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Decent Work and Mental Health During the COVID-19 Pandemic: The Case of Un-/Under-employed Workers

COLLECTION:
CAREERS IN TIMES OF CRISIS

RESEARCH

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ABSTRACT

Previous work crises have shown that un-/under-employment can have detrimental mental health effects. Workers facing issues related to employment and decent work now have the added stress of physical harm from the respiratory disease known as COVID- 19. This situation presents workers with threats to financial security, physical health, and mental health. However, the presence of coping skills such as perceived social support, resilience, self-esteem, and social class could have a protective effect on mental health outcomes. The aim of this descriptive study was to examine how conditions during a pandemic affect underemployed and unemployed workers' mental health and psychological well-being. Data (n = 200 un-/under-employed adults) were examined to understand the relationship between decent work and mental health symptoms, as well as the effect of coping skills, resilience, self-esteem, social class, and social support. Decent work was related to mental health symptoms in the expected directions. The examination of differences between unemployed and underemployed workers on measures of social support, resilience, self-esteem, economic constraints, social prestige and measures of mental health symptoms, found differences in workers' perception of economic constraints, self-esteem, and social prestige, as well as levels of stress, anxiety, and depression. Underemployed workers reported lower perceptions of their social status, more economic constraints, and higher levels of depression, anxiety, and stress. Lastly, examination of the impact of prior mental health issues, found that workers' who reported no prior diagnosis differed significantly from those with two or more diagnoses on measures of self-esteem, resilience, and social support.

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KEYWORDS:
Unemployment; underemployment; COVID; precarious work; mental health; social class

TO CITE THIS ARTICLE:
Roberts, T. N., Hammond, M. S., Morrison, M. M., Williams, T. R., Lynch, E. M., & Young-Seigler, A. C. (2023). Decent Work and Mental Health During the COVID-19 Pandemic: The Case of Un-/Under-employed Workers. *Swiss Psychology Open, 3*(1): 6, pp. 1–18. DOI: https://doi.org/10.5334/spo.43

INTRODUCTION

Previous work crises have shown that un-/under-employment can have detrimental impacts on mental health. In addition to the crisis itself, these situations presented workers with threats to financial security, physical health, and mental health. Research suggests that the presence of coping skills such as perceived social support, resilience, self-esteem, and social class have had protective effects on mental health outcomes during crises and post-traumatic experiences. While similar to these previous work crises, there have been unique impacts and challenges to coping, particularly for those who are un-/under-employed. These two groups of workers have not only faced issues related to employment and Decent Work, but they also faced the added stress of physical harm to themselves and/or family members from this debilitating disease known as Severe Acute Respiratory Syndrome associated with Coronavirus 2 (SARS-CoV-2, COVID-19; CDC, 2020a). Therefore, this study will examine Decent Work, un-/under-employment, economic constraints, protective factors, and mental health outcomes in the context of the COVID-19 pandemic.

BACKGROUND

Due to the dearth of literature examining the effects of large-scale traumatic events on functioning in the work/employment setting, a brief summary of the effects of large-scale natural disasters and global health crises may prove illuminating. Extrapolating from the psychological and traumatic effects of earlier large-scale natural disasters (e.g., earthquake or hurricane; SAMHSA, 2022) and global health crises (e.g., Spanish Influenza; Jarus, 2021) we can glimpse the potential mental health consequences of COVID-19. These types of events differ from man-made traumatic events (i.e., terrorism or mass shooting, Flint water crisis; Substance Abuse and Mental Health Services Administration [SAMHSA], 2022), in that these events are not the product of a lack of care for others' lives, nor of malicious attacks with the intent to harm. This research provides clues as to the likely psychological outcomes resulting from coping with the current "plague" and its resulting fallout.

Research demonstrates that traumatic events result in increases in symptoms related to stress, depression, and anxiety (Brenner & Bhugra, 2020). Research on mental health outcomes as a consequence of natural disasters (i.e., earthquakes, hurricanes, tornadoes) finds that non-specific distress with the presentation of specific psychological problems (e.g., posttraumatic stress, depression, anxiety; Gregg et al., 2022) is most common. When considering the most memorable pandemic in history, individuals' point to the 1918 influenza pandemic (CDC, 2019). In recent memory however, there have been several minor incidents such as Severe Acute Respiratory Syndrome (SARS), Avian Influenza ("Bird Flu"), H1N1 ("Swine Flu"), and currently COVID-19. While there has been a physical cost to contracting these illnesses, there was also a cost to ones' mental health. Cullen, Gulati, and Kelly (2020) stated that people who were prone to psychological problems were especially vulnerable during pandemics, and "psychological reactions to pandemics include[d] maladaptive behaviors, emotional distress and defensive responses (para. 2)". Blendon et al. (2004) documented the mental health symptoms and contextual factors related to the SARS outbreak, as have other researchers (Chan et al., 2009; Hawryluck et al., 2004). The duration of quarantine was significantly related to increased PTSD (28.9%) and depression (31.2%) symptoms and feelings of isolation.

The most comparable pandemic to COVID-19, is the Spanish Influenza of 1918 – 1920. Similar to the COVID-19 pandemic governmental responses, the societal level intervention types included banning large gatherings, mask mandates, isolating, hygiene/disinfection measures, and even closure of schools (Bootsma and Ferguson, 2007). However, Bootsma and Ferguson (2007) found that these time-limited interventions were only moderately effective at reducing total morality rates (10–30%) due to interventions either being introduced too late in large cities (e.g., New York, Baltimore, Washington) and restrictions being lifted too quickly. Furthermore, a large proportion of those deaths reported were credited to pneumonia in the USA, not influenza (Crosby, 2003). This is due to the 1918 pandemic pre-dating the invention of antibiotics, resulting in many deaths "directly from secondary bacterial pneumonia caused by common upper respiratory tract bacteria" (Morens et al., 2008).

Moreover, due to countries involved in the First World War (1914–1918) suppressing information regarding the impact of influenza on their populaces to maintain morale and avoid appearing vulnerable/weak (Roser, 2020), a skew on estimated deaths is present (Johnson and Mueller, 2002; Patterson and Pyle, 1991; Spreeuwenberg et al., 2018). As well as some scarcity in the literature regarding the mental health impact of the 1918 Pandemic, even with systematic reviews attempted by Neelam et al. (2021) and Rogers et al. (2021), which comment on non-significant rise in voluntary hospitalization for those with pre-existing mental illness.

Another consequence of a global health crisis is the impact on the economy and the workforce in the nations or countries affected. These types of events are more likely to be the long-term result of human actions. In these instances, human decision-making, actions, and/or inactions are likely to have contributory effects on the extent of a global health crisis on the individual.

The consequences of human actions can be seen in a recent work crisis (the "Great Recession" of 2008) where long-term unemployment and underemployment, as well as increases in precarious work, negatively impacted

individuals' mental health and well-being. In this "Great Recession" one sees the direct impact of financial market volatility and high unemployment rates on increased rates of mood disorders, anxiety, depression, and suicide (Guerra et al., 2022; Mucci et al., 2016). Staff reductions, wage reductions, and increased workloads were noted by these authors as the most common actions that increased precarious work and level of employment. A second instance is the collapse of the Lehman Brothers corporation resulting in a stock market crisis. Ayers et al. (2012) found that those who were unemployed, underemployed, or facing delinquency and foreclosure displayed a significant amount of psychological distress, typically expressing symptoms of depression or anxious mood (Alam & Bose, 2022). Recent research (Crowe & Butterworth, 2016; Inanc, 2018; Pavlova, 2021) demonstrated that financial stress has consistently been found to be a strong predictor of psychological distress and impaired mental health among the unemployed. With COVID-19, there was a similar health-employment dilemma (Kößler et al., 2022) for many workers. Choosing between the threats to one's health or one's finances would similarly contribute to their psychological distress and more likely result in negative mental health outcomes, as indicated by the research discussed above.

UNEMPLOYMENT

The USA Bureau of Labor Statistics (BLS; BLS, 2015) defines unemployment as individuals who are jobless, despite actively seeking a job and who can work, which is the definition the current study adopts. During the Great Depression, researchers like Bakke (1933), Jahoda et al. (1971), and Komarovsky (as cited in Aydiner-Avsar & Piovani, 2019) highlighted the connection between unemployment and poor mental health. Bakke (1933) pointed out the pattern of "mental and moral fatigue and discouragement which result from having no job" (p. 270). Jahoda et al. (1971) and Komarovsky (as cited in Aydiner-Avsar & Piovani, 2019), found that psychological distress was a more common occurrence than prior to the Great Depression. More specifically, unemployment was related to several signs of psychological distress such as anxiety, depression, suicide, and somatic symptoms (i.e., headaches and stomachaches; Aydiner-Avsar & Piovani, 2019; Paul & Moser, 2009; Wanberg, 2011).

Paul and Moser (2009) conducted a meta-analysis of unemployed individuals, using 237 cross-sectional and 87 longitudinal studies. Their results indicate that, in addition to the forms of distress mentioned above, reduced subjective well-being and self-esteem were an additional outcome of unemployment beyond the mental health impacts. Among the studies in the meta-analysis, psychological problems were found to be present in 34% of those unemployed compared to 16% of those employed. Furthermore, a biproduct of unemployment was financial insecurity (Matthews et al., 2021), which has been found to impact individuals' level of depression (as previously discussed) and, in turn, increased feelings of helplessness and loss of control. These feelings of helplessness contributed to an increased risk of suicide (Classen & Dunn, 2012; Kim & Cho, 2017). Moreover, Scrimpshire & Lensges (2021) noted that unexpected job loss increased fear responses that prohibited successful job re-employment and led to detrimental behaviors, such as substance use.

UNDEREMPLOYMENT

Milner and colleagues (2017) described underemployment as a person who works in a lower quality type of employment, relative to their expectation, and below their full working capacity. In many instances these jobs are part-time, contract work, or temporary work, thus leaving the individual under constant threat of unemployment, loss of income, and financial stress (Haines et al., 2018; Pech et al., 2021). In other words, underemployment can be conceptually viewed as a form of precarious work (Milner et al., 2017). Thompson et al. (2013) argued that underemployment was more commonly associated in people's minds with overqualification, referring to individuals who possess education and experience beyond what is required for their job. Alternately, underemployment could also refer to the USA Bureau of Labor Statistics (BLS) conceptualization of the term of *underutilization rate*, which reports the number of people working part-time for economic reasons and/or who were marginally part of the labor force (Thompson et al., 2013). These conflicting perspectives on how to best define underemployment are reflected in the vocational and employment research literature. In addition, research continues to find that those who are most vulnerable to falling into underemployment include: lower-skilled workers, women, younger workers, and individuals with disabilities (Milner & LaMontagne, 2017). The current study utilizes Milner and colleagues' definition and will use this definition throughout.

An additional factor related to underemployment, and further complicating this construct, is the distinction between voluntary and involuntary underemployment (Pech et al., 2021). In an investigation of women who frequently engaged in voluntary or involuntary part-time work (i.e., paid positions that are not charity or non-paid work), Pech and colleagues found that some of these part-time workers who, if a full-time, suitable job were available, would accept it. This places them in the category of underemployment. Consequently, their voluntary/involuntary part-time worker status brings with it potential threats, such as at greater risk of severance, termination, or layoff with little to no notice, and lack of access to benefits that a full-time worker are more likely to receive (e.g., health and pension benefits; Haines et al., 2018). Research has shown that being in such a precarious situation has an impact on these individuals' mental health (Lee et al., 2021; McKee-Ryan & Harvey, 2011; Steffy, 2017). Underemployment is shown to

predict psychosomatic symptoms, depression, insecurity, frustration, and hostility. Furthermore, underemployment is negatively associated with psychological well-being (i.e., self-esteem, overall life satisfaction; Allan et al., 2022). In addition, when individuals attempted to cope and reach out for social support, the expected stress buffering effects were negligible in addressing the negative health impacts of their work status (McKee-Ryan & Harvey, 2011).

DECENT WORK

Decent work has been defined as access to fair, equitable work that affords basic rights in the workplace and a safe, secure work environment with proper compensation and benefits (Duffy et al., 2017). Unfortunately, the significant growth of precarious work or employment (Benach et al., 2016) in the 21st century, has resulted in employment insecurity, low wages, and limited workplace protections for the USA workforce. Precarious work operates under various features such as: the degree to which an individual is certain of their continued employment, or their level of control over the income level and work in which they engage (Benach et al., 2016). Precarious work has re-ignited discussions regarding the presence of workers known as the *working poor* (Chilman, 1991; Harrington 1962) who, despite being engaged in the workforce, have difficulty meeting their daily financial needs (Lyons et al., 2014; Wicks-Lim, 2012). Living under the constant threat of unemployment and underemployment not only affects the worker's physical situation but may also have detrimental mental health effects (Allan et al., 2022; Aydiner-Avsar & Piovani, 2019; Lee et al., 2021; McKee-Ryan & Harvey, 2011; Paul & Moser, 2009).

For example, overlapping socio-economic or political changes due to the impact of COVID-19 resulted in the loss of property, economic recession, loss of jobs, and challenges in finding employment (Oum et al., 2022). Thus, extended quarantine measures and the extended length of time in underemployment or unemployment contributed to stress (Allan et al., 2022). Allan and colleagues (2022) demonstrated that individuals who are unemployed, underemployed, or experiencing some other types of work-related crisis are more likely to experience increased stress. Work-related crises resulted in the deterioration of decent work conditions and the growth of instability in the workplace which, in turn, eroded protection for workers, compresses wages, and created anxiety about the future of work (Kozan et al., 2019). The COVID-19 pandemic generated work-related crises for many workers in the USA, causing many to experience unemployment and underemployment, which contributed to overwhelming levels of stress and psychological distress (Avila & Lunsford, 2022; Schoon & Henseke, 2022).

COVID-19 & ITS ROLE AS A TRAUMATIC STRESSOR ON MENTAL HEALTH

As with the previous major events discussed in earlier sections, the onset of COVID-19 (CDC 2020a) introduced another layer of stress and uncertainty. Workers faced (and still are facing) issues related to employment and decent work, which were exacerbated by the COVID-19 pandemic, above and beyond the real threat of physical harm from COVID-19 (see Table 1; CDC, 2022a; National Conference of State Legislatures [NCSL], 2021). Early studies conducted in Europe and China on the psychological impact of COVID-19 reported elevated levels of symptomatology related to depression, posttraumatic stress, anxiety, and general stress (Cowan, 2020; Qiu et al., 2020; Wang et al., 2020; Zhang et al., 2020) in their populations. People interacted with strangers daily knowing that any one of these interactions could lead to infection and possibly even death (Schoon & Henseke, 2022). As the pandemic progressed and people perceived greater vulnerability to COVID-19, it generated higher levels of stress and psychological strain which affected people's capacity to work or maintain work. As a result of these and other stressors, differences in coping skills are likely to have affected the individual's ability to deal with the constraints imposed.

Some individuals may find this situation traumatizing. *Trauma*, as defined in the *Diagnostic and Statistical Manual of Mental Disorders* (5th ed.; DSM–5; American Psychiatric Association [APA], 2013), is psychological distress following exposure to a traumatic or stressful event. There are two important aspects to diagnosing PTSD using the DSM-5 criteria – the type of event (Criterion A) and the symptoms displayed by the individual (Criterion B-E). Criterion A for PTSD symptomatology, states that a qualifying event involves "actual or threatened death, serious injury, or sexual violence" (APA, 2013). These exposures involve either: direct experience of the event; witnessing it happen to another person; learning the event occurred

GENERAL IMPACT	WORK-RELATED IMPACT
Limited Information Available for Effective Decision-Making	Government/Workplace Shutdowns
Continuous Changes in Safety Measures	School/Daycare Closures
Inconsistencies in Implementing Public Health Mandates	Rolling Layoffs and Furloughs due to Changing Work Climate
Extensive Quarantine Measures	Individuals in Essential Jobs were Expected to Continue to Work
Isolation & Disconnection	Lack of Childcare due to Shutdowns

Table 1 Types of Impacts in the USA During the First Phase of the COVID-19 Pandemic.

suddenly and unexpectedly to a loved one (violent or accidental, in cases of actual or threatened death); or repeated, or extreme exposure to aversive details of the event, albeit not through electronic media, unless it is work-related (APA, 2013). The more recent edition of the DSM (DSM-5-TR; APA 2022) includes as a qualifying event, medical events which are "life-threatening medical emergencies" or "a particular event in treatment that evokes catastrophic feelings of terror, pain, helplessness, or imminent death". The preponderance of opinion and research (Bridgland et al., 2021; López-Castro et al., 2023) suggests that COVID-19 falls under the definition of acute catastrophic medical situation which can lead to PTSD symptomatology (Husky et al., 2021; North et al., 2021).

More than two and a half years after the start of the COVID-19 pandemic, there continues to be a real threat of exposure via contact with both symptomatic and asymptomatic individuals. The mental and psychological distress borne by individuals as they interact with strangers, knowing that any one of those individuals might infect them with COVID-19, further increases the psychological strain under which everyone has been working. As the virus spread and deaths increased during the initial phases of the pandemic, psychological distress and fears of contracting the virus heightened (Samuel et al., 2021). The next section will further discuss protective factors and their effects on mental health.

PROTECTIVE FACTORS: SOCIAL SUPPORT, SELF-ESTEEM, RESILIENCE, & SOCIAL STATUS

Social support, positive self-esteem, resilience, and social status are just a few of many protective factors that are essential in promoting positive coping with the adverse effects of COVID-19 and employment (Schoon & Henseke, 2022). Research has found that the presence of coping skills and other factors such as perceived social support, resilience, self-esteem, and social class have a protective effect on mental health outcomes (Pavlova, 2021; Sowislo & Orth, 2013; Tindle et al., 2022). Lotzin and colleagues (2022) found that during the COVID-19 pandemic, there were some notable protective factors against PTSD symptoms in trauma-exposed individuals. Protective factors included a medium/high income and limited face-to-face/digital social contact per week (Lotzin et al., 2022).

Keeping connected to a social network that can provide psychological and material resources is vital. Social support has been shown to buffer against the poorer mental health (e.g., depression and other mental health illnesses; Wang et al., 2018) associated with general social isolation and loneliness (Leigh-Hunt et al., 2017) such as occurred during the COVID-19 pandemic. In some studies, social support facilitated higher psychological flexibility (Tindle et al., 2022), leading to individual's engaging in more adaptive coping, which had a mediating effect on the psychological distress being experienced from the COVID-19 pandemic (Schoon & Henseke, 2022).

Self-esteem is another protective factor, as it can influence the perception of threats and options for coping with them (Orth & Robins, 2022). Poor self-esteem is associated with internal (i.e., depression, anxiety, suicidal tendencies) and external problems (i.e., substance abuse and violence; Orth & Robins, 2022; Sowislo & Orth, 2013). When faced with a challenging situation (e.g., pandemic and unemployment or underemployment), individuals with high self-esteem are better able to cope effectively (Orth & Robins, 2022). Thus, high self-esteem or poor self-esteem may impact un-/under-employed individuals' resilience in a pandemic situation.

Resilience is a protective factor that denotes one's ability to adapt to adversity, significant sources of stress, and trauma (Newman, 2005; Southwick et al., 2014). Examples of resilience include dealing with uncertainty, seeking out social support, and remaining hopeful, which have the potential to reduce the stress associated with the pandemic (PeConga et al., 2020). Feder and colleagues (2019) reported that prior to an adverse event, family history and pre-existing psychopathology were consistent predictors of lack of resilience. Thus, resilience or the lack thereof may impact un-/under-employed individuals' resilience in a pandemic situation.

Perception of social status influences coping behaviors, as it is comprised of economic resources, social prestige, and social power. COVID-19 has exposed many of the inequalities and disparities that exist for the poor, minorities, women, and the economically disadvantaged (i.e., having a prior arrest on record, chronically unemployed, limited English proficiency; CDC, 2020b; Dey et al., 2020; Law Insider, 2020, para. 1; Moen, 2022). High levels of perceived stigma and self-stigma may act as a barrier to seeking assistance with mental health concerns or coping effectively (Bharat et al., 2020; Lataloya et al., 2014). In this study, social status refers to an individual's perception of their social prestige as compared to the "average" USA citizen (Thompson & Subich, 2007).

SUMMARY

In summary, while there is research and literature related to mental health studies during previous pandemics and other disease outbreaks, studies that focus on workers in a vulnerable position (un-/under-employed) during the current COVID-19 pandemic are limited. Furthermore, the relationship between decent work, mental health, and protective factors has received little attention in the literature. Thus, research examining the role of prior mental health, economic constraints, and decent work as it impacts future mental health outcomes is necessary, as is exploring the relationship between decent work and mental health. In addition, while the role of protective factors has been examined in relation to mental health, it is unclear whether that relationship holds in a pandemic situation, particularly for un-/under-employed

individuals. Thus, the aim of this study is to explore the relationship between mental health, decent work, and psychological protective factors in un-/under-employed workers during the COVID-19 pandemic (see Figure 1). The research questions guiding this study included:

1. Is there a correlation between Previous Decent Work and Mental Health among un-/under-employed participants?
2. Will participants who report having prior mental health issues score more poorly on protective factors assessments than those without?
3. Do protective factors, economic constraints, and mental health differ based on employment status?
4. What variables predict un-/under-employed participants' perception of Decent Work?

METHOD

PARTICIPANTS

An a priori power analysis using G*Power 3.17 (Faul et al., 2009) indicated that a sample size of 252 was needed (largest resulting sample size across research questions of interest), using $\alpha = 0.05$, a medium effect size of *d* (0.3), and power = .95. Data was gathered from individuals in the USA, aged 21 – 65 years old (n = 290), who were unemployed or underemployed, and not employed in the healthcare field (i.e., physicians, nurses, emergency medical technicians). Healthcare workers were not included in the target population since their experience of the COVID-19 pandemic would differ significantly from those of under-/un-employed individuals being assessed in this study. Prior to data analysis participants were excluded for two reasons: invalid responding (n = 17, 3.15%); or responding to less than 90% of the survey questions (n = 73, 13.52%; 14 of 138 total items in packet). This resulted in a final sample size of 200 un-/under-employed individuals, who were used in the analyses. They ranged in age from 21 – 49 years old (*M* = 37.97, *SD* = 12.2). Participants in the final sample provided information on sociodemographic characteristics (gender, race/ethnicity, marital status, number of children, employment status, education level, annual household income, and current social class; see Table 2). We collapsed all categories that were less than 5% to protect participants' confidentiality.

The sample participants were nearly equally divided between men (95, 47.5%) and women (98, 49.0%). The sample was predominantly European American, with 32% from race/ethnicities other than White. The education level of the sample was skewed slightly towards those with post-secondary education (66.5% bachelor's or master's degrees). Slightly more than half (110, 55.0%) were married or in a partnership at the time of the study.

As for participants' reported employment status, 125 (62.5%) reported they worked part-time, and 75 (37.5%) reported they were unemployed. For participants who reported they worked part-time, 85 (68.0%) were employed by someone else and 40 (32.0%) were self-employed. For the unemployed and those working part-time, 106 (53.0%) were looking for employment, 92 (46.0%) were not looking for employment, while the remaining participants preferred not to say (see Table 3).

MEASURES

Measures were selected to examine the impact of potential contributing factors to mental health outcomes of those affected by COVID-19. A demographic questionnaire was used to obtain information about participants' age, education level, gender, marital status, mental health status, race/ethnicity, SES, social class, and employment status. The questionnaires used in the study are described in greater detail below.

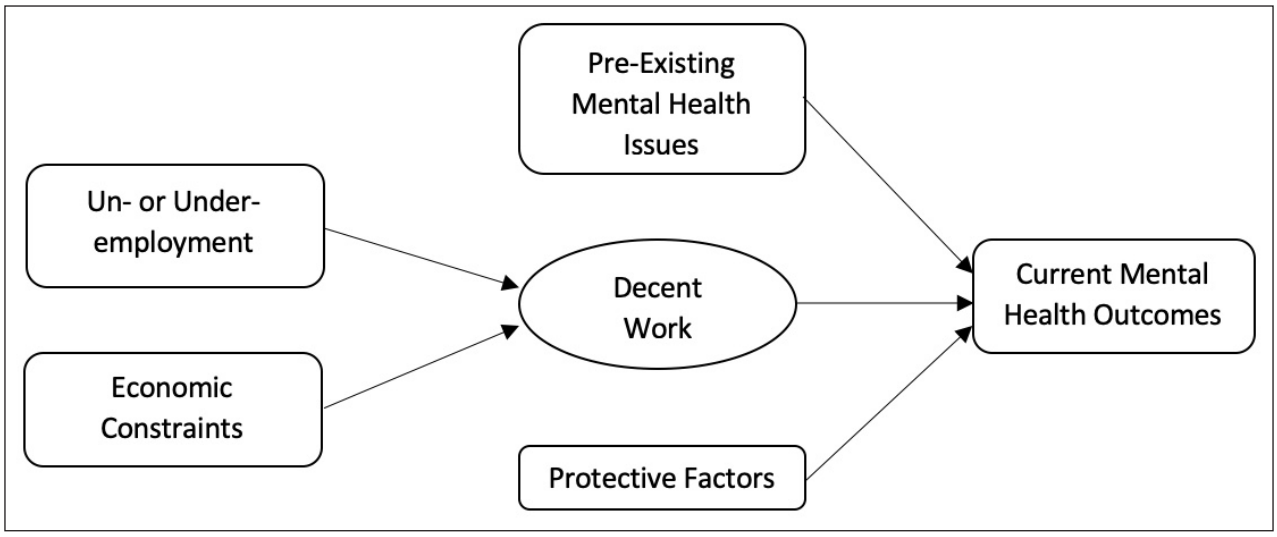

Figure 1 Conceptual Model: Model of Factors Impacting the Mental Health Outcomes of Unemployed and Underemployed Workers in the USA.

SAMPLE CHARACTERISTICS	*n*	%	SAMPLE CHARACTERISTICS	*n*	%
Gender			**Education**		
Male	95	47.5	High School Graduate	26	13.0
Female	98	49.0	AAS or Technical/Trade School	27	13.5
Other or No Response	7	3.5	Bachelor's Degree	91	45.5
Race/Ethnicity			Master's Degree	42	21.0
African Am./Black	33	16.5	Other or No Response	14	7.0
Asian Am./Asian	20	10.0	**Current Social Class**		
White/European	136	68.0	Lower Class	25	12.5
Hispanic/Latino or Other	11	5.5	Working Class	50	25.0
Marital Status			Middle Class	108	54.0
Married/Domestic Partnership	110	55.0	Upper Middle Class or Other	17	8.5
Single	74	37.0			
Divorced, Other, or No Response	16	8.0			

Table 2 Sociodemographic Characteristics of the Participants.

Note: AAS = Associate of Applied Science Degree.

SAMPLE CHARACTERISTICS	*n*	%	SAMPLE CHARACTERISTICS	*n*	%
Employment			**Capacity to Work**		
Part-Time	125	62.5	0%	46	23.0
Unemployed	75	37.5	1 – 10%	9	4.5
Work Status Reason			11 – 20%	26	13.0
Unable to Work Full-Time	64	32.0	21 – 30%	61	30.5
Do Not Want Full-Time Work	58	29.0	31 – 40%	32	16.0
Involuntary or No Response	78	39.0	41% or More	12	6.0
			No Response	14	7.0

Table 3 Employment Status of Variables.

FINANCIAL STRESS MEASURE

Economic Constraints Scale (ECS; Duffy et al., 2019). The ECS is a 5-item measure of individuals' ability to attain financial security across the life-spectrum. Example items include "throughout most of my life, I have struggled financially" and "I have considered myself poor or very close to poor most of my life". Items are measured using a 7-point Likert Scale (1 = *strongly disagree* to 7 = *strongly agree*), with a total score range from 5 to 35. Higher scores are indicative of experiencing greater economic constraints. The Cronbach's alpha for the total scale in the normative sample was reported as $\alpha = .94$ (Duffy et al., 2019), with a Cronbach's alpha for the current sample of $\alpha = .929$ (adjusted $\alpha = .930$).

MEASURES OF DECENT WORK

Employment Status. To obtain information about participants' participation in the workforce, a series of four questions were included in the demographic form. Question 1 asked whether they were unemployed (<1 hr./wk.) or employed part-time (1–34 hrs./wk.). Question 2 requested information about the reason for their employment level, with three options: 1) Not available to work full-time; 2) Do not want full-time work; or 3) Involuntary part-time (want more hours or are available to work more). Question 3 asked whether they were self-employed or employed by someone else. Question 4 asked if they were looking for or not looking for work. The employment status variable used in analyses considered all levels of unemployed and underemployed to be able to examine nuances that may not be available by looking at the dichotomy of under- vs. unemployed.

Decent Work Scale (DWS; Duffy et al., 2017). The DWS is a 15-item measure of individuals' ability to attain/experience decent work. Example items include "I feel emotionally safe interacting with people at work" and "my employer provides acceptable options for healthcare". Items are measured on a 7-point Likert

Scale (1 = *strongly disagree* to 7 = *strongly agree*), with total scores ranging from 15 to 105, and higher scores being indicative of higher levels of decent work. While the DWS has a total of five subscales, only the total scale was used for this study. The Cronbach alpha for the normative sample on the total scale was reported as α = .86 (Duffy et al., 2017). Cronbach alpha for the current sample was α = .827 (adjusted α = .831).

MENTAL HEALTH-RELATED MEASURES

Depression Anxiety and Stress Scale-21 (DASS-21; Antony et al., 1998). The DASS-21 is a 21-item measure of the dimensional conception of psychological distress. Example items include "I found it hard to wind down" and "I felt I was close to panic". Items are measured on a 4-point Likert scale (1 = *never* to 4 = *almost always;* recoded to match the original scale scoring 0 = *never* to 3 = *almost always*) for data analysis, with total scores ranging from 0 – 126. Higher scores being indicative of greater levels of psychological distress. Gloster et al. (2008) reported the reliability for the total score as (α = .94). For the current sample, reliability using Cronbach's alpha was α = .966 (adjusted α = .966).

Posttraumatic Stress Disorder Checklist for DSM-5 (PCL-5; Blevins et al., 2015). The PCL-5 is a 20-item measure of PTSD symptoms, which are measured on a 5-point scale (1 = *not at all* to 5 = *extremely;* recoded to match the original scale scoring of 0 = *not at all* to 4 = *extremely*) for data analysis. Example items include "having strong negative feelings such as fear, horror, anger, guilt, or shame?" and "feeling distant or cut off from other people?". The range of scores for the full-scale score is 0 to 80, with a cut-point score of 31 – 33 for a provisional diagnosis of PTSD. The PCL-5 is reported to have high internal consistency (α = .94) in the normative sample (Blevins et al., 2015). Cronbach's alpha for the current sample was α = .937 (adjusted α = .939).

MEASURES OF PROTECTIVE FACTORS

Connor-Davidson Resilience Scale (CD-RISC; Connor & Davidson, 2003). The CD-RISC is a 25-item measure of an individuals' ability to cope with stress through resilience. Example items include "I tend to bounce back after illness, injury, or other hardships" and "I am able to handle unpleasant or painful feelings like sadness, fear, and anger." Items are measured on a 5-point Likert scale (1 = *not true at all* to 5 = *true nearly all the time;* recoded to match the original scale 0 = *not true at all* to 4 = *true nearly all the time*) for data analysis. The full-scale scores range from 0 to 100, with higher scores representing greater resilience. The Cronbach alpha for the total scale in the normative sample was reported as α = .89 (Connor & Davidson, 2003). Cronbach's alpha for the current sample was α = .952 (adjusted α = .953).

Differential Status Identity Scale (DSIS, Thompson & Subich, 2007). The DSIS is a 60-item measure of individuals' perceptions of their level of social status relative to the "average U.S. citizen". There are three subscales: Economic Resources (30-items), Social Power (15-items), and Social Prestige (15-items). Example items include "Compared to how society values or appreciates the average U.S. citizen, how does society value or appreciate your occupational success or financial success?" Items are measured on a 5-point Likert scale (-2 = *much less* to 2 = *much more*). Only the Social Prestige subscale was used in this study, with scores ranging from –30 to 30, and higher scores reflecting a greater perceived level of social prestige. The DSIS reported high internal consistency in the normative sample for Social Prestige (α = .92; Thompson & Subich, 2007). Cronbach's alpha for the Social Prestige subscale in the current sample was α = .932 (adjusted α = .933).

Multidimensional Scale of Perceived Social Support (MSPSS; Zimet et al., 1988). The MSPSS is a 12-item measure of perceived social support. Example items include "there is a special person who is around when I am in need" and "I can count on my friends when things go wrong". Items are measured on a 7-point Likert Scale (1 = *very strongly disagree* to 7 = *very strongly agree*). The range of scores for the full-scale score ranged from 0 to 72, with higher scores being indicative of greater perceived social support. The internal consistency of MSPSS for the total scale of the normative sample was α = .88 (Zimet et al., 1988). Cronbach's alpha for the current sample was α = .948 (adjusted α = .948).

Rosenberg Self-Esteem Scale (RSE; Rosenberg, 1979). The RSE is a 10-item measure of individuals' overall perception of themselves. Example items include "I certainly feel useless at times" and "I take a positive attitude toward myself". Items are measured on a 4-point Likert scale (1 = *strongly agree* to 4 = *strongly disagree*). Items were recoded to match the original Likert scale (3 = *strongly agree* to 0 = *strongly disagree*) for data analysis. The full-scale scores ranged from 0 to 30, with a cut-off point of 15, with scores below 15 suggesting low self-esteem. The Cronbach's alpha for the total scale in the normative sample was reported as α = .92 (Rosenberg, 1979). Cronbach's alpha for the current sample was α = .884 (adjusted α = 886).

PROCEDURES

After receiving human-subjects approval from the Institutional Review Board (IRB; HS-2020-4548), the survey was posted to the Qualtrics website. Qualtrics is a HIPAA-compliant (USA Health Insurance Portability and Accountability Act of 1996; HIPAA; CDC, 2022b) data gathering tool (Qualtrics, 2022). The request for participation was posted to three commonly used research sources: the institution's Psychology Department research portal (Sona Systems), MTurk, and Reddit. Sona Systems is a cloud-based research and participant management tool used in many universities

(Sona Systems, 2022). Like Qualtrics, Sona Systems is also HIPAA compliant. MTurk (Amazon Mechanical Turk) is a crowdsourcing website in which "workers" are paid to complete "tasks" (such as survey completion) for a business, organization, or an individual. Reddit is a networking site that allows for online discussions on diverse topics or interests and is also used for posting links to research surveys and provides anonymity for participating individuals. Participants were presented with a consent form, which when signed, allowed them to access the survey. Upon completion of the survey packet, participants were thanked for their efforts and exited from the system. Data was downloaded from the Qualtrics system and analyzed using IBM SPSS v. 25.0 (IBM Corp., 2017). MTurk participants were paid $1.25 for successful completion of the study; Reddit participants received no compensation; and SONA-system participants received extra credit for participation.

RESULTS

PRELIMINARY ANALYSES & ASSUMPTIONS TESTING

Prior to assumptions testing, the dataset was examined for potential sampling bias (Heppner et al., 2016) since differences in participants responding across the three data gathering sites (MTurk: n = 249, 91.2%; Sona Systems: n = 5, 1.8%; and Reddit: n = 19, 7.0%). The data were analyzed for significant differences between data gathering methods with the Sona Systems and Reddit samples combined in order to reduce the likelihood of a significant result due to sample size differences. A One-Way ANOVA (Tabachnick & Fidell, 2019), with Bonferroni correction (0.05/11 = 0.0045), was conducted using the 11 demographic variables. The results of the Welch's test (Glantz et al., 2016) indicated that the only variable on which the samples differed significantly was age (p < .001). Examination of the age ranges for the two groups (MTurk versus Sona Systems & Reddit) indicated that the age range for the MTurk sample encompassed the age ranges for the other two samples. In addition, an outlier analysis found that none of the individuals from the Sona Systems and Reddit samples were outliers. Thus, the samples from MTurk, Reddit, and Sona Systems were collapsed to ensure adequate power for the analysis. For the four research questions, the post-hoc power analysis (G*Power 3.17; Faul et al., 2009) indicated that a sample of 200 produced a power of .89. Assumptions testing for normality, linearity, HoV, multicollinearity, and outliers were conducted prior to data analysis with the result that the data met all assumptions except for homogeneity of variance (HoV; Tabachnick & Fidell, 2019). As a result of the failure to meet assumptions for HoV, Pillai's Trace is reported instead of Wilks' Lambda for the MANOVA analysis.

HYPOTHESIS TESTING

RQ1: Is there a correlation between Previous Decent Work and Mental Health among un-/under-employed participants?

The null hypothesis that previous decent work and mental health were not related was rejected, as the results of the correlation analysis demonstrated that these measures were significantly statistically correlated. To examine this hypothesis, bivariate correlations were produced using the Decent Work Scale (DWS), the Depression Anxiety and Stress Scale-21 (DASS-21), and Posttraumatic Stress Disorder Checklist for DSM-5 (PCL-5) scores. Means, standard deviations, and correlations are reported in Table 3. Results indicated that higher Decent Work scores were negatively associated with DASS-21 scores (r = –0.234, p < 0.001); while lower levels of Decent Work were positively associated with PCL-5 scores (r = 0.419, p < 0.001). PTSD symptoms (PCL-5) were negatively correlated with Depression, Anxiety, and Stress scale scores (r = –0.115, p = 0.105). Thus, providing support for a correlation being present between Previous Decent Work and Mental Health (see Table 4).

RQ2: Will participants who report having prior mental health issues score more poorly on protective factors assessments than those without?

The null hypothesis that participants reporting prior mental health issues would score more poorly on protective factors than those without mental health issues was rejected as those with prior mental health issues scored more poorly on measures of protective factors. A One-way Analysis of Variance (ANOVA) was conducted to examine whether protective factors differed as a function of mental health diagnosis. The independent variable (IV) was the Mental Health Symptom Diagnoses (No Diagnoses (n = 31), One Diagnosis (n = 122), Two or More Diagnoses (n = 47)) and the dependent variables (DVs) were the total scores on the Multidimensional Scale of Perceived Social Support (MSPSS), Connor-Davidson Resilience Scale (CD-RISC), and the Rosenberg Self-Esteem Scale (RSE). The results of the analysis indicated a significant relationship between Mental Health Symptom diagnoses and each of the measures: Social Support (MSPSS): $F(2, 197) = 4.36$, p = 0.014, partial η^2 = 0.042; Resilience (CD-RISC): $F(2, 197)$

SCALE LABELS (TOTAL)	N	M	SD	DWS	PCL-5
DWS	200	66.57	14.45	–	–
PCL-5	200	49.45	15.79	0.419**	–
DASS-21	200	42.06	33.96	–0.234**	–0.115

Table 4 Descriptive Statistics & Correlations between Decent Work and Mental Health.

Note: ** = p < 0.001 (2-tailed).

= 9.21, $p < 0.001$, partial $\eta^2 = 0.085$; and Self-esteem (RSE): $F(2, 197) = 25.60$, $p < 0.001$ partial $\eta^2 = 0.206$. Post-hoc comparisons suggested that individuals with no diagnosis or one diagnosis differed across all measures from those with two or more diagnoses (see Table 5).

RQ3: Do protective factors, economic constraints, and mental health differ based on employment status?

The null hypothesis for RQ3 was rejected as individuals from varying employment statuses differed significantly on the measures. A One-Way Multivariate Analysis of Variance (MANOVA) was performed using Employment Status as the IV and seven DVs encompassing mental health, economic constraints, and protective factors. Mental health variables included the Depression Anxiety Stress Scale – 21 (DASS-21) and the PTSD Checklist for DSM-V (PCL-5), while economic constraints were measured by the scale of that name (ECS). Protective factors included the Connor-Davidson Resilience Scale (CD-RISC), the Differential Status Identity Scale's Social Prestige Subscale (DSIS-SP), Multidimensional Scale of Perceived Social Support (MSPSS), and the Rosenberg Self-Esteem Scale (RSE). The participants were grouped based on the type of employment using a combination of responses to the part-time/unemployed status and whether they were actively seeking employment demographic items.

The overall multivariate test produced significant results, suggesting that there was at least one significant difference among the linear combinations of DVs based on employment, Pillai's Trace = 0.495, $F(35, 950) = 2.98$, $p < 0.001$. The results reflected a medium association between employment status and the combined DVs, partial $\eta^2 = 0.099$. Follow up ANOVA analyses were conducted to examine the effect of employment on scores for each measure, revealing statistically significant differences across employment statuses ($p < 0.05$) for ECS, DASS-21, RSE, and DSIS-SP (see Table 6).

Post-hoc pairwise comparisons using Scheffé's test were conducted to identify levels that differed significantly from one another on the ECS, DASS-21, RSE, and DSIS-SP (see Table 7). Those who were Looking for Employment differed significantly from those Not Looking for Employment on the ECS, DASS-21, RSE, and DSIS-SP regardless of whether their employment status was unemployed/part-time or self-employed/working for someone else (self- vs. other). The Part-Time, Self-Employed, Looking for Employment (PT-S-L) group indicated in their scoring a greater perception of their social prestige among the average USA citizen, while reporting low self-esteem. In addition, this group scored significantly higher for experiencing economic constraints, depression, anxiety, and stress. As for differences and similarities across all groups, those that were Unemployed, and Looking or Not Looking for Employment were similar across all measures.

For economic constraints and depression, anxiety, and stress, the Part-Time, Other-Employed, Not Looking for Employment participants scored significantly different from the Part-Time, Self-/Other-Employed, Looking for Employment. For self-esteem, Part-Time,

MEASURES	*M*	*SD*	*F*(5,192)	η^2
Depression, Anxiety, and Stress (DASS-21)	42.14	33.95	11.126***	0.225
Posttraumatic Stress (PCL-5)	49.35	15.73	1.076	0.027
Economic Constraints (ECS)	22.35	8.83	6.732***	0.149
Resilience (CD-RISC)	62.86	19.92	1.366	0.034
Social Prestige (DSIS-SP)	46.17	11.04	6.482***	0.144
Social Support (MSPSS)	62.34	15.33	0.852	0.022
Self-Esteem (RSE)	17.70	6.60	6.334***	0.142

Table 6 Mean, Standard Deviations, and Post Hoc Analysis Differences on Mental Health, Economic Constraint, and Protective Factors by Employment Status (Total).

*** $p < .001$.

MEASURES	MENTAL HEALTH DIAGNOSES	*M*	*SD*	*F*(2, 197)	η^2
Social Support (MSPSS)	No Diagnoses	67.06[a]	15.52	4.36*	0.042
	One Diagnosis	62.44[ab]	13.78		
	Two or More Diagnoses	57.81[b]	17.36		
Resilience (CD-RISC)	No Diagnoses	68.70[a]	21.30	9.21***	0.085
	One Diagnosis	65.01[a]	17.11		
	Two or More Diagnoses	52.82[b]	21.49		
Self-Esteem (RSE)	No Diagnoses	22.37[a]	7.38	25.60***	0.206
	One Diagnosis	17.59[b]	4.67		
	Two or More Diagnoses	13.59[c]	6.86		

Table 5 Means, Standard Deviations, and One-Way ANOVA Examining Mental Health Differences for Protective Factors Assessments.

Note: Means in the same column that have no superscript in common are significantly different at the $p = 0.05$ level.

* $p < .05$. *** $p < .001$.

Other-Employed, Not Looking participants scored significantly different from all groups that were looking for employment (PT-O-L, U-L, PT-S-L). For social prestige, participants that were Part-Time, Self-Employed, Looking for Employment scored significantly different from those Unemployed, Looking and Not Looking.

RQ4: What variables predict un-/under-employed individuals' perception of Decent Work?

The null hypothesis for RQ4 was rejected as three of the eight variables were found to predict perceptions of Decent Work in the sample. Sequential Linear Regression (Tabachnick & Fidell, 2019) was employed to determine whether the addition of information regarding employment status and economic constraints, followed by mental health symptoms, and finally protective factors would improve the prediction of perceptions of Decent Work beyond that afforded by differences in Decent Work. R was significantly different from zero at the end of each step (see Table 8). After step 3, with all IVs in the equation, $R^2 = .39$, $F(3, 196) = 41.20$, $p < 0.001$. The adjusted R^2 value of .38 indicates that more than a third of the variability in perceptions of Decent Work is predicted by social prestige, resilience, and economic constraints.

After step 1, with social prestige in the equation, $R^2 = .324$, $F(1, 198) = 94.79$, $p < .001$. After step 2, with resilience added to prediction of perception of Decent Work by social prestige, $R^2 = .373$, $F(1, 197) = 58.52$, $p < .001$. Addition of resilience to the equation with Decent Work results in a significant increment in R^2. After step 3, with economic constraints added to perceptions of Decent Work and resilience, $R^2 = .387$, $F(1, 196) = 41.20$, $p < .001$. Addition of economic constraints to the equation with modestly improved R^2. This pattern of results suggests that over a third of the variability in perceptions of Decent Work is predicted by social prestige. Resilience contributes significantly to that prediction; economic constraints adds modestly to the prediction.

GROUP	*N*	ECS		DASS-21		RSE		DSIS-SP	
		M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
PT-O-NL	46	17.52[a]	8.69	26.22[a]	30.55	21.57[a]	5.75	45.18[ab]	7.86
PT-S-NL	18	22.22[ab]	9.81	30.23[ab]	29.99	19.39[ab]	7.06	45.50[ab]	11.19
U-NL	28	20.21[ab]	10.05	24.34 [ab]	27.46	18.00[ab]	8.70	42.64[b]	9.10
PT-O-L	37	25.97[b]	6.00	61.51[b]	30.15	16.15[b]	5.05	51.52[ab]	12.15
U-L	47	23.17[ab]	8.68	46.13[ab]	30.30	15.66[b]	6.28	41.91[b]	11.40
PT-S-L	22	27.45[b]	5.10	66.73[b]	33.42	14.78[b]	3.38	53.41[a]	10.01

Table 7 Descriptive Statistics and Post-hoc Tests for ECS, DASS-21, RSE, and DSIS-SP by Employment Status Levels (Scheffé).

Note: Groups: PT-S-NL = Part Time, Self-Employed, Not Looking for Employment; PT-O-NL = Part Time, Other-Employed, Not Looking for Employment; U-NL = Unemployed, Not Looking for Employment; PT-O-L = Part-Time, Other-Employed, Looking for Employment; U-L = Unemployed, Looking for Employment; PT-S-L = Part-Time, Self-Employed, Looking for Employment.

Note: Means in the same column that have no superscript in common are significantly different at the $p = 0.05$ level.

VARIABLES	DSIS-SP	CD-RISC	ECS	B	ß	95% CONFIDENCE INTERVAL FOR ß		RELATIVE WEIGHT (sr^2)
						LOWER BOUND	UPPER BOUND	
DSIS-SP	–	0.527	0.031	0.593**	0.451	0.421	0.765	0.32**
CD-RISC	0.527	–	-0.158	0.167**	0.231	0.071	0.263	0.05**
ECS	0.031	0.013	–	-0.199*	-0.121	-0.385	-0.014	0.01*
M	46.20	62.99	22.34					
SD	10.99	19.98	8.79					
								$R^2 = .39$
							Adjusted	$R^2 = .38$
								$R = .62$*

Table 8 Sequential Multiple Regression of Social Prestige, Resilience, and Economic Constraints on Perceptions of Decent Work in Un-/Under-employed Participants.

* $p < .05$. ** $p < .001$.

DISCUSSION

This study produced four significant findings. First, lower levels of decent work were positively associated with higher levels of depression, anxiety, and stress as well as higher levels of PTSD symptoms in this sample. Second, post-hoc comparisons found that individuals with no diagnosis or one diagnosis differed across all measures from those with two or more diagnoses. Third, those who were not looking for work experienced fewer economic constraints (ECS) and lower levels of mental health symptoms (DASS-21), while reporting the same levels of self-esteem (RSE) as those looking for work. In addition, participants who were employed part-time and looking for work obtained higher scores on social prestige (DSIS-SP) than all other groups, those who were unemployed scored lower than all other groups on this variable.

The results from examining the correlation between Decent Work and mental health (RQ1) were consistent with previous research suggesting that unemployment and underemployment can negatively impact Decent Work, due to their acting as barriers to workers' fulfillment and general well-being (Duffy et al. 2016). Participants in the present study (conducted during the COVID-19 pandemic) displayed elevated levels of PTSD symptomatology, depression, anxiety, and stress when there was a lack of access to Decent Work as found in Brenner & Bughra (2020) and Mucci et al. (2016) who studied employment status, rather than decent work.

The role of protective factors on participants pre-existing mental health issues (RQ2) aligned with a study by Cullen et al. (2020) regarding the COVID-19 pandemic. Similar to the current study, the latter study suggested that an increase in anxiety and depressive symptoms would be expected among those without pre-existing mental health issues and PTSD-symptoms; however, those with pre-existing mental health issues would be at risk of facing negative psychological effects. In the current study, self-esteem, resilience, and social support decreased as the number of mental health diagnoses increased. Those with no diagnoses showed greater levels of protective factors in place when compared to those with one or, two or more diagnoses.

The examination of the role of protective factors, economic constraints, and mental health by employment status (RQ3) could not be found to have been reported in the extant literature. It does, however, extend the results of Thompson & Subich (2007) findings, whereby, an individual's perceived place within their community and among their peers can impact their general well-being (i.e., mental health). In both the current and latter study, belonging to a particular social/employment status (social class/un- or under-employed) both had a strong impact on mental health among participants.

The results from an examination of the study participants' perceptions of Decent Work (RQ4) found more than a third of these perceptions could be explained by social prestige, resilience, and economic constraints. These findings regarding the impact of financial stress on un-/under-employed individuals' access to and perception of Decent Work aligns with other researchers' findings (Inanc, 2018; Pavlova, 2021; Pech et al., 2021). As for resilience and social prestige as protective factors, the current study's findings support those of Schoon and Henseke (2022).

Thus, overall the results of this study provide both researchers and practitioners with additional information toward theory construction and to begin to refine interventions for use with those experiencing such disasters. For example, models of trauma reactions may be modified to increase attention to the role played by Decent Work as a protective factor among those who experience this type of trauma. Furthermore, it will allow therapists to incorporate an understanding of Decent Work into their design and modification of interventions in order to increase the effectiveness of treatments for their clients.

LIMITATIONS

Limitations to the generalizability of this study include sample composition, minority representation, and current definitions of unemployment and underemployment. The sample was drawn from the population of un-/under-employed workers, who were completing surveys on Qualtrics via MTurk, Reddit, and Sona Systems. It is unknown as to the similarity between individuals completing surveys via these mechanism and individuals who do not complete these types of surveys. The participants were predominately from MTurk, which may introduce a bias in the sample resulting from both their choice of system to engage with and their completion of surveys as their primary source of income. Among those most strongly impacted by the COVID-19 pandemic in the USA are American Indian/Alaska Native (AIAN), Asian, Black, and Latinx young adults (Fisher et al., 2022). While People of Color were represented in this study to a greater degree than in many studies, the CDC (2020b) reported that People of Color were disproportionately affected by the pandemic as were Asian (3.5%), American Indian/Alaska Native (1.2%), Black (19.4%), Hispanic/Latino (31.1%), and White (40.1%). So, future studies would benefit from ensuring a sample comprised of individuals from those groups who were more significantly impacted would strengthen the research literature.

Finally, a limitation to understanding the role of unemployment vs. underemployment is the lack of a clear definition and measure of these two variables. In the current study, the definition of underemployment used was the capacity at which a worker felt they were utilizing their skills (Milner et al., 2017) in the job they had. Other researchers, such as Thompson et al. (2013) focused on the concept of overqualification being a defining factor of underemployment. This study chose to use the former definition to better capture the full

range of underemployment, rather than focusing simply on level of training or education. These differences have the potential to generate different explanations for what the impact of this employment status may have on the individual. With regards to the definition of unemployment, the USA Bureau of Labor Statistics (BLS, 2015) defined it as individuals who are jobless, yet actively seeking work. This definition ignores those who are long-term unemployed and have stopped looking for work. While some researchers set the standard on whether an individual receives unemployment compensation from the government (Dooley, 2003). This definition ignores those who have timed out from receiving unemployment compensation. These differences in definitions drive the lack of consensus on definitions. Additional research to develop effective definitions and measures is needed.

FUTURE RESEARCH

Creating a standardized definition of "underemployment" would facilitate research and theory construction on this subpopulation. The absence in the literature and the USA Bureau of Labor Statistics (BLS) data on the underemployed worker limits theory construction, policy creation, and intervention development. Furthermore, while there was a greater proportion of minority individuals in the current study, replicating this study with a sample that is predominately comprised of minority individuals, may generate a clearer understanding regarding how this population was impacted by the COVID-19 pandemic. Additional studies focused on examining the effect of the pandemic on these populations, would better document the mental health toll they were experiencing, and lay the groundwork toward better supporting them.

IMPLICATIONS

The present study aimed to highlight the relationship between decent work, mental health, and protective factors in un-/under-employed workers during the current COVID-19 pandemic. The findings suggest implications regarding both knowledge and treatment. In relation to knowledge, the results of this study identify previously unknown information on how un-/under-employed workers going through a crisis, such as this, are functioning psychologically as well as the role protective factors played in their mental health outcomes.

This information may provide both researchers and practitioners with additional information to modify theories of response to pandemics.

This knowledge can also be used to highlight the importance protective factors play on mental health for individuals experiencing the pandemic or similar events. In relation to treatment, practitioners can use the findings of this study to help increase the effectiveness of properly referring clients who cannot meet their decent work needs and to increase the effectiveness of assisting clients enduring vocational distress exacerbated by a global life event such as the COVID-19 pandemic. Lastly, understanding the implication of the findings can help practitioners refine interventions with those experiencing such disasters. For example, models of trauma reactions may be modified to increase the understanding of the role played by Decent Work as a protective factor among those who experience this type of trauma.

CONCLUSION

Despite these limitations, the present study offered several insights into decent work and mental health, in addition to the impact of the pandemic on un-/under-employed workers. Continuing to look at the factors that offer protective effects and how an individuals' mental health can be impacted by crises such as the COVID-19 pandemic, will allow future researchers to better assess what is occurring in the population and contribute toward evidence-based practices for handling similar events in the future.

TRANSPARENCY STATEMENT

We reported how we determined the sample size and the stopping criterion. We reported all experimental conditions and variables. We report all data exclusion criteria and whether these were determined before or during the data analysis. We report all outlier criteria and whether these were determined before or during data analysis.

DATA ACCESSIBILITY STATEMENT

All raw data for the un-/under-employed analysis are publicly available on the Open Science Framework (https://osf.io/hyqwu/?view_only=ea82ede935214009a745016834dfdb8e).

ACKNOWLEDGEMENTS

The authors would like to thank those who kindly accepted to participate in the study.

COMPETING INTERESTS

The authors have no competing interests to declare.

AUTHOR CONTRIBUTIONS

T.N.R: conceptualization (lead); writing – original draft preparation (lead); writing – review and editing (equal); project administration (lead); methodology (equal); investigation (lead); formal analysis (equal); data curation (lead).

M.S.H: conceptualization (equal); formal analysis (lead); methodology (lead); project administration (equal); resources (lead); supervision (lead); writing – review and editing (equal); data curation (equal).

M.M.M: methodology (equal); formal analysis (supporting); writing – review and editing (supporting).

T.R.W: writing – review and editing (supporting); conceptualization (supporting).

E.M.L: writing – review and editing (supporting).

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TO CITE THIS ARTICLE:
Roberts, T. N., Hammond, M. S., Morrison, M. M., Williams, T. R., Lynch, E. M., & Young-Seigler, A. C. (2023). Decent Work and Mental Health During the COVID-19 Pandemic: The Case of Un-/Under-employed Workers. *Swiss Psychology Open, 3*(1): 6, pp. 1–18. DOI: https://doi.org/10.5334/spo.43

Submitted: 01 March 2022 **Accepted:** 11 April 2023 **Published:** 26 May 2023

Swiss Psychology Open is a peer-reviewed open access journal published by Ubiquity Press.