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Economic Insecurity as a Risk Factor During the COVID-19 Pandemic

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Abstract:

The novel coronavirus disease 2019 (COVID-19) is currently spreading at a rapid rate worldwide. The current pandemic may have several adverse effects on overall psychological functioning and health behaviors. Economic insecurity, operationalized as financial strain and employment uncertainty, can be a significant risk factor for both psychological outcomes and compliance with shelter-in-place recommendations (i.e., health behaviors). One hundred and twenty four participants answered survey data on economic security, fear of COVID-19, health care system distrust, anxiety, well-being, and compliance with CDC recommendations to curb the spread of COVID-19 (i.e., health behaviors; CDC, 2020). Economic security was significantly associated with well-being, health behaviors, and fear of COVID-19, beyond health care system distrust.

Economic insecurity appears to be a risk factor during the COVID-19 pandemic, as it appears to be associated with lower compliance in social distancing and shelter-in-place recommendations. More targeted public policies geared toward alleviating economic distress among vulnerable populations are needed, as they may inadvertently help curb the rapid spread of COVID-19.

Keywords:

economic insecurity; risk factor; COVID-19; health behavior

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ABSTRACT

The novel coronavirus disease 2019 (COVID-19) is currently spreading at a rapid rate worldwide. The current pandemic may have several adverse effects on overall psychological functioning and health behaviors. Economic insecurity, operationalized as financial strain and employment uncertainty, can be a significant risk factor for both psychological outcomes and compliance with shelter-in-place recommendations (i.e., health behaviors). One hundred and twenty-four participants answered survey data on economic security, fear of COVID-19, health care system distrust, anxiety, well-being, and compliance with CDC recommendations to curb the spread of COVID-19 (i.e., health behaviors; CDC, 2020). Economic security was significantly associated with well-being, health behaviors, and fear of COVID-19, beyond health care system distrust. Economic insecurity appears to be a risk factor during the COVID-19 pandemic, as it appears to deter people from engaging in social distancing and shelter-in-place recommendations. More robust public policies geared toward alleviating economic distress among vulnerable populations are needed, as they may inadvertently help curb the rapid spread of COVID-19.

Keywords: economic insecurity; risk factor; COVID-19; health behavior

INTRODUCTION

A novel virus illness, the coronavirus disease 2019 (COVID-19), is currently spreading at an alarming rate worldwide. Since the first case was reported in early December 2019, over 100 million people worldwide have been infected with COVID-19, with over 2.3 million deaths globally (WHO, 2021). At the time of writing (February 17th, 2020), the United States alone has had over 27 million cases and over 450 thousand deaths due to COVID-19 (WHO, 2021). In order to curtail the spread of COVID-19, states have implemented some sort of lockdown restrictions and shelter-in-place orders to reduce close contact between people, flatten the epidemic curve, and prevent the health care system from becoming overwhelmed by the number of people seeking care (Secon, 2020). State-sanctioned lockdown measures (or lack thereof) may signal how worried people should be about the pandemic, which in turn would directly impact how likely they are to

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engage in precautionary health behaviors. The Centers for Disease Control and Prevention (CDC) lists several community mitigation activities that can be taken by people to slow the spread of COVID-19, such as frequently washing hands, avoiding close contact with those who are sick, practicing social distancing (i.e., limiting face-to-face contact with others), covering mouth and nose with a cloth cover when in social situations, and cleaning and disinfecting frequently touched surfaces daily (CDC, 2020a).

However, compliance with shelter-in-place orders is uneven throughout the USA (Maryland Transportation Institute, 2020; Zhang et al., 2020), which further complicate efforts to slow the spread. Due to multiple deprivations on health, education, and living standards (e.g., sanitation), those who live in poverty are at a particularly higher risk for COVID-19 infection and adverse consequences (Alkire, Nogales, & Oldiges, 2020; Evans & Kovesdi, 2020). As people who live in poverty do not have wealth to live without working, and do not have an adequate house structure to keep them safe and comfortable during stay-at-home orders, they are unlikely to comply with prevention recommendations, particularly those who have multiple marginalized identities (Tavares & Betti, 2020; The Lancet, 2020). The health disparities of COVID-19 are particularly stark among people of color, as a disproportionate number of African Americans have been infected and died from the novel coronavirus (Lahut, 2020).

Disinformation regarding COVID-19 is also a significant risk factor in engaging in health behaviors. The rapid spread of incorrect information, such as the controversial studies on the use of hydroxychloroquine and early treatment (Gottlieb & Dyer, 2020), may cause significant harm and prevent people from marginalized communities from seeking treatment. Disinformation regarding adequate course of treatment has been proposed to deter people from engaging in treatment and seeking care, as it contributes to dismissal of scientific findings and overall recommendations from global health institutions (e.g., WHO; Galhardi, Freire, Minayo, & Fagundes, 2020; Tagliabue, Galassi, & Mariani, 2020). Chronic and systemic racism have contributed to an understandable mistrust of the health care system for African Americans (Ajulore & Thames, 2020), further contributing to the spread of misinformation and amplifying health disparities. Social disenfranchisement also contributes to African Americans being overrepresented in 'front-line workers', which further prevents them from engaging in social distancing. Racial bias continues to prevent African Americans from using health care services (Cavalhieri, Chwalisz, & Greer, 2019), which has been amplified during the current pandemic (Laurencin & Walker, 2020). As such, people of color appear to be at a higher risk of adverse effects in the face of the COVID-19 pandemic.

Further, quarantine procedures can also lead to adverse psychological issues, particularly due to lack of interpersonal contact and communication, which can lead to symptoms of anxiety and depression (Luttik et al., 2020; Schmidt et al., 2020; Xiao, 2020). Quarantine and isolation have been linked to stress-related symptoms and disorders (e.g., acute stress disorder, irritability, insomnia, emotional exhaustion), and warrant psychological attention (Jung & Jun, 2020). Two important issues faced by people in quarantine is the dismantle of social support structures and the significant stigma faced by patients. The removal of support systems and stigmatization can potentially worsen mental health issues and prevent patients from accessing the healthcare system, continuing the rapid spread of COVID-19 (Jung & Jun, 2020). To address these issues, providers have offered online mental health services during the COVID-19 outbreak (Liu et al., 2020; Rajkumar, 2020). Unfortunately, these services are only feasible to the substrate of the population

who has access to a computer, high-speed internet, and is able to continue to pay for those services during the quarantine (i.e., have enough wealth to survive without working or be able to work from home). Hence, it is paramount to address economic instability and how it impacts psychological functioning. Efforts should focus not only on providing online mental health services, but on diminishing the stressors stemming from economic insecurity.

Economic Insecurity and COVID-19

People who live in poverty and experience economic insecurity are at higher risk of infection and adverse consequences from COVID-19 (Alkire et al., 2020), partially due to the inability to comply with community mitigation procedures because of financial needs (Evans & Kovesdi, 2020; Tavares & Betti, 2020). People of color in the U.S. are at particular risk for COVID-19 (Lahut, 2020), as gentrification, residential segregation, and racist practices prevent them from accessing healthy food and from having physical access to supermarkets (Alkon et al., 2020). People of color and those in poverty are also frequently neglected from public health campaigns, and are exploited due to structural racism and economic inequalities, leading to a larger number of people living in food-insecure households and being at a higher risk for COVID-19 (Alkon et al., 2020). Pirtle (2020) argues that the health disparities in the COVID-19 pandemic stem specifically from racial capitalism - the systematic marginalization of people of color through economic means. The author notes that people in marginalized neighborhoods have less access to affordable foods and green spaces, which prevents them from engaging in healthy behaviors. Using the example of COVID-19 cases in Detroit, Michigan, he stated that a racialized capitalist system systematically targets the poor, deterring their access to clean water, public spaces, and proper work conditions (e.g., warehouses and service positions), leading to a higher number of cases amongst those who are economically marginalized.

Marginalized groups are also more likely to receive inadequate health literacy, furthering the divide between the poor and the wealthy (Loveday, 2020). People who live in poverty are also more likely to mistrust the health care system, which leads to worse health outcomes overall (Jaiswal, LoSchiavo, & Perlman, 2020). Health providers must recognize this mistrust, to provide information that is accurate and accessible, without bias. As the economic divide increases in the face of the COVID-19 pandemic, with major dislocation of workers and increase in unemployment and underemployment (International Labor Organization, 2020), the mistrust of the health care system may increase. It is paramount to investigate the role of economic insecurity and marginalization on behavior, to better guide policies and allocation of resources to those in need.

Blustein and colleagues (2020) note how unemployment has a significant adverse impact on people's psychological, social, and economic well-being. They discuss how the novel COVID-19 era lead to very large numbers of unemployment, furthering harming those who are economically marginalized. They propose that future research should address the lived experiences of people who are now suddenly out of work. In this unprecedented time, it is paramount to ensure our research can guide public policy. Hence, the present research goal was to investigate whether economic insecurity would be related to CDC's recommendations for shelter in place, so future public policies can be created to provide financial support to those who are struggling the most with economic insecurity. Public policies allocating resources to those who struggle with economic insecurity may decrease their overall stress and encourage them to abide with shelter-in-place recommendations, to curb the spread of the disease in the country.

The current study

The current study was designed to investigate how economic insecurity was related to psychological outcomes and CDC recommendations for community mitigation (i.e., shelter-in-place). It is paramount to investigate how economic insecurity can serve as a significant risk factor during the COVID-19 pandemic, so public policies can be geared toward alleviating economic distress. To that end, it was hypothesized that economic security would be a significant predictor of psychological outcomes after accounting for the effects of mistrust of the health care system, and that economic security would predict people’s distress in the face of COVID-19 (i.e., fear of COVID-19).

METHODS

Participants

Participants were recruited from a crowdsourcing platform (i.e., MTurk) devoted to the recruitment of convenience samples. Samples from MTurk have been found to be more representative of the U.S. in comparison to undergraduate students (Buhrmester, Talaifar, & Gosling, 2018; Chandler & Shapiro, 2016). Three attention checking questions were included (e.g., *Please select strongly agree*), and only those who answered all attention-checking questions correctly were retained. There was no missing data from those in the final sample. Inclusion criteria for the study was (a) being at least 18 years old, and (b) living in the USA. Given the economic marginalization of people of color during the COVID-19 pandemic (Alkon et al., 2020; Lahut, 2020), they were intentionally over-sampled. A priori power analysis for a hierarchical multiple regression with 3 predictors indicated that at least 114 subjects would be necessary to identify an effect size of .10, maintaining a power .80 and an alpha of .05. The final sample consisted of 124 people, with an average age of 35.67 (SD = 11.02). To closely adhere to the a priori power analysis and avoid an over-powered sample (i.e., having a sample size large enough that any correlation between variables is significant, regardless of how trivial; Cohen 1990), the sample consisted of 124 independent observations. Effect sizes were also reported (R^2), to indicate the magnitude of the relationship between the variables. Participants’ information on social class standing, ethnicity, wealth, and gender can be found in Table 1.

Table 1. Demographic information

Variable	<i>n</i>	%
Gender		
Woman	44	35.5
Man	80	64.5
Sexual orientation		
Bisexual	40	32.3
Gay	2	1.6
Heterosexual	82	66.1
Ethnicity		
American Indian or Alaska Native	1	.8
Asian American	5	4
Black or African American	32	25.8
Latino/a	16	12.9
White	69	55.6

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Multiethnic	1	.8
Social class growing up		
At or below the poverty line	2	1.6
Lower class	4	3.2
Working class	18	14.5
Lower-middle class	11	8.9
Middle class	59	47.6
Upper-middle class	24	19.8
Upper class	3	2.4
No response	3	2.4
Employment status		
Working full-time	104	83.9
Working part-time	11	8.9
Unemployed or laid off	5	4
Looking for work	1	.8
Only studying	2	1.6
Retired	1	.8
Family income (last 12 months)		
Less than \$5,000	3	2.4
\$5,000 through \$11,999	6	4.8
\$12,000 through \$15,999	7	5.6
\$16,000 through \$24,999	5	4.0
\$25,000 through \$34,999	8	6.5
\$35,000 through \$49,999	23	18.5
\$50,000 through \$74,999	38	30.6
\$75,000 through \$99,999	15	12.1
\$100,000 and greater	15	12.1
Don't know	0	0
No response	4	3.2
Accumulated wealth		
Less than \$500	3	2.4
\$500 to \$4,999	11	8.9
\$5,000 to \$9,999	13	10.5
\$10,000 to \$19,999	22	17.7
\$20,000 to \$49,999	24	19.4
\$50,000 to \$99,999	29	23.4
\$100,000 to \$199,999	6	4.8
\$200,000 to \$499,999	3	2.4
\$500,000 and greater	5	4
Don't know	2	1.6
No response	6	4.8
Accumulated wealth minus debt		
Less than \$500	8	6.5
\$500 to \$4,999	20	16.1

\$5,000 to \$9,999	15	12.1
\$10,000 to \$19,999	12	9.7
\$20,000 to \$49,999	25	20.2
\$50,000 to \$99,999	24	19.4
\$100,000 to \$199,999	4	3.2
\$200,000 to \$499,999	4	3.2
\$500,000 and greater	3	2.4
Don't know	3	2.4
No response	6	4.8

Measures

Demographic questionnaire. Demographic questionnaire included questions regarding participant's age, gender, ethnicity, education, employment status, wealth, debt, perceived class growing up, and sexual orientation.

Fear of COVID-19. Fear of COVID-19 was operationalized with the Fear of COVID-19 Scale (FCV-19S; Ahorsu et al., 2020). The FCV-19S is a short 7-item scale, designed to measure people's fear of the coronavirus, with higher scores indicating greater fear of coronavirus-19. Total scores are obtained by summing all items' scores, ranging from 7-35. An example item of their scale would be "It makes me uncomfortable to think about coronavirus-19". In their original study, Ahorsu and colleagues (2020) found good internal consistency ($\alpha = .82$) for the FCV-19S in a sample of Iranian participants. The Cronbach's alpha for this sample of Americans was .87.

Economic security. Economic security was measured with the Subjective Economic Distress Scale (SEDS; Gleib et al., 2018). The SEDS is a scale of subjective economic distress, intended to provide a unidimensional measure of financial strain and employment uncertainty. The SEDS is composed of five items (Gleib et al., 2018; Gleib & Weinstein, 2019), that are standardized and summed across. Higher scores indicate more economic security, and lower scores indicate more economic insecurity. An item example would be "Using a scale from 0 to 10 where 0 means 'the worst possible financial situation' and 10 means 'the best possible financial situation,' how would you rate your financial situation these days?" Gleib and colleagues (2018) found good internal consistency for their scale ($\alpha = .84$). The Cronbach's alpha for this sample was .80.

Health care system distrust. Attitudes toward health care was operationalized through the Health Care System Distrust Scale (HCSDS; Rose et al., 2004). The HCSDS is a 10-item measure of distrust of the health care system, with higher scores indicating greater distrust (i.e., more negative attitudes). An item example would be "Medical experiments can be done on me without my knowing about it." In their original study, Rose and colleagues (2004) found acceptable internal consistency for the HCSDS ($\alpha = .75$). The Cronbach's alpha for the current sample was .74.

Health Behaviors. To operationalize health behaviors, a list of behaviors recommended by CDC to prevent the spread of COVID-19 was compiled (CDC, 2020b). Compliance with CDC recommendations was operationalized through self-reported frequency participants indicated they engaged on eight behaviors recommended by CDC. Participants were asked to indicate how frequently they engaged in the following behaviors since the COVID-19 pandemic started: (a) wash your hands often with soap and water for at least 20 seconds, (b) avoid touching your eyes, nose, and mouth with unwashed hands, (c) avoid close contact with people who are sick, (d) put

distance between yourself and other people outside of your home, (e) stay out of crowded places and avoid mass gatherings, (f) cover your mouth and nose with a cloth face cover when around others, (g) cover coughs and sneezes, and (h) clean and disinfect frequently touched surfaces daily. Participants indicated the frequency they engaged in these behaviors in a 4-point Likert-type scale (never, rarely, sometimes, often). This scale of compliance with CDC recommendations had high internal consistency for this sample ($\alpha = .81$).

Anxiety. Anxiety was operationalized through the Penn State Worry Questionnaire (PSWQ; Meyer, Miller, Metzger, & Borkovec, 1990). The PSWQ is a 16-item scale, purported to measure the trait of worry. The PSWQ's scores range from 16 to 80, with higher scores indicating greater overall worry. Meyer and colleagues (1990) reported excellent internal consistency for the PSWQ ($\alpha = .93$). The Cronbach's alpha for this sample was .81.

Well-being. Well-being was measured with the Oxford Happiness Questionnaire (OHQ; Hills & Argyle, 2002). The OHQ is a measure of personal happiness, in which higher scores indicate greater psychological well-being. Hills and Argyle (2002) reported excellent internal consistency for the OHQ in their original study ($\alpha = .91$). The Cronbach's alpha for this sample was .88.

Procedures

Data collection. Following IRB approval, participants were recruited through the MTurk platform. Participants completed an online survey hosted on Qualtrics, in which all scales (except the demographic questionnaire) were randomized to control for order effects.

Data analysis. To test the study's hypotheses, hierarchical regression analyses were conducted. There were no missing values on the final sample. To test the first hypothesis (H1), that economic security would be a significant predictor of psychological outcomes, regressions were run with well-being, anxiety, and compliance with CDC recommendations as outcome variables (DVs), and demographic variables, health care system distrust, fear of COVID-19, and economic security as predictor variables (IVs). To test the second hypothesis (H2), that economic security would predict distress in the face of COVID-19, another hierarchical regression was conducted in which the outcome variable (DV) was fear of COVID-19, and demographic variables, health care system distrust, and economic security were predictor variables (IVs).

RESULTS

Hierarchical regressions were computed to test the study's hypotheses. All bivariate correlations were below .6, tolerance scores were all above .2, and all VIF scores were below 10, indicating there was no evidence of multicollinearity (Tabachnik & Fidell, 2013). Assumptions of homoscedasticity and normality were met based on the evaluation of scatterplots. To test the first hypothesis (H1), three regressions were run with well-being, anxiety, and health behaviors as outcome variables, and demographic variables, health care system distrust, fear of COVID-19, and economic security as predictors. The last step of these three regressions can be found in Table 2. To test the second hypothesis (H2), another regression was run with fear of COVID-19 as an outcome variable, and demographic variables, health care system distrust, and economic security as predictors. The last step of this regression can be found in Table 3.

Hypothesis 1

Well-being. The overall model with all variables included (i.e., age, gender, subjective social status, attitudes toward health care, economic insecurity, and fear of COVID-19)

significantly predicted well-being, $F(6, 114) = 13.922, p < .001$. The first step of the regression, with the demographic variables, significantly predicted well-being, $F(3, 117) = 3.529, p = .017, R^2 = .083$. The second step, once attitudes toward health care (i.e., health care distrust) was added, significantly improved the prediction, $F(1, 116) = 41.788, p < .001, \Delta R^2 = .243$. The third and final step, in which fear of COVID-19 and economic security was added, also significantly improved the prediction of well-being beyond attitudes toward health care, $F(2, 114) = 9.584, p < .001, \Delta R^2 = .097$. In the last step of the regression, only gender, $t = 2.448, p = .016$, health care system distrust, $t = -5.977, p < .001$, and economic security, $t = 3.848, p < .001$, contributed to the prediction of well-being. Fear of COVID-19 was not a significant predictor, $t = -1.082, p = .282$. With this combination of predictors, health care system distrust had the highest beta (-.501) followed by economic security (.332), and were the strongest contributors to the prediction of well-being. The combination of all variables accounted for 42% of variance in well-being ($R^2 = .423$). The effect of health care system distrust was negative, indicating greater distrust was associated with worse well-being, whereas the effect of economic security was positive, indicating that more economic security was associated with greater well-being.

Anxiety. The overall model with all variables included significantly predicted anxiety, $F(6, 114) = 12.324, p < .001$. The first step of the regression significantly predicted anxiety, $F(3, 117) = 3.478, p = .018, R^2 = .082$. The second step significantly improved the prediction, $F(1, 116) = 35.469, p < .001, \Delta R^2 = .215$. The third and final step also significantly improved the prediction of well-being beyond distrust of the health care system, $F(2, 114) = 9.075, p < .001, \Delta R^2 = .097$. In the last step of the regression, only age, $t = -2.964, p = .004$, subjective social status, $t = -2.075, p = .04$, distrust of the health care system, $t = 4.196, p < .001$, and fear of COVID-19, $t = 4.252, p < .001$, contributed to the prediction of anxiety. Economic security was not a significant predictor, $t = .789, p = .432$. With this combination of predictors, fear of COVID-19 had the highest beta (.385), and was the strongest contributor to the prediction of anxiety. The combination of all variables accounted for 39% of variance in anxiety ($R^2 = .393$). The effect of fear of COVID-19 was positive, indicating that greater fear of COVID-19 was associated with greater anxiety.

Health Behaviors. The overall model with all variables included significantly predicted compliance with CDC recommended behaviors (i.e., health behaviors), $F(6, 114) = 6.034, p < .001$. The first step of the regression significantly predicted health behaviors, $F(3, 117) = 4.741, p = .004, R^2 = .108$. The second step significantly improved the prediction, $F(1, 116) = 12.135, p = .001, \Delta R^2 = .084$. The third step also significantly improved the prediction of health behaviors beyond distrust of the health care system, $F(2, 114) = 3.620, p = .030, \Delta R^2 = .048$. In the last step of the regression, only age, $t = 2.480, p = .015$, gender, $t = 2.266, p = .025$, health care system distrust, $t = -3.521, p = .001$, and economic security, $t = 2.690, p = .008$, contributed to the prediction of health behaviors. Fear of COVID-19 was not a significant predictor, $t = .587, p = .559$. With this combination of predictors, health care system distrust had the highest beta (-.339), followed by economic security (.266), and were the strongest contributors to the prediction. The combination of all variables accounted for 24% variance of health behaviors ($R^2 = .241$). The effect of economic security was positive, indicating that greater economic security was associated with more compliance with CDC's recommended behaviors to prevent the spread of COVID-19 (i.e., health behaviors).

Table 2. Hypothesis 1: Step 3 of the regression analyses predicting psychological symptoms and compliance with CDC recommended behaviors from demographic variables, health care system distrust, fear of COVID-19, and economic insecurity (N = 120)

Variable	<i>B</i>	<i>SEB</i>	β	<i>R</i> ²	ΔR^2
<i>Well-being</i>				.423**	.097**
Constant	158.004	10.717			
Age	.173	.125	.099		
Gender	7.128	2.912	.179*		
SSS	-.857	1.113	-.072		
HCSDS	-1.519	.254	-.501**		
FCV-19S	-.275	.254	-.096		
ES	1.936	.503	.332**		
<i>Anxiety</i>				.393**	.097**
Constant	33.398	5.838			
Age	-.202	.068	-.217*		
Gender	-.302	1.586	-.014		
SSS	-1.258	.606	-.200*		
HCSDS	.581	.138	.361**		
FCV-19S	.589	.138	.385**		
ES	.216	.274	.070		
<i>Health behaviors</i>				.241**	.048*
Constant	29.930	2.839			
Age	.082	.033	.204*		
Gender	1.748	.771	.190*		
SSS	-.418	.295	-.153		
HCSDS	-.237	.067	-.339*		
FCV-19S	.039	.067	.059		
ES	.359	.133	.266*		

Note: SSS = Subjective Social Status; HCSDS = Health Care System Distrust Scale; FCV-19S = Fear of COVID-19 Scale; ES = Economic Security. * $p < .05$, ** $p < .001$.

Hypothesis 2

The overall model with all variables included (i.e., gender, age, subjective social status, health care system distrust, and economic security) significantly predicted fear of COVID-19, $F(5, 116) = 12.589$, $p < .001$. The first step of the regression, with the demographic variables, significantly predicted fear of COVID-19, $F(3, 118) = 9.463$, $p < .001$, $R^2 = .194$. The second step, once health care distrust was added, significantly improved the prediction, $F(1, 117) = 19.863$, $p < .001$, $\Delta R^2 = .117$. The third and final step, in which economic security was added, also significantly improved the prediction beyond health care system distrust, $F(1, 116) = 7.307$, $p = .008$, $\Delta R^2 = .041$. In the last step of the regression, subjective social status, $t = 4.254$, $p < .001$, health care system distrust, $t = 4.5296$, $p < .001$, and economic security, $t = -2.703$, $p = .008$, contributed to the prediction of fear of COVID-19. With this combination of predictors, subjective social status had the highest beta (.391), followed by health care system distrust (.373) and economic security (-.238), and were the strongest contributors to the prediction of fear of COVID-

19. The combination of all variables accounted for 35% variance of fear of COVID-19 ($R^2 = .352$). The effect of subjective social status and health care system distrust was positive, indicating that higher social status and greater distrust were associated with greater fear of COVID-19, whereas the effect of economic security was negative, indicating that greater economic insecurity was associated with greater fear of COVID-19.

Table 3. Hypothesis 2: Step 3 of the regression analysis predicting fear of COVID-19 from demographic variables, health care system distrust, and economic insecurity (N = 120)

Variable	<i>B</i>	<i>SEB</i>	β	R^2	ΔR^2
<i>Fear of COVID-19</i>				.352**	.041*
Constant	2.724	3.912			
Age	-.014	.046	-.023		
Gender	-1.326	1.057	-.096		
SSS	1.609	.378	.391**		
HCSDS	.393	.085	.373**		
ES	-.482	.178	-.238*		

Note: SSS = Subjective Social Status; HCSDS = Health Care System Distrust Scale; ES = Economic Security. * $p < .05$, ** $p < .001$.

DISCUSSION

The purpose of this study was to investigate the potential impact of economic insecurity on mental health outcomes in the face of the COVID-19 pandemic, and to explore how economic insecurity can be a risk factor regarding the compliance with the CDC's behavioral recommendations to prevent the spread of COVID-19 (CDC, 2020b). It was hypothesized that economic insecurity and fear of COVID-19 would be significant predictors of health behaviors and psychological outcomes, and that economic insecurity would be a significant predictor of distress in the face of the COVID-19 pandemic (i.e., fear of COVID-19). The results indicate that economic insecurity can be a risk factor during the COVID-19 pandemic, as it contributes to adverse mental health symptoms, and may deter people from engaging in the health behaviors recommended to deter the spread of COVID-19. Overall, the hypotheses were supported, as economic insecurity was a significant predictor of well-being, fear of COVID-19, and health behaviors.

It appears that economic insecurity can serve as a unique risk factor during the COVID-19 pandemic. In this sample, economic security was a significant predictor of well-being, fear of COVID-19, and compliance with CDC behavioral recommendations, beyond one's distrust of the health care system. These findings are consistent with previous research on the adverse impact of economic insecurity on physical and mental health (Catalano, 1991; Gleib & Weinstein, 2019; Hossain & Lamb, 2019; Shuey & Willson, 2019). The findings also suggest that people who are currently experiencing more economic insecurity as a consequence of the rapid changing economic landscape during the COVID-19 pandemic are more likely to engage in risk behaviors, such as not complying with shelter-in-place recommendations. It is paramount to investigate the mental health consequences of the pandemic, particularly in regards to vulnerable groups such as those who are economically marginalized, so public policies can be geared toward these groups to avoid risky behaviors (Holmes et al., 2020).

Contrary to expectations, economic insecurity was not a predictor of anxiety. However, fear of COVID-19 was a significant predictor, indicating how distress caused by the pandemic can have adverse and broad effects on overall psychological functioning. Further, the findings indicated an inverse significant effect for economic security in predicting fear of COVID-19, which suggest that people with less economic security (i.e., more economic insecurity), experience more distress in the face of the pandemic. In a more concerning note, people who were more economically insecure were less likely to engage in CDC recommended behaviors. This alarming finding elucidates how people who experience poverty and economic insecurity do not engage in the behaviors recommended by the CDC to prevent the rapid spread of COVID-19. It is likely that this vulnerable group does not have liquid wealth to maintain their standard of living and well-being during these challenging times, leading them to engage in risky situations as a way to increase their potential income. As they likely cannot live without work, it is plausible that people who are not economically secure during the pandemic work in less than ideal situations, and are not able to engage in social distancing recommendations.

Economic insecurity appears to be a significant risk factor during the COVID-19 pandemic. Thus, further research is needed to understand the unique ways economic insecurity leads to adverse mental health and risk behaviors during shelter-in-place recommendations (e.g., Hossain & Lamb, 2019). Future public policies should initially focus on alleviating economic distress for vulnerable populations, to hopefully increase their compliance with social distancing recommendations and curb the rapid spread of the novel COVID-19. Economic policies, such as the Coronavirus Tax Relief program (IRS, 2020), can be particularly helpful in reducing the financial strain experienced by vulnerable groups, which in consequence can help slow the spread of COVID-19.

Limitations

Some limitations must be considered in interpreting and understanding the results of the current study. The study had a cross-sectional design, preventing the investigation of the long-term effect of economic insecurity on psychological outcomes and health behaviors. Further, all measures were self-report, which might not accurately represent the psychological and economic experiences of participants. Participants were recruited from an online crowdsourcing platform (i.e., MTurk). Although MTurk samples are more representative of the United States population in comparison to undergraduate samples (Buhrmester et al., 2018), people who do not have access to internet and would likely experience significant economic insecurity did not take part on the study. Further, crowdsourcing samples tend to be from higher socioeconomic status. As the majority of Americans are overburdened by significant student loans and are not able to have savings (Jackson & Reynolds, 2013), any significant relationships observed in this study likely *underestimates* the actual effects. Future research should address this issue with a more economically diverse sample. Lastly, these findings may also not generalize to people outside of the US, as other psychosocial variables may also impact their overall psychological functioning and health behaviors.

Implications for Research and Practice

These findings have several implications, for both researchers and practitioners. Economic insecurity was a significant and unique predictor of health behaviors and psychological functioning. Further research is required to investigate how the economic uncertainty during the COVID-19 pandemic has an adverse effect on health behaviors and psychological functioning, to

better guide meaningful public policies. Policies geared toward alleviating the economic distress of those affected by the pandemic, such as the Coronavirus Tax Relief program, can be particularly helpful to vulnerable populations. Behavioral health providers are in a unique position to advocate for those who live in poverty and are economically marginalized (APA, 2019), by supporting policies that diminish the economic gap and provide resources to those who are vulnerable. Further, practitioners should also attend to the potential negative impact of economic insecurity with their patients, particularly on how it may interfere with their ability to provide services. Practitioners have used telehealth services during the COVID-19 pandemic (Liu et al., 2020) – and it might be a worthwhile effort to actively discuss economic and financial distress with their clients, as it appears to be a significant stressor during the current pandemic.

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