


# Contrasting Effects of Finding Meaning and Searching for Meaning, and Political Orientation and Religiosity, on Feelings and Behaviors During the COVID-19 Pandemic

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## Abstract

Perceiving life as meaningful can buffer against negative experiences, whereas searching for meaning in life is often associated with negative outcomes. We examined how these individual differences, along with religiosity and political orientation, are associated with feelings and health-related behaviors during the COVID-19 pandemic ( $N = 7,220$ ; U.S. nationally representative sample). Conservatism and religiosity predicted less negative effect; conservatives (but not the highly religious) were less likely to engage in preventive actions such as wearing face masks and social distancing. Controlling for political orientation, religiosity, and demographics, the presence of meaning in life predicted less negative affect and greater healthy preventive actions, whereas searching for meaning predicted greater negative affect and more preventive and risky health behaviors. Thus, the perception that life is meaningful not only predicts an individual's emotional well-being but is also associated with beneficial actions that can help protect others from the spread of the coronavirus.

## Keywords

COVID-19 pandemic, meaning in life, well-being, politics, religion, healthy behaviors

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“Those who have a ‘why’ to live, can bear with almost any ‘how.’”

—Viktor Frankl (1963)

In the midst of the Holocaust, Viktor Frankl, the founder of logotherapy and one of the most well-known Holocaust survivors, noticed that those who possessed a sense of meaning and purpose in life were more likely to survive than those who did not see their lives as part of a larger picture with a sense of purpose. Frankl also believed that searching for meaning in life was a fundamental human motivation, one in which people should engage. In recent decades, psychologists have relied on Frankl's theories and have distinguished the *presence of meaning* in life from the *search for meaning* in life as separate constructs that have been measured as continuous individual differences (Steger et al., 2006). Much of this research has shown that the presence of meaning in life is linked to positive outcomes, whereas the search for meaning in life is related to negative outcomes (Cohen & Cairns, 2012; Steger et al., 2006; Steger, Kashdan, et al., 2008).

Those who perceive their lives as meaningful tend to report greater life satisfaction and positive emotions, have

better health, and even live longer than those who do not find meaning in their lives (Boyle et al., 2009, 2010; Kim et al., 2013, 2014; Reker et al., 1987; Zika & Chamberlain, 1987). Meaning and purpose in life have been linked to greater recovery following highly stressful and traumatic situations (Steger, Frazier, & Zacchanini, 2008). Theoretically, a global sense of meaning in life entails the ability to make connections, find cohesion, and integrate current events into the larger framework of one's life (King et al., 2016; Park, 2010). During times of disaster, stress, and crisis, the perception that life is meaningful can provide a sense of stability. The potential beneficial and palliative effects of meaning in life are particularly important to study during the coronavirus disease 2019 (COVID-19) pandemic, which has increased fear,

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worry, and concern, and has threatened the health, well-being, and financial security of people all over the globe.

Those who are searching for meaning in life do not report such positive benefits. Searching for meaning has been conceptualized as people's attempt to increase or augment their understanding of their life's significance and purpose (Steger, Kashdan, et al., 2008). People who are searching for meaning in their lives likely have a hard time coping with tragedies and making sense of pandemics (e.g., "why does one neighbor live while another one dies?"). Indeed, research has shown that people who search more for meaning in life than those who search less tend to report higher depression, negative emotions, and neuroticism and lower levels of life satisfaction and self-esteem (Steger et al., 2006; Steger, Kashdan, et al., 2008).

When examining the effect of meaning in life on well-being and behaviors, it is important to consider the range of variables that are relevant to meaning in life that might also affect well-being and behaviors. Standard demographic variables such as age, gender, race/ethnicity, education, and income are often considered as potential confounds or relevant influences. In this specific context, it is particularly important to additionally consider the potential effects of religiosity and political orientation as these variables have been identified as important correlates of meaning in life (Newman et al., 2019; Van Tongeren et al., 2013). Religiosity consistently predicts greater meaning in life, and theories posit that religion is a source of meaning in life (Chamberlain & Zika, 1992; Ivztan et al., 2013; Steger & Frazier, 2005). Conservatives find more meaning in their lives than liberals (Newman et al., 2019), and the assumption in prior research has been that political orientation causes well-being (Napier & Jost, 2008; Schlenker et al., 2012; Wojcik et al., 2015).

Moreover, these constructs are particularly relevant during the COVID-19 pandemic as they could influence various feelings and behaviors. For instance, religious people often believe that God has a plan for their lives and is in control, which provides a framework to make sense of events that are outside of their control (Newman & Graham, 2018). This ultimately leads to greater well-being (e.g., lower stress) but could also lead to a lower frequency of preventive actions, such as washing hands and social distancing. If God already has a plan, current actions might be deemed as unnecessary.

Political ideologies have also played an important role during the COVID-19 pandemic as many health recommendations have been highly politicized, particularly in the United States (Lerer, 2020). Generally speaking, some American liberal voices have emphasized the potential devastating health outcomes of the coronavirus, whereas American conservative politicians have focused on the negative economic effects of shutting down businesses (Crenshaw, 2020). Likewise, some conservative voices believe that liberals are overestimating the health risks, and former President Trump and former Vice President Pence have downplayed the severity of the pandemic (e.g., refusing to get tested, refusing to

wear facemasks, etc.). The belief that COVID-19 is not very serious likely reduces feelings of stress while simultaneously reducing preventive actions.

## Goals and Hypotheses

The goal of the present study was to determine if individual differences in perceptions of meaning in life, religiosity, and political orientation are associated with people's negative feelings and with health behaviors that could either protect or harm respondents and other members of society during the COVID-19 pandemic. Of particular importance, an examination of feelings and behaviors during the COVID-19 pandemic offers the novel ability to extend theoretical research on meaning in life. The COVID-19 pandemic is a unique disaster in that it has truly affected people all across the globe. Prior research that has examined meaning in life during times of crises has focused on individual calamities or disasters that have affected a subpopulation (e.g., Weber et al., 2020; Winger et al., 2016). Consequently, much of the literature on meaning in life has focused on feelings and actions that predominantly influence the individual (e.g., Kim et al., 2014; Steger et al., 2006). A study during times of the COVID-19 pandemic offers the means to study preventive health behaviors, such as practicing social distancing and wearing face masks, which influence the risk not only of the individual but also of other community members in contracting the virus in an ongoing manner.

We hypothesize that the presence of meaning in life predicts lower negative affect and the search for meaning in life predicts greater levels of negative affect during the onset of the pandemic. Prior research has shown that the presence of meaning in life is negatively associated with global reports of negative affect (Steger et al., 2006), global evaluations of the anxiety and depression facets of neuroticism (Steger, Kashdan, et al., 2008), and health anxiety (Yek et al., 2017). In these same studies, searching for meaning in life was positively associated with each of these measures. Each of these studies utilized cross-sectional methods in which participants were asked to reflect on an extended period of time. Although all variables were measured at the same time, the presence and search for meaning in life were assumed to have a causal or predictive effect on negative affect. In our panel design study, participants completed measures of meaning in life before negative affect, consistent with a predictive model. Thus, we expected the direction of our effects to be consistent with prior research, namely that the presence of meaning in life would predict lower negative affect and the search for meaning in life would predict greater negative effect during the pandemic.<sup>1</sup> Moreover, because of the dire health consequences of the coronavirus, anxiety about people's health was likely chronically accessible when people made judgments about their negative feelings. We, therefore, predicted that our results would align with prior findings concerning health anxiety (Yek et al., 2017).

We also hypothesized that the presence of meaning in life would predict greater adherence to social distancing behaviors and other behaviors that could influence their health and reduce the spread of the coronavirus. Prior research has shown that the presence of meaning in life is positively associated with better health and longevity (Boyle et al., 2009, 2010; Kim et al., 2013, 2014; Reker et al., 1987; Zika & Chamberlain, 1987). Purpose in life has been shown to predict higher rates of obtaining cholesterol tests, colonoscopies, prostate exams, and mammograms (Kim et al., 2014). These findings suggest that people who find meaning in their lives tend to care about their own health. In addition to protecting oneself from the coronavirus, social distancing behaviors could reduce the risk of others getting the virus. There are a few reasons why people who find meaning in their lives would engage in behaviors that could help protect others from the spread of the virus. The presence of meaning in life is positively related to the trust and altruism facets of the personality trait agreeableness and the discipline facet of the trait of conscientiousness (Steger, Kashdan, et al., 2008). The presence of meaning in life could also engender actions that focus on the well-being of other members of society because meaning in life entails a sense of coherence and connectedness to others (Costin & Vignoles, 2020; George & Park, 2016; Heintzelman et al., 2013; Martela & Steger, 2016). Focusing on other people should increase adherence to social distancing guidelines. Thus, we predicted the presence of meaning in life would predict higher levels of engagement in behaviors that would limit the spread of the coronavirus.

We were less certain about our predictions about the effect of searching for meaning in life on health behaviors. Some research suggests that searching for meaning would lead to laudable health behaviors. For example, searching for meaning in life is positively related to self-reports of self-sacrifice (Dugas et al., 2016) and heroism motivation (Igou et al., 2018). To the extent to which engagement in social distancing behaviors is viewed as sacrificial and heroic, we would expect searching for meaning in life to lead to behaviors that would benefit society. In addition, searching for meaning is negatively related to dogmatism (Steger, Kashdan, et al., 2008). Dogmatic beliefs might make people less likely to seriously consider the recommendations and advice from health experts. Thus, searching for meaning in life might lead to greater adherence to the rules.

Alternatively, searching for meaning in life might predict greater levels of risky or harmful behaviors. Those who search for meaning in life tend to score high in sensation seeking (Schumpe et al., 2020) and curiosity (Steger, Kashdan, et al., 2008). This means they might be more likely to dismiss warnings and engage in risky behaviors that involve close contact with other people. Furthermore, searching for meaning is negatively related to self-control (Li et al., 2019), which suggests that these individuals might find it hard to remain at home and social distance. In light of these fairly divergent findings, we examined the relationship

between searching for meaning in life and health behaviors in an exploratory manner.

## Method

### *Participants and Procedure*

We analyzed data from the Understanding America Study (<https://uasdata.usc.edu>),<sup>2</sup> a nationally representative internet panel study conducted by the Center for Economic and Social Research at the University of Southern California. Participants were recruited based on various demographics of all household addresses in the United States used by Marketing Systems Groups. Households that do not have an internet connection have been provided with internet-connected tablets to ensure full coverage of the U.S. population. Questionnaires have been distributed to participants several times over the year, beginning in 2014. Each participant was compensated financially for their completion of a questionnaire.

Participants completed measures of meaning in life between December 2019 and early February 2020, before the coronavirus pandemic began to drastically influence the lives of Americans. Questions about political orientation were completed either prior to (from August to September 2018) or at the same time as the meaning in life questions. Questions about religiosity were also completed sometime before the onset of the pandemic (either from June 2015 to January 2016 or from February 2016 to early March 2020). Hence, their answers to these questions were not influenced by the events occurring *during* the coronavirus pandemic. During the pandemic, participants answered questions about their negative emotions and healthy preventive actions at three different time points, once in mid/late March 2020, as states were beginning to implement stay-at-home orders for non-essential workers, once in early/mid April 2020, and once again in late April/early May 2020, as some states began to reopen. They also answered questions about risky health behaviors that were only administered during the latter two time points.

The questions that pertain directly to people's experiences during the COVID-19 pandemic were distributed in three different waves. The first questionnaire was distributed on March 10, 2020, and participants were allowed to complete the questionnaire until March 31, 2020. Most participants (81.00%) completed the questionnaire sometime between March 10, 2020 and March 17, 2020. As reference points, California issued a stay-at-home order on March 19, 2020, and New York and Illinois followed on March 20, 2020. Many states followed shortly thereafter. The Centers for Disease Control and Prevention (CDC) recommended the use of face masks among the public on April 3, 2020.

Participants who completed the questionnaire in March were given the opportunity to complete two additional questionnaires in April and early May. The questionnaires in April were distributed to a random subset of approximately

**Table 1.** Demographics.

	N	%
Gender		
Male	2,990	41.41
Female	4,230	58.59
Age		
18–34 years old	1,503	20.84
35–54 years old	2,702	37.47
55–64 years old	1,455	20.17
65+ years old	1,552	21.52
Annual household income		
<US\$24,999	1,417	19.66
US\$25,000–US\$49,999	1,534	21.29
US\$50,000–US\$74,999	1,401	19.44
US\$75,000–US\$99,999	996	13.82
US\$100,000 +	1,858	25.78
Education		
Low (HS or less)	1,612	22.30
Medium (some college)	2,679	37.11
High (college degree)	2,928	40.56
Race/Ethnicity		
Non-Hispanic White	4,689	65.05
Non-Hispanic Black	566	7.85
Non-Hispanic Asian	363	5.04
Hispanic/Latino	1,204	16.70
Other	386	5.36
Living with a partner		
Yes	4,655	64.52
No	2,560	35.48

500 participants each day, from April 1, 2020 to April 14, 2020 and from April 15, 2020 to April 28, 2020. They were allowed to complete the questionnaire up until 2 weeks after the date they received it. The final responses were collected from some participants as late as May 12, 2020.

The numbers of participants who completed each questionnaire during the pandemic were 6,932 (March; questionnaire 1), 5,478 (early April; questionnaire 2), and 6,287 (late April/early May; questionnaire 3). Response rates were above 80% at each collection period. 5,230 participants completed all three questionnaires; 1,107 completed two questionnaires; and 973 completed one questionnaire. All participants who completed at least one of these questionnaires were included in the analyses ( $N = 7,220$ ;  $M_{\text{age}} = 49.85$ ,  $SD = 16.23$ ; 58.59% female). We had adequate power (.80) to detect small effects ( $r = .03$ ). See Table 1 for demographic details.

## Measures

As is common practice in panel studies, several of the constructs were measured with single items as opposed to traditional multi-item scales. Single item measures minimize participant burden, a serious concern in panel studies. Although single item measures have statistical limitations

and cannot capture multiple facets of a construct, in comparison to their lengthier multi-item scales, single item measures of complex constructs in the well-being literature, such as life satisfaction and self-esteem, have been shown to perform reasonably well (Cheung & Lucas, 2014; Gardner et al., 1998; Robins et al., 2001).

The presence of meaning in life (“My life has a clear sense of purpose or meaning”) and search for meaning in life (“I am searching for purpose or meaning in my life”) were assessed with single items adapted from the Meaning in Life Questionnaire (Steger et al., 2006). Responses were recorded on a 7-point scale (1 = *absolutely untrue*, 7 = *absolutely true*). Prior research has shown that answers to questions from the Meaning in Life Questionnaire demonstrate reasonably high levels of stability over time (Steger & Kashdan, 2007). Thus, these questions can adequately measure these constructs as stable, individual differences. Political orientation was measured with the single item, “Regardless of your political registration or affiliation, where would you place yourself on the political spectrum from extremely liberal to extremely conservative?” with responses recorded on a 9-point scale (1 = *extremely liberal*, 9 = *extremely conservative*) with an additional option “I don’t think of myself that way,” coded as missing. Religiosity was assessed with two items: “How important is religion in your life?” with responses recorded on a 5-point scale (1 = *the most important thing*, 5 = *not at all important*, 6 = *do not know*) and “How often do you attend religious services besides weddings and funerals?” with responses recorded on a 6-point scale (1 = *daily*, 2 = *multiple times a week*, 3 = *once a week*, 4 = *one to two times a month*, 5 = *less than once a month*, 6 = *never*, 7 = *do not know*). Scores were reverse coded such that higher scores indicated greater levels of religiosity. Each item was standardized and the average of the two standardized scores was computed. Additional demographic variables included age, gender, income, education, race/ethnicity, and living with a partner.

To measure negative affect during the COVID-19 pandemic, participants were asked how often they have been bothered by any of the following problems over the past 2 weeks: “Feeling nervous, anxious, or on edge,” “Not being able to stop or control worrying,” “Feeling down, depressed, or hopeless,” and “Little interest or pleasure in doing things.” Responses were recorded on a 4-point scale (1 = *not at all*, 2 = *several days*, 3 = *more than half the days*, 4 = *nearly every day*). These items were aggregated to form a composite score ( $\alpha$  time 1 = .89;  $\alpha$  time 2 = .88;  $\alpha$  time 3 = .90).

Participants were also asked about 15 behaviors that could influence the health of the individual and others in society. Ten of these behaviors are considered beneficial, such as washing hands with soap, wearing a face mask, canceling or postponing air travel for work or pleasure, and avoiding public spaces, gatherings, or crowds, whereas five of these behaviors can be considered more risky, such as hosting friends, attending large gatherings, and coming into close contact with someone they do not live with (see Table 4). For



the preventive or helpful behaviors, participants were asked which of the behaviors they had done in the last 7 days to keep themselves safe from the coronavirus. (The suffix “in addition to what they normally do” was added in the instructions in the first wave only.) For the potentially risky behaviors, participants were asked which of the behaviors they had done in the last 7 days. Responses were yes or no (unsure was included as an option for the second and third questionnaires only<sup>3</sup>). We ran a series of exploratory factor analyses for categorical data for each wave using the psych package in *R* (Revelle, 2016). Based on these analyses, we created two continuous composite scores (one for preventive health behaviors and one for risky health behaviors) by averaging the dichotomous items. The exact wording of the behaviors and a complete description of these analyses can be found in the Supplemental Materials.

## Results

### Analytic Plan

We first ran a series of preliminary analyses by examining the correlations between all variables that were measured once (presence of meaning in life, search for meaning in life, religiosity, political orientation, and demographics) and all variables that were measured more than once (negative affect, preventive behaviors, and risky behaviors). We also examined the amount of within- and between-person variation in those variables that were measured multiple times. Our primary analyses addressed the between-person, prospective relationships between the meaning in life variables (presence and search) and average levels of negative feelings, preventive health behaviors (e.g., wearing a face mask, washing hands with soap, social distancing), and potentially risky health behaviors (e.g., hosting friends, going to a bar) assessed during the COVID-19 pandemic. We examined these relationships with and without controlling for demographic variables, political orientation, and religiosity. Because of the relevance of religiosity and political orientation, our secondary analyses examined the relationships between religiosity and political orientation and average levels of negative feelings and health behaviors during this time (both with and without controlling for additional demographic variables).

To address the primary and secondary analyses, we used multilevel modeling to account for the nested data structure (time periods nested within participants) and used the *lme4* package in *R* (Bates et al., 2015). In separate models, negative affect, preventive health behaviors, and risky health behaviors were entered as outcome measures. At Level 2, the between-person level, the presence of meaning in life and search for meaning in life were entered as predictors in separate models. These variables were standardized to aid in interpretation.

$$\begin{aligned} \text{Level 1: } y_{ij} (\text{outcome}) &= \beta_{0j} + r_{ij} \\ \text{Level 2: } \beta_{0j} &= \gamma_{00} + \gamma_{01} (\text{meaning in life}) + u_{0j} \end{aligned}$$

Standard demographic variables, religiosity, and political orientation were similarly entered at Level 2 as control variables in subsequent models. Next, we created similar models in which religiosity and political orientation were predictors at Level 2 in separate models. Standard demographic variables were entered as controls in subsequent models.<sup>4</sup>

### Preliminary Analyses

The correlations between all variables can be found in Table 2. We also highlight some of the key relationships between the two measures of meaning in life (presence and search), religiosity, and political orientation here. Conservatives were more likely to be religious than liberals,  $r(5174) = .37, t = 28.67, p < .001$ ; conservatives also reported greater presence of meaning in life,  $r(5193) = .14, t = 10.14, p < .001$ , and less search for meaning in life,  $r(5195) = -.19, t = 13.70, p < .001$  than liberals. Similarly, religiosity was positively related to presence of meaning,  $r(5870) = .24, t = 18.82, p < .001$ , and negatively related to search for meaning,  $r(5873) = -.08, t = 6.07, p < .001$ . Presence and search for meaning in life were negatively related,  $r(6136) = -.20, t = 15.76, p < .001$ . These analyses replicate the findings reported in prior research (Newman et al., 2019; Oishi & Diener, 2014; Steger & Frazier, 2005; Steger et al., 2006).<sup>5</sup>

Moreover, the presence of meaning in life was positively related to age and income, replicating previous findings that have measured meaning in life with validated, lengthier scales (Steger, Oishi, & Kashdan, 2009; Ward & King, 2016). The replication of these relationships indicates that the single-item measures demonstrate adequate convergent validity, and thus bolster our confidence in the veracity of the subsequent analyses conducted to test our primary hypotheses.

In a series of unconditional or null multilevel models, we examined the ICCs of negative affect, preventive health behaviors, and risky health behaviors. The ICC is the ratio of between-person variance over total variance (between plus within). The ICCs for negative affect, preventive health behaviors, and risky health behaviors were .65 (.35 between-person variance, .19 within-person variance), .16 (.01 between-person variance, .07 within-person variance), and .56 (.02 between-person variance, .02 within-person variance), respectively. More than half of the variance of negative affect and risky health behaviors occurred between-persons. Although most of the variance of preventive health behaviors occurred within-persons, there was enough between-person variance to examine between-person relationships.

### Primary Analyses

Moving to our primary analyses, we examined the relationships between (a) levels of presence of meaning in life and search for meaning in life and (b) average levels of negative affect, preventive behaviors, and risky health behaviors. The results are presented in the top portion of Table 3. To

**Table 2.** Descriptive Statistics for All Variables: N, Mean, SD, Alpha (for Scales), and Correlations.

Variable	N	M	SD	$\alpha$	( <sup>0</sup> ) <sub>U-cat</sub>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
1 T1 negative affect	6,894	1.50	0.71	.89																
2 T2 negative affect	5,458	1.66	0.76	.88		.61														
3 T3 negative affect	6,264	1.59	0.74	.90		.62	.75													
4 T1 preventative behaviors	6,822	0.41	0.28		.87	.20	.15	.14												
5 T2 preventative behaviors	5,463	0.70	0.21		.73	.03	.07	.03	.35											
6 T3 preventative behaviors	6,260	0.68	0.22		.75	.04	.07	.06	.34	.59										
7 T2 risky behaviors	5,463	0.16	0.20		.57	.04	.01	.02	-.13	-.14	-.14									
8 T3 risky behaviors	6,262	0.18	0.21		.60	.02	.00	.00	-.12	-.14	-.16	.56								
9 Presence of meaning in life	6,139	5.16	1.43			-.21	-.18	-.22	.05	.12	.10	-.04	-.03							
10 Search for meaning in life	6,143	4.11	1.81			.22	.23	.22	.10	.03	.06	.04	.03	-.20						
11 Religiosity	6,829	-0.01	0.91	.80		-.09	-.10	-.08	.04	.06	.06	.05	.04	.24	-.08					
12 Conservatism	5,424	5.11	2.22			-.20	-.21	-.21	-.14	-.09	-.10	.07	.11	.14	-.19	.37				
13 Age	7,212	49.85	16.23			-.19	-.20	-.20	-.13	-.06	-.01	-.08	-.08	.04	-.24	.12	.19			
14 Income	7,206	72,583	51,660			-.12	-.10	-.12	.00	.08	.08	-.04	-.04	.12	-.12	-.08	.01	.03		
15 Education	7,219	2.18	0.77			-.04	-.04	-.04	.07	.14	.11	-.06	-.04	.06	-.01	-.04	-.14	.03	.42	

Note. T1 = time 1 (March), T2 = time 2 (early April), T3 = time 3 (late April/early May). Reliability estimates are presented for variables that consisted of more than one item. Reliability estimates of continuous variables were calculated with Cronbach's alpha, and reliability estimates of dichotomous variables were calculated with categorical omega as recommended by Flora (2020).

**Table 3.** Relationships Between (1) Presence of Meaning in Life, Search for Meaning in Life, Religiosity, and Political Orientation and (2) Average Scores of Negative Affect, Preventive Health Behaviors, and Risky Health Behaviors.

Level 2 Variables	Outcome Variables											
	Negative Affect				Preventative Health Behaviors				Risky Health Behaviors			
	<i>b</i>	<i>t</i>	<i>p</i>	<i>r<sub>b</sub><sup>(f)</sup></i>	<i>b</i>	<i>t</i>	<i>p</i>	<i>r<sub>b</sub><sup>(f)</sup></i>	<i>b</i>	<i>t</i>	<i>p</i>	<i>r<sub>b</sub><sup>(f)</sup></i>
Presence of meaning in life												
No controls	-.15	18.22	< .001	.25	.02	7.78	< .001	.18	-.01	2.86	.004	.05
With demographic controls only	-.13	16.84	< .001		.01	5.93	< .001		-.00	1.72	.086	
With all controls	-.12	13.27	< .001		.01	4.13	< .001		-.01	2.52	.012	
Search for meaning in life												
No controls	.16	19.62	< .001	.27	.01	6.06	< .001	.14	.01	2.65	.008	.04
With demographic controls only	.12	14.99	< .001		.01	4.03	< .001		.00	1.10	.271	
With all controls	.11	12.53	< .001		.01	3.25	.001		.01	1.97	.049	
Religiosity												
No controls	-.07	8.75	< .001	.12	.01	5.18	< .001	.11	.01	3.53	< .001	.05
With demographic controls	-.06	7.53	< .001		.01	4.66	< .001		.01	4.78	< .001	
Political conservatism												
No controls	-.15	17.82	< .001	.26	-.03	10.69	< .001	.27	.02	7.65	< .001	.13
With demographic controls	-.13	14.82	< .001		-.02	6.47	< .001		.02	8.72	< .001	

Note. Demographic controls included age, gender, race/ethnicity, household income, and education. Models with all controls additionally included religiosity and political orientation. Because religiosity and political orientation are presumed to be causes of presence and search for meaning in life, we did not control for them in the secondary analyses presented in the bottom portion of this table. Confidence intervals are provided in Supplemental Table 2. Effect size estimates were calculated using a method explained by Rights and Sterba (2019). The *r<sub>b</sub><sup>(f)</sup>* statistic is analogous to the square root of the reduction in variance method initially described by Raudenbush and Bryk (2002), akin to a correlation.

understand these results more easily, we also divided each predictor variable roughly into thirds, and we present the proportion of participants within each third who responded with a “yes” to each specific behavior during a given or typical week during the pandemic (see Table 4).

The presence of meaning in life predicted less negative affect, whereas searching for meaning in life predicted more negative affect during the pandemic. These relationships were significant with and without controls. The presence of meaning in life predicted a higher frequency of preventive health behaviors, such as washing hands with soap and canceling social activities, and was negatively related to risky health behaviors, such as hosting friends and having close contact with people they do not live with.

To illustrate the magnitude of these effects, we present a few examples of the differences in the percentages of people at different levels of meaning in life who reported engaging in a particular behavior during a given or typical week of data collection during the pandemic. For example, 56% of those who marked a score of 2 (“mostly untrue”) of the presence of meaning in life question (“My life has a clear sense of purpose or meaning”) canceled their social plans during a given week, whereas 64% of those who marked a score of 6 (“mostly true”) out of 7 canceled their social plans during a given week, a difference of roughly 8%. Considering the continuous nature of the scale, for every one-point increase in the raw score of presence of meaning in life, the number of people who canceled social plans during a given week

increased by 2.00%. The difference in coming into close contact with someone they do not live with between those at the very extremes of the scale translated into a 10% difference (45% of those at the low end vs. 35% of those at the high end). That is, for every one-point increase in the raw score of the presence of meaning in life, the percentage of people who did not come into close contact with someone they do not live with increased by 1.34%. Thus, people who found more meaning in life before the pandemic (as opposed to those who found less meaning in life) engaged in behaviors during the pandemic that could protect them from getting infected with the coronavirus and they refrained from potentially dangerous activities that could increase either their risk of becoming infected or their risk of infecting others.

Searching for meaning in life was positively related to preventive healthy behaviors, such as canceling social activities and working from home. For instance, approximately 23% of those on the low end of the scale (“mostly untrue”) reported canceling travel for work during a typical week compared with roughly 30% of those at the high end of the scale (“mostly true”). Interpreted in a continuous manner, for every one-point increase in the raw score of searching for meaning in life, the percentage of people who reported canceling travel for work during a typical week increased by 1.21%. However, searching for meaning in life also predicted increases in potentially risky behaviors, such as visiting at a friend’s residence. Thus, searching for meaning in life was

**Table 4.** Estimates of the Proportion of People Who Engaged in Various Behaviors During a Typical Week Across Tertiles of the Predictor Variables.

Category	Presence of Meaning			Search for Meaning			Religiosity			Political Orientation		
	Low	Mid	High	Low	Mid	High	Low	Mid	High	Lib	Mod	Cons
	1-4	5	6-7	1-3	4-5	6-7	< -50	> .56	> .56	1-3	4-6	7-9
<b>N in each group</b>	1,744	1,485	2,910	2,042	2,712	1,389	2,584	1,995	2,250	1,574	2,032	1,818
Outcome variable	1.76	1.60	1.45	1.41	1.59	1.80	1.64	1.59	1.49	1.76	1.58	1.40
Negative affect	.44	.44	.45	.43	.44	.47	.43	.44	.45	.49	.47	.39
Preventative health behaviors	.91	.94	.95	.93	.93	.94	.93	.94	.95	.94	.94	.93
Worn a mask or other face covering	.23	.26	.29	.24	.26	.31	.24	.28	.29	.28	.28	.23
Washed your hands with soap or used hand sanitizer several times per day	.44	.48	.51	.46	.48	.52	.45	.51	.51	.48	.50	.46
Canceled or postponed air travel for work	.32	.35	.38	.33	.35	.41	.34	.37	.39	.41	.36	.31
Canceled or postponed air travel for pleasure	.57	.63	.64	.60	.62	.63	.60	.62	.65	.65	.63	.59
Canceled or postponed work or school activities	.73	.77	.78	.76	.76	.79	.75	.78	.79	.79	.77	.75
Canceled or postponed personal or social activities	.75	.78	.79	.77	.77	.78	.78	.77	.78	.82	.79	.74
Avoided contact with people who could be high-risk	.66	.68	.69	.69	.67	.68	.68	.68	.69	.71	.68	.66
Avoided public spaces, gatherings, or crowds	.41	.46	.47	.44	.43	.51	.46	.45	.47	.55	.46	.41
Avoided eating at restaurants												
Worked or studied at home												
Risky health behaviors												
Gone to a friend, neighbor, or relative's residence (that is not your own)	.24	.23	.23	.23	.22	.25	.22	.23	.25	.18	.23	.27
Had visitors such as friends, neighbors or relatives at your residence	.25	.23	.22	.23	.23	.23	.21	.23	.25	.19	.22	.27
Attended a gathering with more than 10 people, such as a reunion, wedding, funeral, birthday party, concert, or religious service	.02	.02	.02	.02	.01	.02	.01	.02	.02	.01	.02	.02
Gone out to a bar, club, or other place where people gather	.01	.01	.01	.01	.01	.02	.01	.01	.01	.01	.01	.01
Had close contact (within 6 feet) with people who do not live with you	.41	.40	.37	.37	.38	.42	.39	.38	.38	.36	.39	.42

Note. Response categories for the presence and search for meaning in life were as follows: 1 = absolutely untrue, 2 = mostly untrue, 3 = somewhat untrue, 4 = cannot say true or false, 5 = somewhat true, 6 = mostly true, 7 = absolutely true. Religiosity was assessed with two items and the scores to each item were standardized before aggregating. Scores ranged from -1.61 to 2.05. Lib = liberals, mod = moderates, cons = conservatives. Response categories for political orientation were as follows: 1 = extremely liberal, 2 = very liberal, 3 = somewhat liberal, 4 = liberal side of moderate, 5 = moderate, 6 = conservative side of moderate, 7 = somewhat conservative, 8 = very conservative, 9 = extremely conservative. Values in the main portion of the table represent the percentage of people who indicated that they had engaged in that particular behavior at least once over the course of the pandemic within each specific grouping of the predictor variable.



associated with some helpful and potentially harmful behaviors. These relationships remained after statistically controlling for various demographics, including religiosity and political orientation.

### *Secondary Analyses*

Religiosity and conservatism were negatively related to average levels of negative affect throughout March to early May (see the bottom portion of Table 3 and the right side of Table 4). Highly religious people were more likely than less religious people to participate in beneficial actions, such as washing their hands with soap, canceling travel plans, avoiding contact with high-risk people, and working from home. For example, 44% of those who never attend religious services reported canceling travel plans for pleasure during a given week, whereas 51% of those who attend religious services once a week did the same. Stated in other words, for every one-point increase in religious attendance, the percentage of people who reported canceling travel plans for pleasure increased by 1.30%. Religiosity was, however, also positively related to potentially dangerous or risky behaviors, such as visiting and hosting friends, attending large gatherings, and making contact with people they do not live with.

Conservatives were much less likely to engage in preventive health behaviors and were more likely engage in risky behaviors than liberals were. For example, 50% of those who identified as “very liberal” reported wearing a face mask during an average week during the pandemic compared with 36% of those who identified as “very conservative.” Stated in a continuous manner, for every one-point increase in political conservatism, the percentage of people who reported wearing a face mask during an average week decreased by 2.04%. Similarly, 18% of the “very liberals” went to a friend, neighbor, or relative’s residence that was not their own, whereas 29% of the “very conservatives” reported doing so for a given week during the pandemic. That is, for every one-point increase in political conservatism, the percentage of people who reported visiting a friend, neighbor, or relative’s residence increased by 1.64%.

### **Discussion**

In a nationally representative sample of Americans, we found that those who find more meaning in their lives reported less negative affect during the crux of the COVID-19 pandemic than those who find less meaning in their lives. They also consistently engaged in behaviors that could potentially help the health of themselves and others, such as social distancing and canceling travel plans. In contrast, those who report higher levels of searching for meaning in life experienced greater negative effect than those who report lower levels of searching for meaning in life. These individuals engaged in some healthy and useful behaviors, such as canceling social

plans, but they also engaged in risky behaviors such as coming into close contact with people they do not live with.

In addition, religiosity and conservative political ideology predicted feelings and behaviors in interesting and nuanced ways. Highly religious people and conservatives felt less negative affect than those who are less religious and liberals, respectively. Their effects on health behaviors that could either protect or harm themselves and others diverged, however. Whereas conservatives were consistently less likely to engage in social distancing behaviors than liberals, the highly religious were more likely to engage in behaviors that have mixed effects. They were more likely to participate in certain social distancing behaviors, but they were more likely to attend large gatherings and host friends than less religious people.

### *Theoretical and Practical Contributions*

Our findings offer several theoretical contributions to the literature and practical implications. The effects of presence and search for meaning in life on negative affect not only supports prior research (Newman et al., 2018; Steger et al., 2006) but it also extends the research in important ways. Most of the research on meaning in life has examined how it may be beneficial to the individual, for example, by increasing longevity and improving health and subjective well-being (Chamberlain & Zika, 1992; Hill & Turiano, 2014; Reker et al., 1987; Steger et al., 2006, Steger, Mann, et al., 2009) This was certainly the case in these data as the presence of meaning in life was negatively associated with negative affect, but our findings offer theoretical extensions to previous findings by demonstrating that meaning in life was also associated with many behaviors that could help others in society, such as social distancing and wearing face masks. Perceiving life as full of meaning and purpose entails the ability to make connections and detect coherence in patterns (Heintzelman et al., 2013). People who find meaning in life are able to make sense of the events in their lives and see how things coherently fit together (Costin & Vignoles, 2020; Martela & Steger, 2016). In the present context, we presume that people who find meaning and purpose in life are likely able to see how other members of society are connected to themselves and to the larger whole. Thus, meaning and purpose in life could foster a desire to help others because they feel they are connected to something greater than themselves. Although this explanation dovetails with prior theoretical research, we admit these interpretations are speculative and go beyond the data as we did not specifically measure coherence.

It is worth emphasizing that the presence of meaning in life was the most consistent predictor of these helpful behaviors even after controlling for the effects of political orientation, religiosity, and various demographics. Moreover, additional within-person analyses showed that preventive health behaviors were positively related to negative affect and risky health behaviors were negatively related to negative

affect.<sup>6</sup> Prior research has shown that social relationships and connections are beneficial for a variety of well-being indicators, including perceptions of meaning in life (e.g., Machell et al., 2015; Stillman et al., 2009). This suggests that those who find meaning in life actively engage in behaviors that might be detrimental to their emotional well-being for the sake of long-term health for themselves and others. It is possible that those who report high levels of meaning in life find meaning from various different sources (Schnell, 2009). They might be able to afford curtailing some of their social interactions, whereas sacrificing these interactions could be costlier among those who do not find as much meaning in their lives.

The present findings also highlight the importance of understanding searching for meaning in life in a couple of ways. First, prior research has shown that individuals who search for meaning in life report higher levels of negative affect when they think about their lives broadly (Steger et al., 2006). Our findings extend these between-person relationships by showing that people who search for meaning in life broadly report higher negative affect when they think about a much shorter period of time (the past 2 weeks), assessed multiple times during an unusual period of time. This means that searching for meaning in life is associated with higher levels of negative affect not only during normal periods of life but also during periods of time when most people experience elevated levels of negative affect.

Second, searching for meaning in life was associated with higher rates of both preventive health behaviors and risky health behaviors. This suggests that searching for meaning in life could potentially lead to behaviors that help and harm others at the same time. One potential reason for these mixed effects is that searching for meaning could lead people to engage in behaviors that will help them find meaning. The goal of searching for meaning is to find meaning, and this search could be fruitful in yielding a greater presence of meaning in certain situations (e.g., Newman et al., 2018). Some of the activities people engage in to find meaning might be beneficial to the health of others, whereas some of these activities may not. For example, searching for meaning in life is positively related to heroism motivation (Igou et al., 2018) and self-sacrifice (Dugas et al., 2016). At the same time, people who search for meaning in life tend to pursue excitement and sensation (Schumpe et al., 2020) and they lack self-control (Li et al., 2019), which could lead to some risky behaviors that would be harmful to others. Alternatively, it is possible that certain people who are searching for meaning in life with beneficial motives (e.g., self-sacrifice, heroism motivation) might engage in preventive health behaviors, whereas a different group of people who are searching for meaning in life could engage in risky behaviors for other motives (e.g., sensation seeking). These possibilities and explanations are admittedly speculative, and the exact mechanisms underlying the effect of searching for meaning in life on preventive and risky health behaviors could be examined in future research.

The associations involving political orientation replicate prior work that has identified a “happiness gap” between liberals and conservatives (Napier & Jost, 2008; Newman et al., 2019; Wojcik et al., 2015), but it adds a novel piece by highlighting some key behaviors that could help others in society. Liberals are more likely than conservatives to wear face masks and avoid other people and gatherings, behaviors that could be done with the intention of helping others in addition to themselves. Thus, these findings corroborate prior work demonstrating that liberals are more likely or willing to help others than conservatives (Hasson et al., 2018). Although speculative, one reason why conservatives are less willing to wear face masks and avoid gathering in large groups could be attributed to ideological differences in one of the key tenets of conservatism, resistance to change (Jost et al., 2003). This resistance could be accentuated by the refusal of prominent Republican leaders to wear face masks and change their behaviors.

Corroborating previous research, religiosity was associated with greater emotional well-being and healthier coping behaviors (Smith et al., 2003). Differing perspectives on how religious people might fare during times of crisis have been proposed (Chida et al., 2009). On one hand, religious people may not take the necessary precautions because of the belief that God is in control (Hasnain et al., 2005). On the other hand, beliefs about being a good neighbor could lead to more prosocial behavior which could benefit themselves and others. We found some support for both perspectives as religious people were more likely to act as good neighbors by canceling social plans and working from home but were also more likely to ignore certain precautions by hosting friends and attending large gatherings.

The effects reported in this manuscript are fairly small in magnitude in absolute terms (as can be seen in Table 2). For example, the correlations between the meaning in life variables and negative affect were  $r = -.25$  and  $r = .27$  for presence and search, respectively. Studies that have measured negative effect as individual differences have reported similar effect sizes (e.g., Newman et al. 2018, 2021; Steger et al., 2006). Moreover, although the correlations between the meaning in life variables and the health outcomes were small in magnitude, these outcome measures are important as they may prevent the spread of the coronavirus and save lives. We expect that increases as small as a few percentage points in the frequency of certain behaviors could have a significant impact on people’s safety and well-being. As described above, an increase in people’s perception of meaning in life (“My life has a clear sense of purpose or meaning”) from the “mostly untrue” response to the “mostly true” response would amount to an 8% increase in canceling social plans. Because the coronavirus can spread rapidly at social gatherings, decreasing the number of people who meet socially by 8% (roughly translated as a decrease of 26 million Americans) could have a substantial influence on slowing the spread of the virus. Moreover, given the prolonged nature of the pandemic and

the spread of the coronavirus, a small increase in the number of people canceling social plans throughout the pandemic would amount to a sizable difference in slowing the spread of the virus. Thus, collectively promoting people's sense of meaning and purpose in life could potentially save hundreds or thousands of lives. For reviews of potential modifiable factors that might influence people's sense of meaning in life, see King et al. (2016) and King and Hicks (2021).

### *Limitations and Future Directions*

One limitation of our study is the use of single items to measure some of the predictors. Granted, as discussed earlier, single-item measures are often used in large-scale surveys to lower participant burden and often perform as adequately as multi-item scales (e.g., Robins et al., 2001). In fact, correlations between our meaning in life variables and several demographic variables replicated findings that used longer scales (e.g., Steger, Oishi, & Kashdan, 2009). Nevertheless, multi-item scales could be useful, particularly to measure different aspects or components of meaning in life (George & Park, 2016). Moreover, questions about specific political issues as opposed to a general question about political orientation more broadly could also provide more nuanced predictions about the types of people who might engage in social distancing behaviors. Future studies could address these possibilities.

We should also acknowledge that the presence and search for meaning in life were measured as individual differences at one time prior to the onset of the pandemic, allowing us to examine between-person prospective processes. It is worth recognizing that between-person relationships are distinct from within-person relationships (Affleck et al., 1999; Nezlek, 2001). This means that our analyses did not address how states of meaning in life changed over time in response to stressors of the COVID-19 pandemic. Some research suggests that the active process of searching for meaning in daily life might be beneficial for well-being as opposed to the more negative between-person effects we documented (Newman et al., 2018). In future research conducted during times of crises, it would be worthwhile to examine fluctuating states of meaning in life in addition to stable individual differences in meaning in life.

Relatedly, because we measured the presence and search for meaning in life at one time as individual differences, we were not able to examine the precise mechanisms underlying our reported effects. We have speculated about the prosocial nature of some of the preventive and risky health behaviors, but it is not clear whether people were motivated by a prosocial intention or merely a desire to protect themselves. Thus, although the preventive health behaviors can protect others from the coronavirus and the risky behaviors may increase the risk of infection of others, the motivation to engage in prosocial behaviors was not measured. Studies designed specifically to test this possibility would be useful.

Given that our sample consisted of Americans, we caution researchers from over-generalizing our findings to other countries. The influence of politics and religion on health behaviors and recommendations has varied greatly across different countries. The United States has experienced particularly high levels of political tension in response to health guidelines, and the effects we observed might be less pronounced in other countries. Relatedly, religious participants in the United States are mostly Christian, and their behaviors might differ from religious people in countries where the dominant religion is not Christianity. In addition, the effect of presence and search for meaning in life on negative affect and health behaviors might vary across different countries. For instance, although searching for meaning in life may be negatively associated with well-being when assessed as an individual difference in the United States, searching for meaning may have a positive effect on well-being in Asian countries (Li et al., 2020; Steger, Kawabata, et al., 2008).

### **Conclusion**

To summarize, political conservatism and religiosity predicted less negative affect during the onset of the pandemic. Conservatives engaged in fewer protective health behaviors than liberals, and the highly religious were more likely to engage in some beneficial health behaviors but were less likely to engage in others compared with the less religiously affiliated. Regardless of one's political orientation or religious engagement, the perception that life is meaningful appears to reduce the negative feelings accompanied by the COVID-19 pandemic and can lead to behaviors that could help improve the lives of other people. In contrast, people who search for meaning in life tend not to fare as well emotionally during this time of crisis, and they engage in some behaviors that could potentially help people and other behaviors that could potentially harm others.

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## Supplemental Material

Supplemental material is available online with this article.

## Notes

1. Negative effect was not measured before the onset of the pandemic, and hence we make no predictions or implications that the relationships between meaning in life and negative affect are strengthened or weakened before vs. during the pandemic.
2. Data and analytic code are stored at <https://uasdata.usc.edu/survey/UAS+212>. Note that a login is required to download the data.
3. Responses marked as unsure were set to missing. The number of unsure responses ranged from 16 to 187 (.2% to 2.6% of the total data).
4. Given the assumption that religiosity and political orientation are causes of meaning in life, we did not control for presence and search in these models.
5. Upon first glance, it appears the negative relationship between searching for meaning in life and religiosity is inconsistent with the positive (albeit not significant) relationships documented by Steger et al. (2006). It should be noted, however, that Steger et al. measured intrinsic and extrinsic religiosity whereas we measured religiosity with two items that assessed the frequency of attendance of religious services and importance of religion. Thus, the discrepancy may be due to the different measures of religiosity. It could also be attributed to sampling variation as the two correlations are not drastically different. These possibilities would need to be addressed in future studies.
6. Analytic details are reported in the Supplemental Materials.

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