse, or internalized blame, may be efforts to cope with perceived meaninglessness in life (Ruffin, 1984), suggesting that interventions that build a sense of meaning may be a

useful strategy for reducing risk. For example, brief cognitive behavioral therapy for suicide risk (BCBT-S; Rudd, 2012) specifically incorporates cognitive restructuring designed to strengthen a service member's reasons for living and personal sense of meaning in life. Prospective clinical trials are currently underway to confirm this possibility.

Results also indicate that life functioning was higher among those military personnel with a greater access to sources of tangible social support (e.g. availability of others to lend money, provide transportation, or temporary housing), which aligns with previous research findings that indicate a positive relationship between work performance and social support among military trainees (Overdale & Gardner, 2012). One potential hypothesis for this association is that access to material forms of support may promote work functioning because it yields resources that facilitate problem-solving. For example, having easy access to material goods during times of stress (e.g. due to financial strain or debt, illness, or when one's vehicle needs repairs) might enable a service member to continue to participate in work, relationships, and recreational activities. Another potential explanation is that military personnel who are functioning well in life do not request material support from others very frequently, thereby increasing the likelihood of receiving support when it is needed. In other words, military personnel who regularly ask for financial assistance or transportation to appointments may quickly exhaust such support from others, making tangible support less available over time, which in turn impacts daily functioning. Although our data are unable to tease apart these possibilities, in either case, tangible support is associated with better functioning at work and in social relationships.

Social support has been previously found to correlate with better functioning in military samples (Joplin, Quick, Nelson, & Turner, 1995; Maguen & Litz, 2006; Myers & Bechtel, 2004; Solomon, Mikulincer, & Hobfoll, 1986), but what is unique about this study's findings is that meaning in life explained the relationship of belonging, though not tangible support, with life functioning. This suggests that the positive relationship of belonging with life functioning is due, in large part, to the service member's sense of meaning in life. Belonging may be especially related to meaning in life given that strong social relationships facilitate the opportunity to process life events with others, thereby helping individuals to incorporate these events into a more global life meaning (Harvey, 1996; Orbach, Harvey, Davis, & Merbach, 1994). Indeed, feeling that one belongs to a group might actually reflect the meaning that one makes related to membership in the group. This is not to suggest that tangible forms of social support are not important, however, especially for those

who regularly face physically demanding and/or potentially traumatic events. For such individuals, having the resources necessary to overcome day-to-day difficulties may be especially critical for integrating traumatic experiences into an existing system of values and beliefs. Specifically, individuals who are able to find the resources necessary to resolve challenges in life may be able avoid a discrepancy between their values and the meaning attributed to the event causing the distress.

Given the ability of meaning in life to predict emotional health and well-being, results of the current study suggest that clinical interventions and prevention efforts within the military that explicitly foster belonging through community-based social and recreational activities (e.g. picnics, holiday parties, etc.) might be associated with lower emotional distress among military personnel because they facilitate a stronger sense of meaning, whereas programs that emphasize the provision of material goods or resources (e.g. money, childcare, and provision of transportation) are associated with better mental health for different reasons. This finding might be especially relevant to military leaders or for individuals of authority, who can potentially influence the mental health and well-being of subordinates by supporting and scheduling social and recreational activities that bolster meaning in life while also directly facilitating the availability of tangible forms of social support from helping agencies, as these tangible supports are situationally beneficial to the many challenges to life functioning that military personnel frequently experience.

A limitation of this study is its cross-sectional design. It could be that those who function better find life to be more meaningful, or it could be that those who find life more meaningful perform better in multiple areas of life. Longitudinal studies exploring how both earlier and current sense of life functioning are linked to changes in meaning in life, belonging, and tangible support over time may help disentangle the direction and causality of these relationships. It may be that once a positive cycle is in place, better functioning takes place, leading to more meaning, which in turn leads to a stronger sense of organizational belonging. It should also be noted that our reliance on self-reported functioning is a limitation in this study. Another limitation is self-report methodology, which is vulnerable to bias. For example, individuals with more severe emotional distress might overestimate their functional impairment or problems at work, home, and with others; likewise, those with better mental health might underreport problems in functioning. Future studies that can augment self-report methods with objective performance reports from supervisors or with collateral ratings by significant others may provide a more valid exploration of how meaning in life is related to life functioning. Our study is also limited by a considerable imbalance in gender distribution. Although the

predominantly male sample is reflective of the military population, it, nonetheless, may limit generalizability to female military personnel. Similarly, results might not generalize to military personnel with other professionals and/or in other branches of service; so, replication of these findings across military samples to confirm these findings would be beneficial. Despite these limitations, the current study provides important preliminary information regarding the potential positive effects of meaning in life on the mental health and social/occupational functioning of military personnel.

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