Veterans and Nonveterans Coping With Stress During 4 Months of COVID-19

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ABSTRACT

PURPOSE Identifying how people have been coping with stress during the COVID-19 pandemic allows us to anticipate how the population may react to similar stressors over time. In this study, we assessed patterns of coping styles among veterans and nonveterans, and stability and change in these strategies at 3 time points during the pandemic.

METHODS Using an online survey platform, we circulated a questionnaire at 3 time points during the period when COVID-19 vaccines became widely available (December 2-27, 2020; January 21-February 6, 2021; and March 8-23, 2021). The questionnaire asked participants about their extent of use of 11 coping strategies, and symptoms of anxiety and depression.

RESULTS A total of 2,085 participants (50.8% veterans) completed the questionnaire at 1 or more time points and 930 participants (62.8% veterans) completed it at all 3 time points. Cluster analysis identified 3 distinct coping styles: adaptive, distressed, and disengaged. Compared with nonveterans, veterans more commonly had adaptive and disengaged coping styles, and less commonly had a distressed coping style. The majority of the cohort (71.3%) changed coping style at least once during the study period. Participants who used the same coping style across all 3 time points reported lower levels of anxiety and depression.

CONCLUSIONS Our data demonstrate a need to better understand the dynamic nature of coping with pandemic-level stressors across time. We did not find patterns of change in coping styles, but our findings point to potential advantages of stability in coping style. It is possible that less adaptive styles that are more stable may be advantageous for mental health. This research has implications for supporting patients dealing with stress in family medicine.

INTRODUCTION

Stress related to the COVID-19 pandemic may be contributing to mental health risk on a grand scale. Emerging evidence supports a widespread mental health impact.[1] Determining how people cope with this stress may allow us to better anticipate the response to similar stressors for populations over time. Consistent with prepandemic studies, studies conducted during the pandemic have indicated that coping is related to psychosocial outcomes.[2,3] Military veterans and individuals with existing health problems have been identified as potentially high risk subgroups[4-6] who may be particularly vulnerable to COVID-19 stressors. The pandemic has created a natural setting of similar stressful circumstances for people worldwide characterized by social isolation, health concerns, and economic and social stressors.[7,8]

Influential, evidence-based frameworks of stress and coping show that during stress, individuals appraise the stressful circumstance, marshal intrapersonal resources, and engage in coping strategies.[9] The particular strategies that a person might use are influenced by individual differences as well as situational factors.[10,11] Coping strategies include active strategies (active coping, planning what to do next), strategies focused on adjusting emotions (positively reframing the situation, using humor), and strategies that may be harmful (blaming oneself, mentally disengaging).[10,12] Family practice has long been an environment in which patients can learn about positive coping strategies from their physician and other clinicians in the practice.[13,14] The COVID-19 pandemic has revitalized interest in coping strategies.[2,3,15] Understanding how coping strategies work together in stressful contexts is important for enhancing opportunities to support resilience in clinical practice.

Prior work of Butler and colleagues[16] identified coping profiles—phenotypes of coping strategies and other relevant attributes—in relation to a stressful event simulation. In the study reported here, we used a narrower and real-world approach to focus specifically on coping styles, both behaviors and cognitive mechanisms, during the COVID-19 pandemic, a period of rapid change and unpredictability in circumstances.

We sought to identify coping styles, represented by patterns of specific coping strategies, used during the pandemic and assessed whether those styles remained stable or changed for individual participants over a 4-month time period. We also compared patterns between veterans and nonveterans.

METHODS

Study Design
In this large longitudinal observational study, we sent a questionnaire to a nationwide panel of veterans and nonveterans at 3 time points during the COVID-19 pandemic: December 2-27, 2020 (Time 1), January 21-February 6, 2021 (Time 2), and March 8-23, 2021 (Time 3).[17] We used an online survey distribution platform Qualtrics (Qualtrics International Inc) that maintains panels of potential participants who can be screened for research participation. The panels provided access to a diverse population of individuals in the United States willing to participate in a survey about varied experiences with COVID-19.[18,19] Details about the survey screening and nonprobability sampling methods are reported elsewhere by our team.[18] All procedures were approved by the University of Utah and Salt Lake City VA Institutional Review Board and were designated exempt. A consent cover letter accompanied the questionnaire, and completion of the questionnaire implied consent.

Participants completed the same questionnaire at each time point, answering questions about their demographics, coping strategies they engaged in, and their levels of depression and anxiety. During our study period, COVID-19 vaccines became widely available in many areas, which enhanced the natural experiment of COVID-19 experiences to incorporate ongoing changing risk in the likelihood and severity of infection, to complement individual differences in coping styles.

Study Measures
Demographics
Demographic information included age, gender identity, race and ethnicity, income, education, residence area (on a spectrum from rural to urban), veteran status, and number of health conditions captured by the Charlson Comorbidity Index, a well-validated measure of comorbidities.[20]

Strategies for Coping With Stress
The valid and reliable Brief COPE measure includes 2 questions per dimension of coping with stress; examples include active coping ("I've been concentrating my efforts on doing something about the situation I'm in"), using emotional support ("I've been getting comfort and understanding from someone"), and venting ("I've been expressing my negative feelings").[21] This measure has been used in many health-related settings. Higher scores indicate greater use of a given coping strategy with a range from 1 ("I haven't been doing this at all") to 4 ("I've been doing this a lot").

We modified the instructions to direct study participants specifically to pandemic coping: "Different people deal with things in different ways. Please respond to the following statements indicating to what extent you've been doing them to cope with the COVID-19 pandemic." We reduced the number of strategies (subscales) from 14 to 11 on the basis of data collected in the larger study that were repetitive (eg, substance use was collected on a questionnaire used elsewhere in the study). The 11 strategies are shown in Figure 1.

To examine pandemic-related stress, we assessed the level of concern about COVID-19 using a Likert scale at each time point from 1 (no concern) to 5 (extreme concern).

Depression and Anxiety Symptoms
The Patient Health Questionnaire-4 Depression and Anxiety Scale is a 4-item scale asking how frequently respondents experience symptoms of depression and anxiety.[22,23] We scaled the answers from 0 ("Not at all") to 3 ("Nearly every day"), and calculated a total score between 0 and 12. A score of 0 to 2 is considered to be normal, while a score of 3 to 5 indicates mild symptoms, 6 to 8 moderate symptoms, and 9 to 12 severe symptoms.

Analytic Strategy
Descriptive methods were used to summarize demographic data and coping styles. We compared groups using t tests or other appropriate group comparisons.

We used κ-means cluster analysis to characterize individual coping styles for each participant at each time point based on respondents' answers to the Brief COPE questions about the 11 coping strategies. This analysis and the "elbow method" of evaluating total within-group sums of squares revealed 3 clusters as a reasonable number. For ease of comparison, we converted the cluster centers (means) for each coping strategy at each time point to standardized scores, which account for both the mean and variability in the sample. We report standardized scores to be consistent with prior work.[16]

We compared participants who maintained the same coping style across time with those who changed coping style by demographic characteristics and reported depression and anxiety symptoms using χ^2 tests. We also assessed differences between veterans and nonveterans in coping styles.

RESULTS

We recorded 2,564 attempts to access the online questionnaire and received 2,085 complete responses at Time 1 (completion rate of 81%). Participants' characteristics are given in Table 1. We did not have data on education for nonveterans

Figure 1. Coping style clusters and their component strategies at 3 time points.
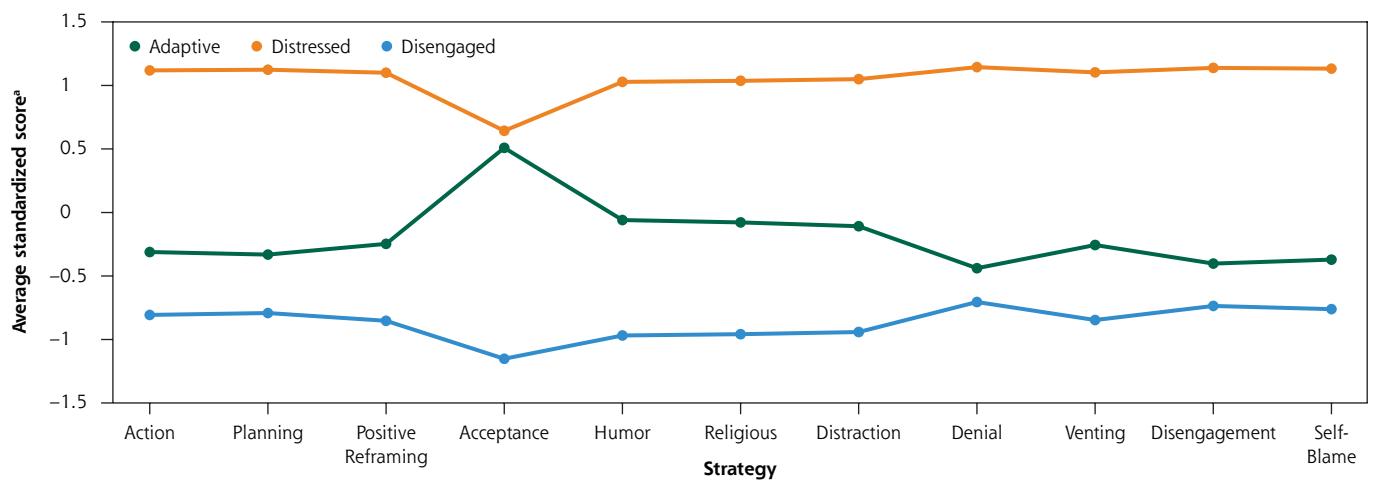
A. Time 1 (Dec. 2-27, 2020)
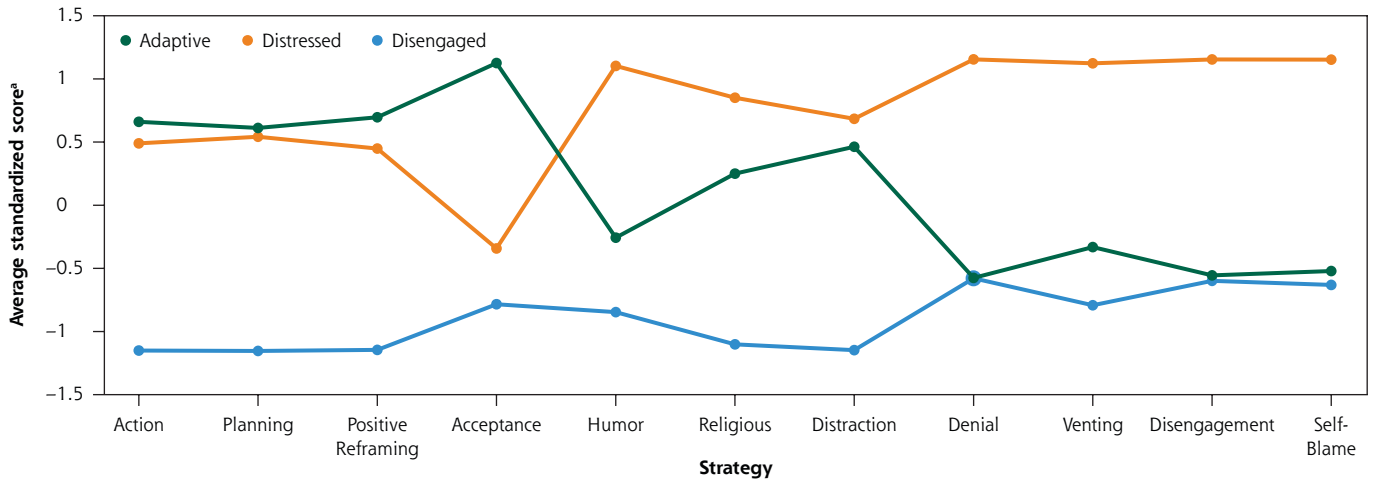
B. Time 2 (Jan. 21-Feb. 6, 2021)
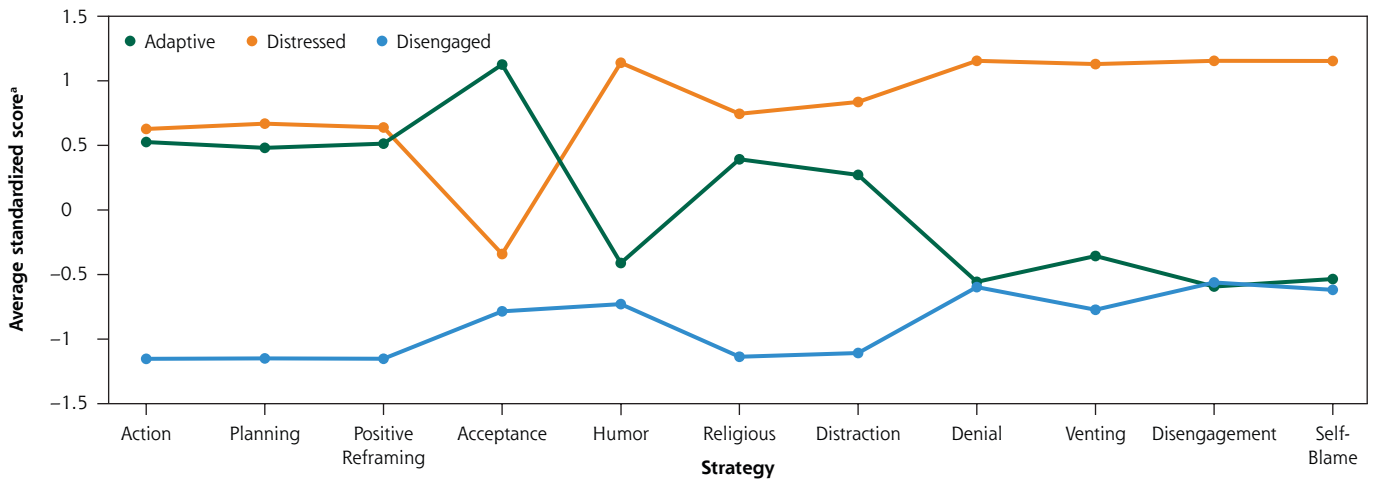
C. Time 3 (Mar. 8-23, 2021)

Notes: The adaptive, distressed, and disengaged clusters (coping styles) were based on the extent of use of the 11 coping strategies (see Methods for details).

Table 1. Participant Demographics Over Time and by Veteran Status (N = 2,085)

Demographic	Time 1 (Dec. 2-27, 2020)		Time 2 (Jan. 21-Feb. 6, 2021)		Time 3 (Mar. 8-23, 2021)	
	Nonveteran, No. (%) (n = 1,025)	Veteran, No. (%) (n = 1,060)	Nonveteran, No. (%) (n = 511)	Veteran, No. (%) (n = 746)	Nonveteran, No. (%) (n = 387)	Veteran, No. (%) (n = 688)
Gender						
Female	551 (53.8)	84 (7.9)	249 (48.7)	48 (6.4)	180 (46.5)	51 (7.4)
Male	457 (44.6)	975 (92)	260 (50.9)	697 (93.4)	205 (53.0)	636 (92.4)
Transgender/Nonbinary/Other	17 (1.7)	1 (0.1)	2 (0.4)	1 (0.1)	2 (0.5)	1 (0.1)
Age group in years, No. (%)						
18-34	265 (25.9)	6 (0.6)	68 (13.3)	0 (0)	51 (13.2)	1 (0.1)
35-54	341 (33.4)	39 (3.7)	120 (23.5)	22 (2.9)	80 (20.7)	21 (3.1)
55-74	353 (34.6)	696 (65.8)	276 (54.1)	497 (66.8)	218 (56.3)	460 (67.1)
≥75	61 (6.0)	317 (30.0)	46 (9.0)	225 (30.2)	38 (9.8)	204 (29.7)
Race						
American Indian	8 (0.8)	11 (1.0)	1 (0.2)	8 (1.1)	3 (0.8)	10 (1.5)
Asian	40 (3.9)	22 (2.1)	28 (5.5)	16 (2.1)	20 (5.2)	13 (1.9)
Black	133 (13.0)	129 (12.2)	44 (8.6)	72 (9.7)	25 (6.5)	73 (10.6)
Pacific Islander	1 (0.1)	5 (0.5)	0 (0)	5 (0.7)	0 (0)	4 (0.6)
White	842 (82.1)	879 (82.9)	436 (85.3)	638 (85.5)	338 (87.3)	585 (85.0)
Other	7 (0.7)	30 (2.8)	4 (0.8)	19 (2.5)	4 (1.0)	17 (2.5)
Ethnicity						
Non-Latine	954 (93.2)	943 (89.1)	470 (92.0)	671 (90.2)	352 (91.0)	613 (89.2)
Latine	70 (6.8)	115 (10.9)	41 (8.0)	73 (9.8)	35 (9.0)	74 (10.8)
Education[a]						
< High school	...	5 (0.5)	...	4 (0.5)	...	3 (0.4)
High school graduate/some college	...	434 (40.9)	...	295 (39.5)	...	273 (39.7)
BA/BS degree	...	373 (35.2)	...	259 (34.7)	...	243 (35.3)
Graduate degree	...	248 (23.4)	...	188 (25.2)	...	169 (24.6)
Relationship status						
None	256 (25.0)	81 (7.6)	109 (21.4)	54 (7.2)	83 (21.6)	52 (7.6)
Romantic	78 (7.6)	31 (2.9)	23 (4.5)	22 (2.9)	13 (3.4)	19 (2.8)
Married/living with partner	594 (58.1)	791 (74.7)	330 (64.7)	560 (75.1)	253 (65.7)	516 (75.1)
Divorced/separated	62 (6.1)	87 (8.2)	31 (6.1)	64 (8.6)	24 (6.2)	54 (7.9)
Widowed	33 (3.2)	69 (6.5)	17 (3.3)	46 (6.2)	12 (3.1)	46 (6.7)

continues

BA = bachelor of arts; BS = bachelor of science.

[a] Missing for veterans because of a coding error.
[b] Maximum possible number of conditions is 12.

because of a coding error. In our sample, women made up 7.9% of participants in the veterans group and 53.8% in the nonveterans group. Although nonprobability sampling is not representative, women comprise 10% of the total veteran population[24] and 50.4% of the total US population.[25]

Coping Styles

On the basis of participants' responses regarding how much they used each of the 11 coping strategies in dealing with COVID-19 pandemic stress, we identified 3 clusters of coping styles: adaptive, distressed, and disengaged. The component strategies of each cluster across over time are shown in Figure 1.

The adaptive coping style was characterized by action-oriented coping, high acceptance, and relatively lower use of denial, venting, disengagement, and self-blame. Adaptive copers were midlevel on use of religion and humor as coping strategies. They reported relatively higher use of both emotion-focused coping strategies (eg, positive reframing, acceptance) and action-oriented coping strategies (eg, planning, taking action), and a relatively lower degree of potentially harmful strategies (disengagement, self-blame, venting).

The distressed coping style was characterized by levels of action and planning similar to those observed with adaptive

Table 1. Participant Demographics Over Time and by Veteran Status (N = 2,085) *(continued)*

| Demographic | Time 1 (Dec. 2-27, 2020) | | Time 2 (Jan. 21-Feb. 6, 2021) | | Time 3 (Mar. 8-23, 2021) | |
	Nonveteran, No. (%) (n = 1,025)	Veteran, No. (%) (n = 1,060)	Nonveteran, No. (%) (n = 511)	Veteran, No. (%) (n = 746)	Nonveteran, No. (%) (n = 387)	Veteran, No. (%) (n = 688)
Income category						
< $40,000	304 (31.6)	154 (15.2)	98 (20.4)	100 (14.0)	71 (19.3)	85 (12.8)
$40,000-$74,000	272 (28.2)	325 (32.0)	145 (30.1)	213 (29.8)	114 (31.0)	199 (29.9)
$75,000-$99,000	127 (13.2)	187 (18.4)	72 (15.0)	136 (19.0)	63 (17.1)	126 (18.9)
$100,000-$149,000	149 (15.5)	210 (20.7)	100 (20.8)	159 (22.3)	75 (20.4)	150 (22.5)
≥$150,000	111 (11.5)	140 (13.8)	66 (13.7)	106 (14.8)	45 (12.2)	106 (15.9)
Residence						
Rural	207 (20.3)	185 (17.5)	84 (16.5)	121 (16.2)	63 (16.3)	119 (17.3)
Small city	162 (15.9)	197 (18.6)	80 (15.7)	142 (19.0)	62 (16.0)	118 (17.2)
Suburban	412 (40.3)	483 (45.6)	249 (48.8)	349 (46.8)	200 (51.7)	319 (46.4)
Midsized	94 (9.2)	102 (9.6)	46 (9.0)	68 (9.1)	32 (8.3)	70 (10.2)
Large city	145 (14.2)	88 (8.3)	51 (10.0)	62 (8.3)	30 (7.8)	58 (8.4)
Other	2 (0.2)	5 (0.5)	0 (0)	4 (0.5)	0 (0)	4 (0.6)
Number of comorbid conditions[b]						
0	434 (42.3)	253 (23.9)	196 (38.4)	170 (22.8)	148 (38.2)	162 (23.5)
1	236 (23.0)	303 (28.6)	132 (25.8)	217 (29.1)	99 (25.6)	203 (29.5)
2	140 (13.7)	235 (22.2)	76 (14.9)	152 (20.4)	55 (14.2)	143 (20.8)
3 or 4	149 (14.5)	228 (21.5)	87 (17.0)	171 (22.9)	72 (18.6)	157 (22.8)
≥5	66 (6.4)	41 (3.9)	20 (3.9)	36 (4.8)	13 (3.4)	23 (3.3)

BA = bachelor of arts; BS = bachelor of science.

[a] Missing for veterans because of a coding error.

[b] As captured by the Charlson Comorbidity Index. Maximum possible number is 12.

Table 2. Coping Styles Over Time Among Veterans and Nonveterans, and for Total Cohort

| Group[a] | Time 1[b] (N = 2,085) (Dec. 2-27, 2020) | | | Time 2[b] (N = 1,257) (Jan. 21-Feb. 6, 2021) | | | Time 3[b] (N = 1,075) (Mar. 8-23, 2021) | | |
	Adaptive	Distressed	Disengaged	Adaptive	Distressed	Disengaged	Adaptive	Distressed	Disengaged
Veterans, No. (%)	383 (36.1)	61 (5.8)	616 (58.0)	252 (33.7)	36 (4.8)	458 (61.3)	339 (52.3)	162 (15.3)	187 (17.6)
Nonveterans, No. (%)	310 (30.2)	283 (27.6)	432 (42.1)	184 (36.0)	84 (16.4)	243 (47.5)	157 (22.8)	147 (21.3)	83 (8.1)
Total, No. (%)	693 (33.2)	344 (16.5)	1,048 (50.3)	436 (34.7)	120 (9.54)	701 (59.6)	496 (46.0)	309 (28.7)	270 (25.1)

[a] For each group and time point, values total across the row.

[b] Percentages of veterans and nonveterans differed significantly by χ² test (P < .01).

coping, but was also accompanied by much higher levels of denial, venting, disengagement, and self-blame. Distressed copers engaged in relatively higher use of the potentially harmful strategies.

The disengaged coping style, as detailed in our prior work,[16] was characterized by relatively low levels of use of all of the coping strategies.

Coping Styles Over Time and by Veteran Status

Table 2 shows the proportions of veterans and nonveterans and total participants belonging to each cluster over time.

Overall, the most common coping style at Times 1 and 2 was the disengaged coping style (used by 50.3% and 59.6% of participants, respectively), whereas the most common style at Time 3 was the adaptive coping style (used by 46.0%).

Nonveterans were more likely than veterans to be distressed copers at all 3 time points (eg, 27.6% of nonveterans vs 5.8% of veterans were distressed copers at Time 1). Overall, veterans were more likely to be adaptive or disengaged copers, and nonveterans were more likely to be distressed copers.

This pattern of differences in distress levels is consistent with participants' concern about contracting COVID-19,

Figure 2. Coping style clusters at 3 points in time.
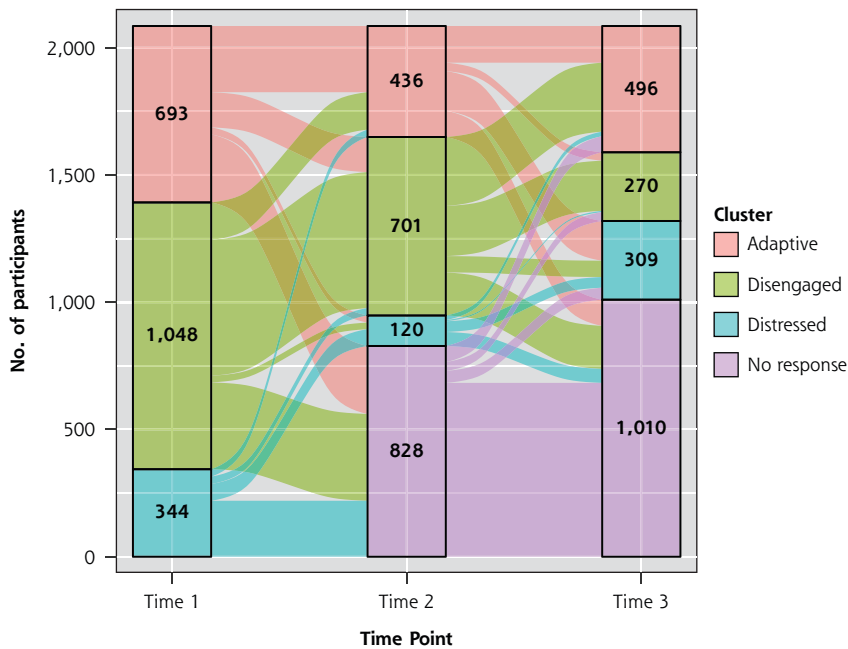
Note: Time 1 spanned December 2-27, 2020; Time 2 spanned January 21-February 6, 2021; and Time 3 spanned March 8-23, 2021.

which varied significantly by veteran status (P <.001 at all 3 time points), with veterans reporting less concern on average than nonveterans. At Time 1, the average nonveteran's concern about contracting COVID-19 on the 5-point scale was 3.1 whereas the average veteran's concern was 2.8, a significant difference (P <.01). Importantly, at Time 3, all participants had a reduction in COVID-19 concern, which may have influenced the use of specific coping strategies. At that time, average concern had dropped to 2.6 for nonveterans and 2.2 for veterans, but it remained higher for the former (P <.01).

Most participants shifted in coping style across time points. Figure 2 depicts a high-level view of cluster membership and attrition over time, and Table 3 shows these patterns in finer numeric detail. For example, as shown in the table, 828 (39.7%) of the original 2,085 participants had dropped out by Time 2. Of the 693 total adaptive copers at Time 1, only 436 remained in that cluster at Time 2.

Table 3. Changes in Coping Style and Study Attrition Over Time Among All Participants (N = 2,085)

	Time 1, No. (%)[a] (Dec. 2-27, 2020)				Time 2, No. (%)[a] (Jan. 21-Feb. 6, 2021)		
Status at Time 2	Adaptive	Disengaged	Distressed	Status at Time 3	Adaptive	Disengaged	Distressed
Drop-out (n = 828)	267 (38.5)	341 (32.5)	220 (64.0)	Drop-out (n = 327)	103 (23.6)	169 (24.1)	55 (45.8)
Adaptive (n = 436)	260 (37.5)	147 (14.0)	29 (8.4)	Adaptive (n = 433)	144 (33.0)	271 (38.7)	18 (15.0)
Disengaged (n = 701)	138 (19.9)	534 (51.0)	29 (8.4)	Disengaged (n = 235)	33 (7.6)	197 (28.1)	5 (4.2)
Distressed (n = 120)	28 (4.0)	26 (2.5)	66 (19.2)	Distressed (n = 262)	156 (35.8)	64 (9.1)	42 (35.0)
Total (N = 2,085)	693 (100)	1,048 (100)	344 (100)	Total (N = 1,257)	436 (100)	701 (100)	120 (100)

Note: Table includes data from all participants at each time point. Time 3 spanned Mar 8-23, 2021
[a] For each status and time point, numbers total across rows. For each time point, percentages total down columns.

Table 4. Changes in Coping Style Among Participants With Data at All 3 Time Points (N = 930)

	Time 2			Time 3		
Time Point and Coping Style	Adaptive, No. (%)	Disengaged, No. (%)	Distressed, No. (%)	Adaptive, No. (%)	Disengaged, No. (%)	Distressed, No. (%)
Time 1						
Adaptive	195 (60.6)	111 (34.5)	16 (5.0)	136 (42.2)	34 (10.6)	152 (47.2)
Disengaged	113 (21.3)	401 (75.7)	16 (3.0)	273 (51.5)	193 (36.4)	64 (12.1)
Distressed	25 (32.1)	20 (25.6)	33 (42.3)	24 (30.8)	8 (10.3)	46 (59.0)
Time 2						
Adaptive	...	...	...	144 (43.2)	33 (9.9)	156 (46.8)
Disengaged	......	...	...	271 (50.9)	197 (37.0)	64 (12.0)
Distressed	...	...	...	18 (27.7)	5 (7.7)	42 (64.6)

Note: Time 1 spanned December 2-27, 2020; Time 2 spanned January 21-February 6, 2021; and Time 3 spanned March 8-23, 2021.

Table 4 and Figure 2 show the pattern of stability and change in coping style for the 930 participants who had data at all 3 time points. Overall, 663 (71.3%) used more than 1 coping style during the study, whereas 267 remained consistent. Within the subset of consistent participants, 74 (27.7%) were adaptive copers at all 3 time points, 171 (64%) were disengaged, and 22 (8.2%) were distressed.

Coping Style Stability vs Coping Style Change

To understand differences in potential contributors and/or outcomes between the group who changed coping style over time and the group who did not, we compared them on demographics and mental health symptoms. The groups were largely equivalent demographically, but those who changed coping styles over time had higher depression and anxiety scores than those who consistently used the same coping style (although both groups scored in the normal range) (Table 5).

DISCUSSION

We found that people used 3 distinct styles of coping to manage the stress of the COVID-19 pandemic similar to those found in prior work of ours and others.[2,16] Adaptive copers were engaged in action-oriented and emotional-focused strategies with relatively low levels of dysfunctional strategies. Distressed copers were engaged in dysfunctional strategies such as self-blame, and disengaged copers generally did not engage in any strategy. These patterns are consistent with existing work showing that coping strategies cluster into groups of adaptive and maladaptive strategies.[2] Research using cluster analysis does not always result in identical groupings of strategies or naming conventions, but certain patterns of strategies are considered adaptive or not. Strategies that we classified as disengaged coping have elsewhere been referred to as "low coping."[26] Specific coping strategies influence the response to stress and relate to subsequent psychosocial and health outcomes.[3,27] Given the dynamic nature of coping styles, it is important to continue work to support clinicians in directing patients to mental health support when they need it.

Over our study's time window, 4 months of a rapidly evolving context for the COVID-19 pandemic, changes in coping style were common. This suggests a need to better understand the dynamic nature of coping across time and during changes in circumstantial threat. In a longitudinal study of coping strategies and depression in patients with cancer, specific

maladaptive strategies were associated with less of a reduction in depression symptoms.[28] A prospective study examining coping styles found that changes over time in coping style were common, and that some strategies (eg, self-blame) were associated with worse mental health symptoms over time.[26] A review of coping during the pandemic among workers and other research among cancer patients showed that resilience

Table 5. Comparisons of Participants With Stable vs Changing Coping Style Over Time

Demographic	Total (N = 930)	Coping Style Trajectory[a]		
		Stable (n = 267)	Changing (n = 663)	P Value
Gender, No. (%)				.23[b]
Female	193 (20.8)	47 (17.6)	146 (22.0)	
Male	735 (79.0)	220 (82.4)	515 (77.7)	
Transgender/Nonbinary/Other	2 (0.2)	0 (0.0)	2 (0.3)	
Age group in years, No. (%)				.50[c]
18-34	37 (4.0)	13 (4.9)	24 (3.6)	
35-54	87 (9.4)	21 (7.9)	66 (10.0)	
55-74	591 (63.7)	176 (65.9)	415 (62.8)	
≥75	213 (23.0)	57 (21.3)	156 (23.6)	
Race, No. (%)				.19[b]
American Indian	8 (0.9)	1 (0.4)	7 (1.1)	
Asian	31 (3.3)	6 (2.2)	25 (3.8)	
Black	73 (7.8)	14 (5.2)	59 (8.9)	
Pacific Islander	4 (0.4)	0 (0)	4 (0.6)	
White	810 (87.1)	243 (91.0)	567 (85.5)	
Other	17 (1.8)	4 (1.5)	13 (2.0)	
Ethnicity, No. (%)				.52[c]
Non-Latine	837 (90.1)	237 (89.1)	600 (90.5)	
Latine	92 (9.9)	29 (10.9)	63 (9.5)	
Veteran status, No. (%)				.16[c]
Veteran	584 (62.8)	177 (66.3)	407 (61.4)	
Nonveteran	346 (37.2)	90 (33.7)	256 (38.6)	
Education, No. (%)				.050[b]
< High school	2 (0.3)	2 (1.1)	0 (0)	
High school graduate/some college	235 (40.2)	80 (45.2)	155 (38.1)	
BA/BS degree	204 (34.9)	53 (29.9)	151 (37.1)	
Graduate degree	143 (24.5)	42 (23.7)	101 (24.8)	
Income category				.16[c]
< $40,000	136 (15.2)	47 (18.4)	89 (14.0)	
$40,000-$74,000	264 (29.6)	73 (28.5)	191 (30.0)	
$75,000-$99,000	168 (18.8)	40 (15.6)	128 (20.1)	
$100,000-$149,000	194 (21.7)	63 (24.6)	131 (20.6)	
≥$150,000	131 (14.7)	33 (12.9)	98 (15.4)	
				continues

BA = bachelor of arts; BS = bachelor of science; IQR = interquartile range; PHQ-4 = Patient Health Questionnaire-4.

[a] Stable participants (28.7%) remained in the same cluster at all 3 time points; changing participants (71.3%) switched clusters at least once.
[b] The Fisher exact test was used for the comparison.
[c] The χ² test was used for the comparison.

Table 5. Comparisons of Participants With Stable vs Changing Coping Style Over Time (continued)

| Demographic | Total (N = 930) | Coping Style Trajectory[a] | | P Value |
		Stable (n = 267)	Changing (n = 663)	
Residence				.31[b]
Rural	151 (16.2)	46 (17.2)	105 (15.8)	
Small city	159 (17.1)	36 (13.5)	123 (18.6)	
Suburban	457 (49.1)	138 (51.7)	319 (48.1)	
Midsized	90 (9.7)	26 (9.7)	64 (9.7)	
Large city	70 (7.5)	19 (7.1)	51 (7.7)	
Other	3 (0.3)	2 (0.7)	1 (0.2)	
Number of comorbid conditions				.58[c]
0	275 (29.6)	83 (31.1)	192 (29.0)	
1	269 (28.9)	79 (29.6)	190 (28.7)	
2	173 (18.6)	43 (16.1)	130 (19.6)	
3 or 4	190 (20.4)	53 (19.9)	137 (20.7)	
≥5	23 (2.5)	9 (3.4)	14 (2.1)	
PHQ-4 Depression and Anxiety scale[d]				
Ordinal score, No. (%)				.050[c]
0	572 (61.5)	183 (68.5)	389 (58.7)	
1	102 (11.0)	27 (10.1)	75 (11.3)	
2	60 (6.5)	11 (4.1)	49 (7.4)	
3	60 (6.5)	12 (4.5)	48 (7.2)	
4	61 (6.6)	12 (4.5)	49 (7.4)	
≥5	75 (8.1)	22 (8.2)	53 (8.0)	
Score, mean (SD)	1.3 (2.3)	1.1 (2.2)	1.4 (2.3)	
Score, median (IQR)	0 (0-2)	0 (0-1)	0 (0-2)	.008[e]

BA = bachelor of arts; BS = bachelor of science; IQR = interquartile range; PHQ-4 = Patient Health Questionnaire-4.

[a] Stable participants (28.7%) remained in the same cluster at all 3 time points; changing participants (71.3%) switched clusters at least once.
[b] The Fisher exact test was used for the comparison.
[c] The χ^2 test was used for the comparison.
[d] Score of 0 to 2 is normal, 3 to 5 indicates mild symptoms, 6 to 8 indicates moderate symptoms, and 9 to 12 indicates severe symptoms.
[e] The Wilcoxon rank sum test was used for the comparison.

further work to better understand coping in veterans. Veterans have access to additional services that nonveterans may not, which possibly contributed to adaptive coping. In addition, veterans may be generally experienced in resilience.

Participants who did not change coping style across time (the stable group) were less depressed and anxious than those who did change styles. In our sample, a change in coping style was more common than not. One potential explanation is the high relative proportion of participants identified as disengaged copers in the stable group. Possibly, these disengaged participants were less affected by pandemic stress and did not need to use many coping strategies, and therefore reported fewer mental health symptoms. Given the demographic similarity between groups who changed vs did not change coping style, however, it is reasonable to conclude that a consistent coping style (even a relatively less optimal one, such as the distressed coping style) may be protective for mental health during a unique and rapidly changing period of global stress, beyond some of the demographic risk factors that impact mental health symptoms. An alternative explanation may be that a relatively healthier mental health status may promote consistency of coping strategies. Given our focus on changes in coping style over time, we did not assess in detail the personal characteristics of specific clusters (eg, adaptive copers), but importantly, we did find differences by veteran status across coping styles. Potentially, veterans are more likely to use active coping strategies.

Our findings should be evaluated in the context of some limitations. First, we used only 11 subscales of the coping measure, which affected our ability to assess other potentially important coping strategies (eg, substance use) in each cluster. We adapted the measure instructions to focus directly on coping with the pandemic, which may make our results more difficult to compare with other work. Our sample was recruited from a Qualtrics panel and, though diverse, was not intended to be nationally representative, not least because our participants were very comfortable with online survey tools and had access to high-quality internet. Compared with veterans generally, the veterans in our sample may differ on specific characteristics (eg, exposure to a war zone, intensity of VA health care use), which we did not assess.

Our study is unique in that we directed respondents to report the strategies they were using to manage a specific stressor, the COVID-19 pandemic, and followed changes during an unprecedented event and rapidly evolving time period. The malleability of coping styles points to practical applications for helping individuals to develop and engage in adaptive strategies. Family practice clinicians may want to

and posttraumatic growth relate to coping styles.[27,29] Other COVID-19–related research has shown that adaptive coping strategies are associated with better mental health.[7,30] Taken together, these findings suggest that we might expect improvement of coping styles over time.

Our results do not clearly support patterns of change in a particular direction, however (eg, many Time 1 adaptive copers changed to less adaptive strategies at Time 2). We cannot state with certainty why specific people may have changed their coping style (or not) over time, but reasons may include (1) the response to dynamic events of that stage in the pandemic, (2) individual characteristics (eg, those who were disengaged at all 3 time points may not have experienced enough stress to necessitate coping), and (3) individual experiences such as posttraumatic growth, which could support enhancement of specific strategies such as acceptance at later stages. Further, our findings raise some intriguing questions for

investigate patient engagement in coping styles and encourage the use of adaptive coping. They should routinely offer support for patients experiencing distress and reassure patients that a rapidly evolving experience in coping is normal. In addition, investigating patient engagement in specific coping strategies and encouraging adaptive coping styles and strategies (active coping where possible, acceptance when ready) may be protective.

Our results also raise some important questions about potentially positive effects of a stable coping style over time that should be confirmed and examined in future research. Of note, both the stable and changing coping style groups had low levels of depression and anxiety symptoms that fell in the normal range. Nonetheless, our work suggests that coping styles are not necessarily evolving in a direction of growth, resilience, or adaptation when they change, making it important to understand how change in coping styles over time may impact well-being and to support patients as they face stress.

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