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ORIGINAL ARTICLE

Putting adversity in perspective: purpose in life moderates the link between childhood emotional abuse and neglect and adulthood depressive symptoms

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ABSTRACT

Background: Childhood emotional abuse and neglect is linked with a host of adverse outcomes later in life, including depression. However, potential psychological resources that may mitigate the adverse outcomes of childhood emotional abuse and neglect are not well-understood.

Aims: Drawing from the insight that having a sense of purpose can help individuals deal with setbacks and difficulties better, we propose that purpose in life can also help sufferers of childhood maltreatment cope more effectively and reduce the onset of depressive symptoms.

Methods: Participants were drawn from two large, nationally representative studies comprising a total of 3664 respondents. Purpose in life, childhood emotional abuse and neglect, and depressive symptoms were measured with validated scales.

Results: We found convergent evidence that purpose in life attenuates the effect of childhood emotional abuse and neglect on subsequent depressive symptoms across a range of measures of mood and depression.

Conclusions: The current study highlights the important role played by purpose in life in building resilience, coping against adverse life events, and psychological well-being.

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Childhood emotional abuse and neglect (CEAN) pertains to a category of childhood maltreatments that range from non-physical aggression to lack of sensitivity toward a child's needs (Spertus, Yehuda, Wong, Halligan, & Seremetis, 2003). CEAN victims typically feel rejected, ridiculed, terrorized, and isolated (Hart, 1988). The effects of CEAN tend to be insidious as the maltreatment is relatively subtle compared to other outright forms of physical abuse. Over time, CEAN victims may develop a sense of helplessness, which is rooted in cognitive schemas that regard the self as being unlovable, others as being insensitive and rejecting, and stressors as being immutable (Bowlby, 1982; Paredes & Calvete, 2014). Among the various types of childhood maltreatments, CEAN is most strongly linked to the development of depressive symptoms later in life (Fernando et al., 2014; Gibb, Chelminski, & Zimmerman, 2007; Nelson, Klumparendt, Doebler, & Ehring, 2017; Salokangas et al., 2019; Spertus et al., 2003). For instance, a meta-analysis by Nelson et al. (2017) found that the emotional abuse and neglect subfactors of childhood trauma most strongly predicted the development of severe, early-onset, treatment-resistant depression with a chronic course. CEAN is also associated with a variety of other adverse outcomes, including personality disorders, substance abuse, revictimization (Yehuda, Spertus, & Golier, 2001), and physical ailments ranging from recurrent headaches to gastrointestinal inflammation (e.g., Felitti, 1991; Moeller, Bachmann, & Moeller, 1993). Given the numerous studies attesting to CEAN as a risk factor for depression and various other problems, it would be an understatement to suggest that some urgency is needed in understanding how its harms might be mitigated.

We aim to make several contributions to our understanding of CEAN and depression through the current study. First, we note that traumatic experiences cause sufferers to fixate on the past (e.g., Alison & Cohen, 1998). Thus, we propose that purpose in life, which promotes goal-directedness and future orientation, can serve as a psychological resource in helping victims cope. Second, although people who suffer from CEAN-borne depressive symptoms may prefer to cope independently rather than go for treatment (Rickwood, Deane, & Wilson, 2007), there is a dearth of research that usefully informs sufferers on how their own recovery and healing can be managed. Where studies on CEAN are available, they tend to rely on psychiatric samples that are compromised by small sample sizes and high levels of comorbidity (Spertus et al., 2003), thus limiting our ability to generalize insights to and inform lay individuals. Therefore, the current study aims to simultaneously address these issues by examining, through a large-scale, nationally representative dataset, purpose in life as a basis of coping that the everyday, average CEAN sufferer can cultivate independently.

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Supplemental data for this article can be accessed here.

The buffering effects of purpose in life

Broadly, purpose in life pertains to having a sense of meaningful direction in life (McKnight & Kashdan, 2009), which is achieved when individuals, typically through reflection and introspection, come to see themselves as working towards important, long-term life pursuits (Ryff, 2017). Thus, having purpose guides the formulation of goals and the regulation of behavior such that there is sustained impetus and motivation to continue striving despite extant difficulties (Bronk, Leontopoulou, & McConchie, 2018; Locke & Latham, 2002). For instance, two individuals could face the same mundane or stressful tasks at a job, but the individual who regards the work as serving a meaningful purpose (e.g., income earned from the job can support his family, the task outputs can better the lives of the less fortunate, etc) is more likely to construe the experience positively, endure the aversive aspects of the work, and persist relative to the individual who does not see any purpose to the job.

Having purpose therefore enables life events to be meaningfully contextualized such that, when viewed from a broader perspective of intent and objective, the negative aspects of one's past experiences become diminished or regarded as valuable components of one's life journey towards important objectives. Indeed, individuals who perceive greater meaning report that their lives are more comprehensible and experience greater control and agency than individuals who do not (Antonovsky, 1993; DeCharms, 1968; Frankl, 1985; McKnight & Kashdan, 2009). Purpose in life can also facilitate the self-regulation needed for better mental health. Trauma victims often become "stuck" in the past as they fixate on how they could have prevented or avoided those past events (Alison & Cohen, 1998; Craighead, Miklowitz, & Craighead, 2013). People who are more effective at regulating the onset and intensity of thoughts and feelings associated with negative life experiences report having better mental health and overall well-being (Kotter-Grühn, Scheibe, Blanchard-Fields, & Baltes, 2009; Scheibe, Freund, & Baltes, 2007). Hence, the future-orientation of purpose in life can help victims curtail excessive rumination by shifting their focus away from the past, reengaging them with alternative, feasible goals, and channelling their attention elsewhere more productively (Gollwitzer, Heckhausen, & Steller, 1990; Wrosch, Scheier, Miller, Schulz, & Carver, 2003; Wrosch, Schulz, Miller, Lupien, & Dunne, 2007).

Consequently, compared to individuals with low purpose in life, purposeful individuals hold a generally more positive outlook on life, have greater confidence in handling life stressors, and are less discouraged in the face of setbacks (McKnight & Kashdan, 2009; Park & Baumeister, 2017). Studies show that having purpose is associated with the adoption of adaptive coping strategies that motivate direct tackling of stressors as opposed to avoidance strategies that prolong or even worsen stressors (Kim, Strecher, & Ryff, 2014; Schaefer et al., 2013). Purpose in life is also associated with reduced stress reactivity and anxiety (McKnight & Kashdan, 2009) and heightened recovery and resilience toward negative stimuli (Ishida & Okada, 2006; Schaefer et al., 2013). In turn, individuals who report having relatively more purpose in life have been observed to enjoy many positive health-related outcomes, such as reduced risk of Alzheimer's Disease (Boyle, Buchman, Barnes, & Bennett, 2010), reduced allostatic load (Zilioli, Slatcher, Ong, & Gruenewald, 2015), and overall greater subjective well-being (Ardelt, 2003).

In light of the beneficial effects of purpose in life in coping against the negative outcomes of life stressors, we postulate that having a high sense of purpose in life would likewise help CEAN victims buffer against subsequent depressive symptoms. Victims who can foster higher purpose in life would be empowered to make sense of and put aside their negative experiences while being imbued with greater confidence to tackle stressors effectively, thereby liberating them from negative thought patterns and curtailing the development of depressive symptoms.

The current study

The current study aims to test the prediction that purpose in life can attenuate the effects of CEAN on depressive symptoms. More specifically, we expect that the positive relationship between CEAN and depressive symptoms will be moderated by purpose in life such that depressive symptoms will be lower (higher) for individuals who report high (low) levels of purpose in life. Moreover, we sought to address the methodological concern that previous studies have primarily relied on small clinical samples by testing our predictions on two separate, large, and nationally representative datasets from the Biomarker Project of the Midlife in the United States (MIDUS 2: Biomarker Project; Ryff, Seeman, & Weinstein, 2010) and the Midlife in the United States Refresher (MIDUS Refresher; Ryff et al., 2016).

Method

Participants

Study 1

Study 1 consisted of 1054 adults from the MIDUS 2: Biomarker Project, which was conducted between 2004 and 2009 and is a subset of the original MIDUS 1 survey comprising more than 7108 non-institutionalized adults recruited through random digit sampling across the United States. Participants' demographic, health-related, socioemotional, and personality characteristics are summarized in Table 1.

Study 2

Study 2 consisted of a distinct sample of 2610 adults from the MIDUS Refresher, which was conducted between 2011 and 2014 with a younger cohort. Similar to MIDUS 1, participants were recruited through random digit sampling across the United States. In both studies, all households comprising at least one adult aged between 25 and 74 years were eligible for participation. Within eligible households, respondents were selected based on sex and age using probability methods. The data collection for both studies were approved by the Health Sciences IRBs at the University of Wisconsin-Madison. All participants provided written informed consent prior to participation.

Table 1. Descriptive statistics for demographics, health status, health behaviors, and personality characteristics in study 1 and study 2.

	Study 1		Study 2	
	M (*SD*)	Range	M (*SD*)	Range
Demographic				
Age (years)	58.04 (11.62)	35–86	52.16 (14.27)	23–76
Sex (% of male)	45.26%		46.82%	
Marital status (% of married)	72.24%		65.03%	
Education	7.74 (2.45)	1–12	7.91 (2.50)	1–12
Household Income per year (in USD)	76,672 (60,409)	0–200,000	84,506 (67,193)	0–300,000
Household Income (decile)	5.50 (2.87)	1–10	5.50 (2.88)	1–10
Health Status and Medication				
Number of chronic diseases	4.02 (2.94)	0–20	2.87 (3.12)	0–27
Self-rated physical health	2.30 (0.93)	1–5	2.43 (1.08)	1–5
Body mass index	29.18 (6.01)	14.99–60.39	28.89 (7.03)	15.05–93.00
Depression medication (% of yes)[a]	16%		–	
Depression medication on their own (% of yes)[b]	1.5%		0.1%	
Personality				
Openness to experience	2.96 (0.52)	1–4	2.94 (0.53)	1–4
Conscientious	3.40 (0.45)	1–4	3.37 (0.49)	1–4
Extraversion	3.13 (0.57)	1–4	3.07 (0.59)	1–4
Agreeableness	3.44 (0.50)	1–4	3.37 (0.53)	1–4
Neuroticism	2.03 (0.63)	1–4	2.14 (0.64)	1–4
Trait anxiety[c]	33.58 (8.82)	20–69	1.75 (1.22)	1–5
Predictors and Moderator				
Childhood emotional abuse[d]	7.96 (4.10)	5–25	1.96 (1.10)	1–4
Childhood emotional neglect[e]	9.69 (4.45)	5–25	1.94 (0.65)	1–4
Purpose in life	39.59 (6.51)	10–49	38.26 (7.08)	13–49
Criterions				
Depressive symptoms (WHO's CIDI-SF)	0.56 (1.69)	0–7	0.61 (1.76)	0–7
Depressive symptoms (CES-D)	8.02 (7.72)	0–49	–	–
General distress and anxiety symptoms	18.38 (6.50)	12–60	–	–
Negative affect	1.53 (0.52)	1.0–4.6	1.56 (0.61)	1–5

Note. SDs are shown in parentheses. Education attainment was rated on a scale of 1 (*No school*) to 12 (*Ph.D, ED. D, MD, LLB, LLD, JD, or other professional degree*). WHO's CIDI-SF: World Health Organization's composite international diagnostic interview (short form); CES-D: Center for Epidemiological Studies' depression inventory. Values were reported before imputation

[a]Data on total antidepressant use was not available in MIDUS Refresher.

[b]Participants' report of using antidepressants either without a doctor's prescription, in larger amounts than prescribed, or for a longer period than prescribed was available.

[c]Trait anxiety was measured by Spielberger's (1983) trait anxiety inventory in Study 1 and the frequency of worrying for the past 12 months in Study 2.

[d]Childhood emotional abuse in Study 1 was measured with the emotional abuse subscales of Bernstein and Fink's (1998) childhood trauma questionnaire (CTQ), while childhood emotional abuse in Study 2 was measured by asking participants how often their mother or father "insulted or swore at [them]; sulked or refused to talk to [them]; stomped out of the room; did or said something to spite [them]; smashed or kicked something in anger.

[e]Childhood emotional neglect in Study 1 was measured with the emotional neglect subscales of the CTQ, while childhood emotional neglect in Study 2 was measured with Rossi's (2001) Parental Affection Scale.

Measures

Childhood emotional abuse and neglect

In Study 1, the emotional abuse and emotional neglect subscales of Bernstein and Fink's (1998) childhood trauma questionnaire (CTQ) were used to assess participants' experience of CEAN. Apart from these specific subscales being directly of interest to our investigation, a meta-analysis has also found emotional abuse and neglect to be the two subscales out of the five in the CTQ that pose the highest risk factor for severe, early-onset, treatment-resistant depression (Nelson et al., 2017). Participants were asked to reflect on their experiences as a child and how much they agreed with statements related to emotional abuse and neglect (e.g., "People in my family said hurtful or insulting things to me") on a scale of 1 (never true) to 5 (very often true). Each subscale of emotional abuse ($\alpha = 0.88$) and emotional neglect ($\alpha = 0.89$) consisted of five statements. The psychometric properties of the CTQ have been extensively validated with independent samples (e.g., Scher, Stein, Asmundson, McCreary, & Forde, 2001; Spinhoven et al., 2014) and shown to be consistent with patient information derived from clinical interviews and records from child protective services (Bernstein et al., 2003).

In Study 2, childhood emotional abuse was assessed by asking participants how often their parent(s) "insulted or swore at [them]; sulked or refused to talk to [them]; stomped out of the room; did or said something to spite [them]; smashed or kicked something in anger." Following Poon and Knight's (2011) recommendations, emotional abuse was indexed by the highest frequency reported for either parent to avoid underestimation. Childhood emotional neglect was assessed with the 12-item parental affection questionnaire (Rossi, 2001). Participants reported the amount of understanding, care, love and affection, attention, effort, and support given by their parents on a scale of 1 (a lot) to 4 (not at all), with higher scores indicating higher childhood emotional neglect ($\alpha = 0.92$).

Purpose in life

The seven-item purpose in life subscale of Ryff's (1989) psychological well-being measure (see Table 2) was used to assess participants' purpose in life. Participants rated their

Table 2. Content and descriptive statistics for each item in the seven-item purpose in life subscale.

Item	M $(SD)_{Study\ 1}$	M $(SD)_{Study\ 2}$
1. I live life one day at a time and don't really think about the future (R)	2.86 (1.86)	3.00 (1.84)
2. I have a sense of direction and purpose in life	5.90 (1.30)	5.71 (1.39)
3. I don't have a good sense of what it is I'm trying to accomplish in life (R)	2.37 (1.66)	2.63 (1.77)
4. My daily activities often seem trivial and unimportant to me (R)	2.63 (1.74)	2.98 (1.76)
5. I enjoy making plans for the future and working to make them a reality	5.80 (1.28)	5.70 (1.30)
6. Some people wander aimlessly through life, but I am not one of them	5.88 (1.49)	5.81 (1.49)
7. I sometimes feel as if I've done all there is to do in life (R)	2.12 (1.58)	2.35 (1.67)

Note. Item 1, 3, 4, and 7 were reversed coded before computed as the overall purpose in life score.

agreement with specific statements (e.g., "I have a sense of direction and purpose in life") on a scale of 1 (strongly disagree) to 7 (strongly agree) ($\alpha_{Study1} = 0.69$; $\alpha_{Study2} = 0.74$).

Depressive symptoms and mood-related problems

Four measures were used to assess depressive symptoms and mood-related problems. The short form of the World Health Organization's composite international diagnostic interview (WHO's CIDI-SF; Kessler, Andrews, Mroczek, Ustun, & Wittchen, 1998) was used to measure participants' experience of symptoms associated with major depressive episodes during the past 12 months (e.g., "feel down on yourself, no good, or worthless," "lose interest in most things"). The scale consists of a series of diagnostic-specific measures based on the revised third edition of the Diagnostic and Statistical Manual of Mental Disorders (American Psychiatric Association, 1987). The test-retest reliability and clinical validity of the CIDI-SF has been well-established with good diagnostic sensitivity and specificity (Kessler, DuPont, Berglund, & Wittchen, 1999).

The Center for Epidemiological Studies' depression inventory (CES-D; Roberts & Vernon, 1983) was used as another measure of the severity of participants' depressive symptoms. Participants were asked to rate the extent to which they experienced 20 depressive symptoms (e.g., "I felt that I could not shake off the blues even with the help of my family and friends") during the past week on a scale of 0 (rarely or none of the time) to 3 (most or all of the time) ($\alpha_{Study1} = 0.89$).

The nonspecific depression subscale of Clark and Watson's (1991) mood and anxiety symptom questionnaire (MASQ) was used to assess the severity of participants' general distress and anxiety symptoms. Participants were asked to rate the extent to which they experienced 12 general distress and anxiety symptoms (e.g., "felt sad") during the past week on a scale of 1 (not at all) to 5 (extremely) ($\alpha_{Study1} = 0.90$).

The negative affect subscale of the Midlife Development Inventory (MIDI; Mroczek & Kolarz, 1998) was used to measure participants' experience of negative emotions. Participants were asked to rate how often they experienced 6 types of negative affectivity (i.e., "so sad nothing could cheer you up," "hopelessness," "nervous," "restless or fidgety," "that everything was an effort," and "worthless") over the past 30 days on a scale of 1 (all of the time) to 5 (none of the time) ($\alpha_{Study1} = 0.85$; $\alpha_{Study2} = 0.88$). Most of the scales were administered via an offline self-administered questionnaire, except for WHO's CIDI-SF which was measured through a telephone interview.

Control variables

We controlled for several confounding variables that have been linked to depressive symptoms, including demographic and socioeconomic status (SES; Anand, Esposito, & Villaseñor, 2018; Weinberger et al., 2018), personality (Allen et al., 2018), and health (e.g., Swami et al., 2007). Demographic control variables consisted of age, sex, marital status, while SES control variables consisted of education attainment, household income (Hartanto, Lee, & Yong, 2019) and the MacArthur scale of subjective social status (Adler, Epel, Castellazzo, & Ickovics, 2000).

To ascertain whether the buffering effect of purpose in life on depressive symptoms extends beyond the influence of personality traits, we controlled for the Big Five personality traits – extraversion, conscientious, agreeableness, neuroticism, and openness to experience – and trait anxiety. Controlling for neuroticism and trait anxiety accounts for the comorbidity of anxiety in depression and minimizes memory bias in anxious individuals (Mathews, Mogg, May, & Eysenck, 1989; Reidy & Richards, 1997). The Big Five personality traits were assessed by asking participants to rate how well each of 25 adjectives described them on a scale of 1 (not at all) to 4 (a lot). The scale was developed for use in the MIDUS by combining a set of existing personality inventories and was validated in a study comprising 1000 participants (Lachman & Weaver, 1997). In Study 1, trait anxiety was measured using Spielberger's (1983) trait anxiety inventory, which consisted of 20 items and was rated on a scale of 1 (almost never) to 4 (almost always). As the trait anxiety inventory was not administered in the MIDUS Refresher, trait anxiety was indexed by the frequency of worrying over the past 12 months for Study 2.

For health status, we used the number of chronic diseases (e.g., diabetes) experienced in the past 12 months and body mass index (BMI) as indicators of objective health. We also controlled for subjective health by using participants' ratings of their physical health on a scale of 1 (poor) to 5 (excellent). Lastly, we controlled for participants' use of depression medications (e.g., selective-serotonin reuptake inhibitors, serotonin modulators, tricyclics, phenothiazines).

Data analysis

Moderation analyses were conducted using the SPSS PROCESS macro (model 1; Hayes, 2018) to examine the moderating role of purpose in life on the relationship between CEAN and depressive symptoms. Ordinary least squares regressions were used to estimate the coefficients of each predictor and their interactions. In Study 1, depressive symptoms was indexed by (1) WHO's CIDI-SF, (2) CES-D,

(3) the nonspecific depression subscale of the MASQ, and (4) the negative affect subscale of the MIDI. In Study 2, depressive symptoms was indexed by two available depression-related measures, WHO's CIDI-SF and the MIDI (see Supplementary Materials for zero-order correlations among the main variables). Separate moderation analyses were conducted for childhood emotional abuse and childhood emotional neglect in Study 1 to minimize multicollinearity. In each analysis, we controlled for age, sex, marital status, education attainment, household income, subjective SES, openness to experience, conscientiousness, extraversion, agreeableness, neuroticism, trait anxiety, number of chronic diseases, self-rated health, BMI, and depression medication. When a significant two-way interaction was observed, simple slopes were computed to probe the interaction effect.

Missing values were imputed using the expectation-maximization (EM) algorithm (Little & Rubin, 1989), which were found to constitute 0.3% and 1.9% of our total values in Studies 1 and 2, respectively. Collinearity statistics did not show any evidence of multicollinearity.

Results

Study 1

Our moderation analyses on childhood emotional abuse and purpose in life are summarized in Table 3. As predicted, we consistently observed significant childhood emotional abuse × purpose in life interactions on depressive symptoms across the four depression-related measures; (a) WHO's CIDI-SF (β = –0.114, 95%CI = [–0.009, –0.003], p < 0.001), (b) CES-D (β = –0.058, 95% CI = [–0.023, –0.005], p = 0.003), (c) MASQ (β = –0.054, 95%CI = [–0.019, –0.002], p = 0.014), and (d) MIDI (β = –0.107, 95%CI = [–0.002, –0.001], p < 0.001). We performed simple slopes analyses to probe the significant two-way interactions (Figure 1) and found that for participants with low purpose in life, childhood emotional abuse was significantly and positively associated with depressive symptoms in adulthood across all four depression-related measures; (a) WHO's CIDI-SF (B = 0.075, SE = 0.014, 95%CI = [0.047, 0.102], p < 0.001), (b) CES-D (B = 0.135, SE = 0.044, 95%CI = [0.050, 0.220], p = 0.002), (c) MASQ (B = 0.139, SE = 0.041, 95%CI = [0.059, 0.219], p < 0.001), and (d) MIDI (B = 0.018, SE = 0.004, 95%CI = [0.011, 0.025], p < 0.001). In contrast, among participants with high purpose in life, childhood emotional abuse was not significantly associated with depressive symptoms in adulthood; (a) WHO's CIDI-SF (B = –0.002, SE = 0.018, 95%CI = [–0.038, 0.033], p = 0.908), (b) CES-D (B = –0.044, SE = 0.056, 95%CI = [–0.154, 0.065], p = 0.427), (c) MASQ (B = –0.001, SE = 0.052, 95%CI = [–0.104, 0.102], p = 0.981), and (d) MIDI (B = –0.004, SE = 0.005, 95%CI = [–0.013, 0.005], p = 0.394).

Our moderation analyses for childhood emotional neglect and purpose in life are summarized in Table 4. Similar to our findings for childhood emotional abuse, we also observed significant childhood emotional neglect × purpose in life interactions on depressive symptoms in adulthood across the four depression-related measures; (a) WHO's CIDI-SF (β = –0.063, 95%CI = [–0.006, –0.000], p = 0.028), (b) CES-D (β = –0.051, 95%CI = [–0.021, –0.003], p = 0.007), (c) MASQ (β = –0.064, 95%CI = [–0.021, –0.004], p = 0.003), and (d) MIDI (β = –0.083, 95%CI =

Table 3. Model summaries with two-way interactions between childhood emotional abuse and purpose in life.

	Study 1				Study 2	
	Major depression (WHO's CIDI-SF)	Depressive symptoms (CESD)	General distress & depressive symptoms (MASQ)	Negative affect (MIDI)	Major depression (WHO's CIDI-SF)	Negative affect (MIDI)
Main effect						
Childhood emotional abuse	0.036 (0.013)*	0.045 (0.040)	0.068 (0.037)†	0.007 (0.003)*	0.059 (0.030)†	0.016 (0.009)†
Purpose in life	–0.016 (0.009)†	–0.110 (0.029)**	–0.038 (0.027)	–0.005 (0.002)*	–0.028 (0.006)**	–0.013 (0.002)**
Two-way interaction						
Childhood emotional abuse × purpose in life	–0.006 (0.002)**	–0.014 (0.005)*	–0.011 (0.004)*	–0.002 (0.000)**	–0.011 (0.004)*	–0.006 (0.001)**
Covariates						
Age	–0.014 (0.005)*	–0.028 (0.015)†	–0.042 (0.014)*	–0.006 (0.001)**	–0.009 (0.002)**	–0.006 (0.001)**
Sex	–0.198 (0.102)†	0.761 (0.315)*	0.219 (0.296)	0.007 (0.025)	–0.243 (0.069)**	–0.027 (0.020)
Marital status	–0.268 (0.114)*	–1.209 (0.353)**	–0.660 (0.332)	–0.009 (0.028)	–0.134 (0.076)†	–0.018 (0.022)
Education attainment	–0.001 (0.021)	–0.026 (0.065)	0.159 (0.061)*	0.003 (0.005)	–0.014 (0.015)	0.010 (0.004)*
Household income	0.013 (0.019)	0.127 (0.060)*	0.070 (0.056)	–0.003 (0.005)	–0.003 (0.014)	–0.005 (0.004)
Subjective SES	0.047 (0.032)	0.084 (0.100)	0.287 (0.094)*	0.019 (0.008)*	–0.035 (0.020)	–0.019 (0.006)*
Openness to experience	0.234 (0.111)*	0.632 (0.344)†	0.175 (0.323)	0.071 (0.028)*	0.246 (0.073)*	0.073 (0.021)*
Conscientiousness	0.127 (0.117)	0.221 (0.361)	0.171 (0.339)	–0.028 (0.029)	0.111 (0.075)	–0.069 (0.022)*
Extraversion	–0.046 (0.109)	–0.016 (0.339)	0.403 (0.318)	–0.038 (0.027)	–0.096 (0.070)	–0.064 (0.020)*
Agreeableness	0.110 (0.114)	–0.434 (0.351)	–0.060 (0.330)	–0.025 (0.028)	–0.008 (0.075)	0.063 (0.022)*
Neuroticism	0.235 (0.095)*	–0.827 (0.293)*	–0.677 (0.275)*	0.301 (0.023)**	0.173 (0.058)*	0.284 (0.017)**
Trait Anxiety	0.033 (0.007)**	0.642 (0.022)**	0.507 (0.021)**	0.013 (0.002)**	0.315 (0.029)**	0.083 (0.008)**
Number of chronic diseases	0.084 (0.002)**	0.148 (0.060)*	0.081 (0.056)	0.013 (0.005)*	0.053 (0.012)**	0.033 (0.003)**
Self-rated health	0.114 (0.058)*	0.614 (0.179)**	0.293 (0.168)†	0.017 (0.014)	0.118 (0.035)*	0.020 (0.010)†
BMI	–0.001 (0.008)	0.014 (0.025)	0.014 (0.023)	0.002 (0.002)	0.002 (0.005)	0.002 (0.001)
Depression medication	–0.091 (0.034)	–0.889 (0.420)*	–0.348 (0.394)	0.024 (0.034)	0.490 (0.267)†	0.308 (0.078)**

Note: Values reflect unstandardized coefficient estimates with standard errors in the parentheses. Sex was dummy coded with female as reference. Marital status was dummy coded with unmarried as reference.

WHO's CIDI-SF: World Health Organization's composite international diagnostic interview (short form); CES-D: Center for Epidemiological Studies' depression inventory; MASQ: Mood and Symptom Questionnaire; MIDI: Midlife Development Inventory.

†p <0.10, *p < 0.05, **p < 0.001.

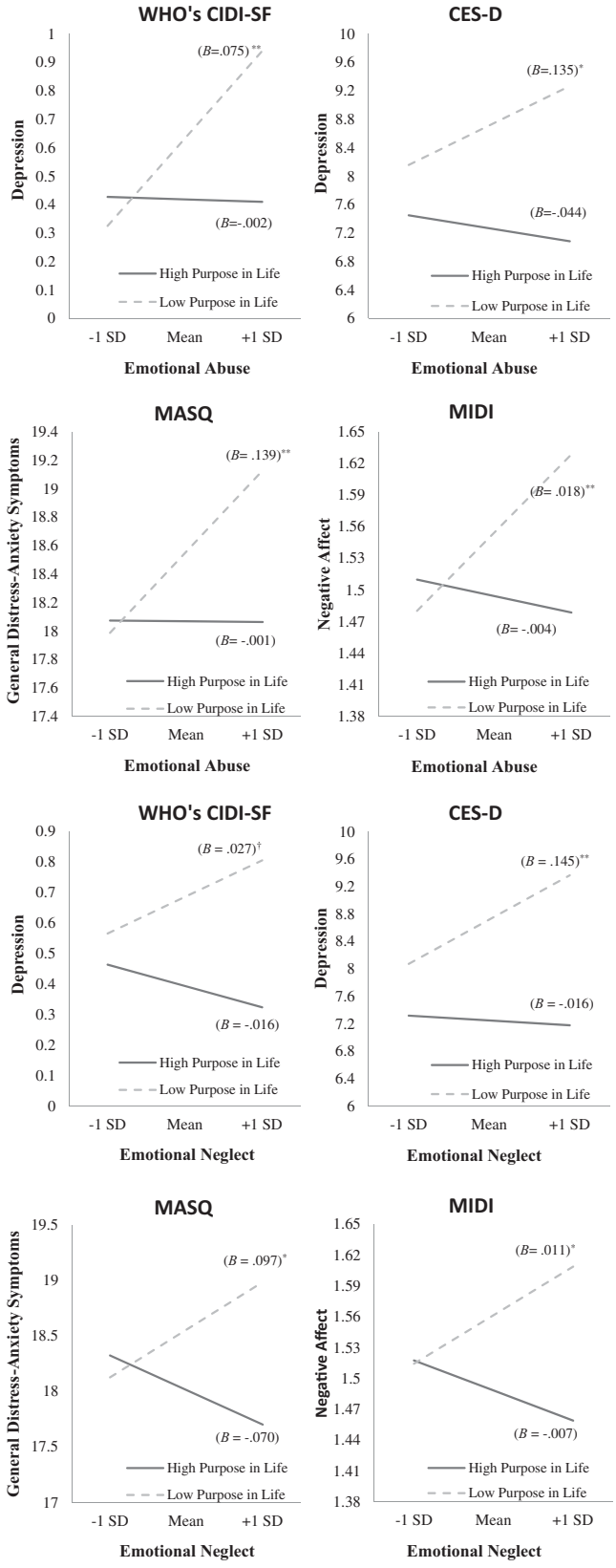

Figure 1. Simple slopes (i.e., unstandardized coefficients) of childhood emotional abuse and neglect predicting depressive symptoms and negative affect when purpose in life was at least 1 *SD* above and below the mean in Study 1. $^{*}p < 0.05$, $^{**}p < 0.001$.

[–0.002, –0.001], $p < 0.001$). Simple slopes analyses (Figure 2) revealed that for participants with low purpose in life, the positive relationship between childhood emotional neglect and depressive symptoms remained either significant or marginally significant when measured with (a) WHO's CIDI-SF ($B = 0.027$, $SE = 0.014$, 95%CI = [0.000, 0.054], $p = 0.053$), (b) CES-D ($B = 0.145$, $SE = 0.043$, 95%CI = [0.062, 0.228], $p < 0.001$), (c) MASQ ($B = 0.097$, $SE = 0.040$, 95%CI = [0.018, 0.175], $p = 0.016$), and (d) MIDI ($B = 0.011$, $SE = 0.003$, 95%CI = [0.004, 0.017], $p = 0.002$). In contrast, among participants with high purpose in life, childhood emotional neglect was not significantly associated with depressive symptoms in adulthood across all depression-related measures; (a) WHO's CIDI-SF ($B = -0.016$, $SE = 0.016$, 95%CI = [–0.048,.016], $p = 0.334$), (b) CES-D ($B = -0.016$, $SE = 0.050$, 95%CI = [–0.113, 0.082], $p = 0.750$), (c) MASQ ($B = -0.070$, $SE = 0.047$, 95%CI = [–0.161, 0.215], $p = 0.134$), and (d) MIDI ($B = -0.007$, $SE = 0.004$, 95%CI = [–0.014, 0.001], $p = 0.100$).

Study 2

Consistent with Study 1, we observed significant childhood emotional abuse × purpose in life interactions on depressive symptoms from all available measures, specifically the WHO's CIDI-SF ($\beta = -0.050$, 95%CI = [–0.019, –0.003], $p = 0.005$) and MIDI ($\beta = -0.074$, 95%CI = [–0.008, –0.003], $p < 0.001$). Furthermore, our simple slopes analyses showed that among participants with low purpose in life, childhood emotional abuse was positively associated with depressive symptoms on the WHO's CIDI-SF ($B = 0.137$, $SE = 0.040$, 95%CI = [0.059, 0.215], $p < 0.001$) and MIDI ($B = 0.056$, $SE = 0.012$, 95%CI = [0.033, 0.079], $p < 0.001$). In contrast, among participants with high purpose in life, childhood emotional abuse was not associated with depressive symptoms; WHO's CIDI-SF ($B = -0.019$, $SE = 0.042$, 95%CI = [–0.103, 0.064, $p = 0.648$) and MIDI ($B = -0.024$, $SE = 0.012$, 95%CI = [–0.048, 0.000], $p = 0.050$). Similarly, we also consistently observed significant childhood emotional neglect × purpose in life interactions on depressive symptoms in adulthood; WHO's CIDI-SF ($\beta = -0.040$, 95%CI = [–0.002, –0.000], $p = 0.025$) and MIDI ($\beta = -0.073$, 95%CI = [–0.001, –0.000], $p < 0.001$). Among participants with low purpose in life, there was a significant positive relationship between childhood emotional neglect and depressive symptoms; WHO's CIDI-SF ($B = 0.017$, $SE = 0.006$, 95%CI = [0.005, 0.028], $p = 0.004$) and MIDI ($B = 0.009$, $SE = 0.002$, 95%CI = [0.006, 0.012], $p < 0.001$). In contrast, among participants with high purpose in life, childhood emotional neglect was not associated with depressive symptoms in adulthood; WHO's CIDI-SF ($B = -0.001$, $SE = 0.006$, 95%CI = [–0.013, 0.011], $p = 0.881$) and MIDI ($B = -0.002$, $SE = 0.002$, 95%CI = [–0.006, 0.001], $p = 0.211$).

Discussion

Using two large samples of middle-aged adults well distributed across the United States, we consistently found significant interactions between CEAN and purpose in life on depressive symptoms. More specifically, we found that purpose in life attenuated the relationship between CEAN and various indices of depressive symptoms experienced in

Table 4. Model summaries with two-way interactions between childhood emotional neglect and purpose in life.

	Study 1				Study 2	
	Major depression (WHO's CIDI-SF)	Depressive symptoms (CESD)	General distress & depressive symptoms (MASQ)	Negative affect (MIDI)	Major depression (WHO's CIDI-SF)	Negative affect (MIDI)
Main effect						
Childhood emotional Neglect	0.006 (0.012)	0.065 (0.036)†	0.013 (0.033)	0.002 (0.003)*	0.008 (0.005)†	0.003 (0.001)*
Purpose in life	−0.022 (0.009)*	−0.113 (0.029)**	−0.042 (0.027)	−0.006 (0.002)*	−0.027 (0.006)**	−0.013 (0.002)**
Two-way interaction						
Childhood emotional Abuse × purpose in Life	−0.003 (0.001)*	−0.012 (0.005)*	−0.013 (0.004)*	−0.001 (0.000)**	−0.001 (0.001)*	−0.001 (0.000)**
Covariates						
Age	−0.017 (0.005)**	−0.031 (0.015)*	−0.047**	−0.007 (0.001)**	−0.009 (0.002)**	−0.006 (0.001)**
Sex	−0.237 (0.102)*	0.731 (0.313)*	0.148 (0.295)	0.001 (0.025)	−0.226 (0.070)*	−0.019 (0.020)
Marital status	−0.265 (0.116)*	−1.176 (0.354)**	−0.654 (0.332)*	−0.007 (0.028)	−0.133 (0.076)†	0.018 (0.022)
Education Attainment	−0.003 (0.021)	−0.023 (0.065)	0.156 (0.061)*	0.002 (0.005)	−0.015 (0.015)	0.009 (0.004)*
Household income	0.010 (0.020)	0.123 (0.060)*	0.065 (0.056)	−0.001 (0.005)	−0.006 (0.014)	−0.007 (0.004)
Subjective SES	0.059 (0.032)	0.105 (0.100)	0.312 (0.094)**	0.022 (0.008)*	−0.033 (0.020)	−0.018 (0.006)*
Openness to experience	0.262 (0.112)*	0.628 (0.344)†	0.222 (0.323)	0.076 (0.029)*	0.251 (0.073)*	0.074 (0.021)**
Conscientiousness	0.131 (0.118)	0.216 (0.361)	0.187 (0.340)	−0.027 (0.029)	0.112 (0.075)	−0.070 (0.022)*
Extraversion	−0.024 (0.111)	−0.003 (0.338)	0.424 (0.318)	−0.034 (0.027)	−0.078 (0.070)	−0.056 (0.020)*
Agreeableness	0.108 (0.116)	−0.316 (0.354)	−0.043 (0.332)	−0.021 (0.029)	−0.002 (0.076)	0.067 (0.022)*
Neuroticism	0.256 (0.096)*	−0.802 (0.292)*	−0.635 (0.275)*	0.306 (0.024)**	0.183 (0.058)*	0.287 (0.017)**
Trait Anxiety	0.034 (0.007)**	0.637 (0.023)**	0.508 (0.021)**	0.013 (0.002)**	0.314 (0.029)**	0.082 (0.008)**
Number of chronic Diseases	0.083 (0.019)**	0.156 (0.059)*	0.094 (0.056)†	0.015 (0.005)*	0.054 (0.012)**	0.033 (0.003)**
Self-rated health	0.112 (0.059)†	0.604 (0.179)**	0.296 (0.169)†	0.016 (0.014)	0.120 (0.035)*	0.021 (0.010)*
BMI	0.002 (0.008)	0.017 (0.025)	0.017 (0.023)	0.003 (0.002)	0.002 (0.005)	0.002 (0.001)
Depression medication	−0.128 (0.137)	−0.900 (0.420)*	−0.405 (0.394)	0.017 (0.034)	0.527 (0.267)*	0.322 (0.078)*

Note: Values reflect unstandardized coefficient estimates with standard errors in the parentheses. Sex was dummy coded with female as reference. Marital status was dummy coded with unmarried as reference.
WHO's CIDI-SF: World Health Organization's composite international diagnostic interview (short form); CES-D: Center for Epidemiological Studies' depression inventory; MASQ: mood and symptom questionnaire; MIDI: Midlife Development Inventory.
†p <0.10, *p < 0.05, **p < 0.001.

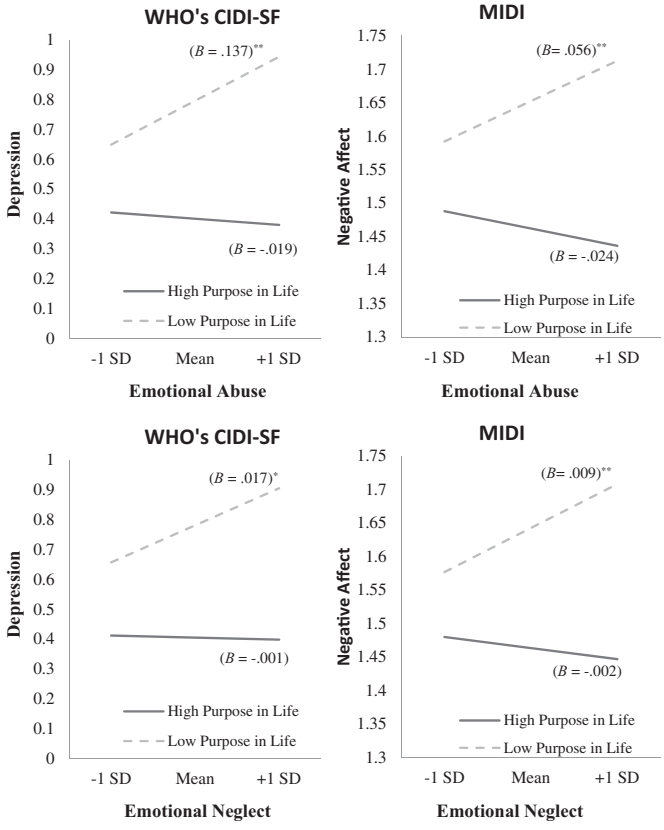

Figure 2. Simple slopes (i.e., unstandardized coefficients) of childhood emotional abuse and neglect predicting depressive symptoms and negative affect when purpose in life was at least 1 *SD* above and below the mean in Study 2.
†p <0.10, *p < 0.05, **p < 0.001.

adulthood. Among individuals with low purpose in life, the experience of emotional abuse or emotional neglect during childhood was associated with more depressive symptoms, whereas for individuals with high purpose in life, there was no relationship between the experience of emotional abuse or emotional neglect during childhood and depressive symptoms. These findings lend support to our postulation that purpose in life is associated with greater resilience against the development of depressive symptoms associated with CEAN.

Our results are also consistent with the literature on subjective well-being and self-regulation, which stresses that the abandonment of unattainable strivings (e.g., trying to change the past) and reengagement of effort in other feasible goals promote better mental and physical health (e.g., Wrosch et al., 2003; Wrosch et al., 2007). Studies reveal that people who are more successful at self-regulation have less dysfunctional mental preoccupations and better psychological and physical well-being, including the reduction of depressive symptoms (e.g., Kotter-Grühn et al., 2009; Wrosch et al., 2003; Wrosch et al., 2007; Vitaliano, DeWolfe, Maiuro, Russo, & Katon, 1990). Thus, effective self-regulation, particularly through focal shifts from the past to the future and reengagement with forward-looking goals, may be a key mechanism through which purpose in life promotes mental health for CEAN victims. However, although our findings are consistent with the speculation that the goal-directed and future-oriented nature of purpose in life can help CEAN victims with goal regulation, we did not actually investigate this proposed mechanism. Further research, in particular

experiments testing the effectiveness of interventions and the dynamics of purpose, are warranted to confirm the causal pathways that underlie purpose and better mental health.

Furthermore, the use of large and nationally representative samples increases our confidence that lay individuals can benefit greatly from fostering a purposeful approach to life. The moderating effect of purpose in life persisted even after controlling for demographic variables, socioeconomic status, personality traits, health status, and use of depression medication. This impressively attests to the effectiveness of purpose in life, especially when personality traits such as neuroticism and extraversion have been documented to covary with both purpose in life and depressive symptoms (Grant, Langan-Fox, & Anglim, 2009; Kotov, Gamez, Schmidt, & Watson, 2010). These results present robust evidence for purpose in life as a buffer against depressive symptoms as well as other negative outcomes of adverse life events such as CEAN.

Practical and theoretical implications

Our study marks the first attempt at extending the utility of purpose in life to the domain of CEAN and subsequent depressive episodes in adulthood. Drawing from insights of the purpose in life literature, we predicted and then provided evidence that fostering a sense of purpose can be a key intervention against depression for CEAN victims. As such, a practical next step would be to investigate the various ways in which purpose in life can be cultivated in CEAN victims, especially since studies have suggested that victims are at risk of having less purpose in life (Hill, Turiano, & Burrow, 2018). The development of purpose-driven interventions will likely involve teaching victims to introspectively reflect on their directions in life, identify meaningful goals to pursue, and view their problems within the context of a bigger picture as shaped by their broader life endeavors. The practical applications of purpose in life, in particular concrete steps that people can take to achieve higher levels of meaning and direction, should be further examined.

It is interesting to note that some of our findings, especially for emotional neglect in childhood, indicate that purpose in life may not only buffer (i.e., prevent an increase in) the incidence of depressive symptoms, but even reduce them such that victims of childhood maltreatment with high purpose in life may enjoy decrements in negative mood or gains in positive mood. This suggests that individuals with high purpose in life can potentially feed off their challenges and emerge even stronger with better psychological well-being than individuals facing fewer hurdles in life. Having a direction in life driven by meaningful goals helps to structure and guide the overall narrative of one's life, thereby allowing hardships experienced along the way to be co-opted into one's life story. This can contribute to one's belief in the meaning and significance of their individual life path, fortify their resolve to continue striving, and lead to even better psychological coping against past and future stressors (Antonovsky, 1993; Selvaraj & Bhat, 2018). Indeed, studies have shown that purpose in life tends to develop when one has experienced and reflected upon significant life events (Hill, Allemand, & Roberts, 2013; Ryff, 2017), and people have been documented to derive greater meaning out of negative life experiences than positive ones (Tov & Lee, 2016). Further research can examine the role played by purpose in life in turning one's difficulties into strength and resilience against subsequent life stressors, thereby extending our understanding of how purpose contributes to psychological well-being.

Limitations

Although the current study utilized two large samples and was able to rule out numerous confounding factors, some limitations exist. The cross-sectional design of the current study necessitates that causal inferences be derived with caution. For instance, although the significant interactions between purpose in life and CEAN on depressive symptoms experienced in adulthood suggest that purpose in life reduces depressive symptoms, unforeseen variables may also account for these effects. Similarly, although the psychometric properties of Bernstein and Fink's (1998) CTQ have been extensively validated in a number of independent samples (e.g., Scher et al., 2001; Spinhoven et al., 2014), it is possible that the recall nature of our CEAN measures might be confounded by participants' current depression or feelings of meaninglessness. It is also noteworthy that the use of WHO's CIDI-SF as a measure of depressive symptoms is based on the older *DSM-III-TR*. Moreover, most of our participants on average experienced relatively low emotional abuse and neglect. Lastly, given that the current investigation is based solely on relatively older American samples, further research should strive to replicate our results with samples from other populations in order to establish generalizability.

Conclusion

By demonstrating that purpose in life can serve as a potential buffer against depressive symptoms characteristic of CEAN, the current study highlights the importance of purpose in life in building resilience, coping against adverse life events, and psychological well-being. Our study importantly attests to the viability of fostering a greater sense of purpose for anyone who might be struggling with CEAN or other negative life experiences. Our findings can therefore inform and engender further research into interventions that mitigate the psychological harms of adverse life events and also provide, more broadly, insights on how a purpose-driven life may contribute to perceptions of a life well-lived despite its difficulties.

Disclosure statement

No potential conflict of interest was reported by the authors.

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