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Review

Hope's relationship with resilience and mental health during the COVID-19 pandemic

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Abstract

The COVID-19 pandemic has affected individuals financially, physically, and mentally during the past couple of years. Recent research has indicated that mental health concerns such as stress, anxiety, and depression have been on the rise due to the pandemic and its consequences. Fortunately, resilience factors such as hope have also been examined in the midst of the pandemic. Hope has been found to be a buffer against stress, anxiety, and depression over time during the COVID-19 pandemic. Hope has also been associated with positive outcomes such as posttraumatic growth and well-being. These results have been investigated in populations particularly affected by the pandemic such as healthcare professionals and patients with chronic illness and cross-culturally.

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Introduction

When the COVID-19 virus was officially declared a pandemic in March 2020, the virus and the ramifications of it had a dramatic impact on individuals worldwide [1]. From changing the way people interact with one another to impacting finances and physical health, the pandemic has taken its toll. In particular, the pandemic has affected mental health as rates of stress, anxiety, and depression rose [2,3]. Although determining whether a COVID-19 diagnosis constitutes a traumatic event is still being debated, there is clear evidence that the pandemic has led to an increase in stress [3,4]. Additionally, anxiety and depression have risen as a result of the pandemic, in part due to the stress of uncertainty [2]. However, resilience factors such as hope have

shown to be impactful in the midst of the pandemic [5]. Hope not only buffers against psychopathology, but it also promotes well-being [6–9].

Hope definition and measurement

Hope as defined by one of the most well-researched cognitive models of hope [10] is comprised of three components: goals, agency, and pathway thinking. Snyder defined goals as attainable targets that an individual is working towards. Agency is defined as the motivation or urge to pursue one's goals. Pathway thinking is defined as the ability to think of different ways or pathways to reach one's goals. In essence, agency and pathway thinking work in tandem to help an individual reach their goals. Of note, hope in the early stage of adversity may be important to help provide stability in the midst of large amounts of uncertainty as hope is theorized to be an iterative process [8]. Alternative ways hope has been measured include the Herth Hope Index and psychological capital [11,12]. The Herth model of hope is often studied in healthcare contexts takes a psychosocial approach as opposed to a primarily cognitive one [12]. Psychological capital, which is often studied in organizational research, is composed of the constructs such as hope, resilience, optimism, and efficacy [11]. Although the different conceptualizations of hope vary in definition, these conceptualizations have all been studied in the context of pandemic [6,7]. Additionally, hope has consistently been theorized to and has shown to buffer against a variety of psychopathology and promote well-being [6,7].

Hope and stress

A great deal of work has been dedicated to studying the increase of stress during the pandemic and its predictors [5,13]. Much of this work has been focused on vulnerability factors but increasing work has examined protective factors including hope [5,13]. Hope has been shown in past work to act as a buffer against stress [14], and this relationship is replicated in samples collected during the pandemic. Hope moderately and inversely related to PTSD symptoms that individuals endorsed were due to the COVID-19 pandemic [15,16]. Additionally, the relationship between perceived COVID stress and hope has been investigated longitudinally, as demonstrated in one study [5]. Higher levels of trait hope predicted lower levels of COVID-19 related perceived stress in a sample of American adults [5]. Specifically, hope predicted lower perceived stress one month later during the initial months

of the COVID-19 pandemic, 5]. Not only does hope protect against perceived stress, but it also buffers against other types of stress such as parenting stress [13]. Parents who were more hopeful were found to report less parenting stress during the COVID-19 pandemic in a cross-sectional sample of American adults [13]. Hope was also found to be a moderator of self-compassion's effects on parenting stress during the COVID-19 pandemic [13]. These findings illustrate hope has both direct and buffering effects on stress during the COVID-19 pandemic.

Furthermore, hope can indirectly predict positive outcomes through its relationship with stress such as post-traumatic growth (PTG) and satisfaction with life [17,18]. In a sample of Chinese undergraduates, stress mediated the role between hope and post-stress growth [17]. Hope and empathy were also found to work in tandem via empathy acting as a moderator to buffer against the effects of stress and promote post-stress growth in a sample of Chinese undergraduate students [17]. Therefore, hope not only directly and indirectly predicts positive outcomes, but other positive psychology constructs such as empathy can enhance and support hope's effects. Stress also mediates the relationship between psychological capital and life satisfaction, depression, and anxiety over time [18]. Specifically, psychological capital had a small but positive indirect effect on satisfaction with life [18]. These findings illustrate that hope can not only protect against the deleterious effects of stress itself but can result in something positive.

Hope and anxiety

In addition to stress, hope has an established inverse relationship with anxiety during the COVID-19 pandemic [5,19,20]. During the early days of the pandemic when there was much uncertainty surrounding the COVID-19 virus and its effects, hope was found to have a negative relationship with anxiety [19]. The authors investigated anxiety in addition to other mental health variables such as depression and social dysfunction in a sample based in Turkey [19]. In one cross-sectional community sample of Iranian adults, hope had a moderate negative relationship with anxiety [20]. Not only does trait hope negatively relate to anxiety, but state hope was also found to predict anxiety at the beginning of the pandemic in a Turkish sample [21]. Of note, state hope can be effectively promoted via intervention, which supports the potential benefits of targeting hope as a means of reducing anxiety [22–24]. Furthermore, similar to stress, hope's relationship to anxiety appears to be stable and prospective over time as demonstrated in longitudinal studies [5,18].

Hope and depression

Hope has also buffered symptoms of depression during the COVID-19 pandemic [25–27]. In cross-sectional studies, hope had a moderate and negative

relationship with depressive symptoms [25]. Similar to anxiety, depressive symptoms were also negatively correlated with hope in the early days of the pandemic as demonstrated in a sample of Amazon Mechanical Turk workers in 39 of the United States [23,26]. Furthermore, hope was found to be the mediator between the relationship gratitude has with depressive symptoms [27]. These findings were investigated in frontline healthcare workers during the COVID-19 pandemic [27]. There also appears to be few studies that have examined hope's relationship to depression longitudinally, with the exception of one study [18]. The one study that did investigate hope and depression's relationship longitudinally found that psychological capital had a moderate to strong relationship with depression symptoms over time in a Romanian sample [18].

Hope and positive outcomes

Decades of research has demonstrated that hope is a robust predictor of various positive outcomes, and this association has also been demonstrated during the COVID-19 pandemic [28–31]. Hope has an established relationship to subjective well-being, which is defined as having lower negative affect, greater positive affect, and greater amounts of life satisfaction [6]. Hope's association with well-being appears to transcend contexts, including the pandemic [30–35]. Hope's ability to predict well-being during times of chronic and extreme duress exemplifies the importance of cultivating resilience factors. Additionally, there is promising evidence that hope has promoted PTG experienced as a result of the stress during the pandemic [17,36,37]. Not only has hope promoted positive psychological outcomes, but there is limited evidence that it has also predicted some positive physical outcomes. Specifically, hope promoted healthy eating behaviors in a Polish sample during the pandemic [38]. In sum, hope's predictive abilities span both negative and positive outcomes despite challenging contexts such as a global pandemic.

The pandemic has also shed light on how hope promotes resilience in special populations such as patients with chronic illness [39,40]. Individuals who have a chronic illness have the added health challenge of managing their pre-existing illness as well as the stress of being especially vulnerable to the COVID-19 virus [41]. Despite this added challenge, hope was found to be inversely related to depression in individuals with cancer [40]. Additionally, hope was found to remain at stable levels along with other positive psychological and religious factors in a sample of individuals with various chronic diseases [39]. Even within patients who had COVID-19 pneumonia, hope significantly and positively predicted general resilience [42]. These findings demonstrate that hope is stable and can promote positive

outcomes such as resilience even when individuals are dealing with physical adversity. Although there are a limited number of studies in this area, the studies that have been conducted show promising results.

Hope and resilience in healthcare workers

The pandemic has provided the opportunity to study hope and resilience in healthcare workers who have experienced unique stressors during the pandemic [27,43]. At the frontlines of the COVID-19 pandemic, nurses, doctors, and other healthcare workers have faced mental challenges, emotional challenges, and the lack of personal protective equipment [44]. In spite of these challenges, healthcare workers across the world have demonstrated incredible resilience [27,43] and there is some evidence that hope is one of the factors that may have helped to promote resilience. Hope was found to negatively associate with depression in a sample of front-line medical workers in Wuhan, China where the outbreak began [27]. Additionally, hope has been investigated and found to be a resilience factor in healthcare workers in Turkey [43]. Interestingly, in Japan, lower levels of hope were identified as a risk factor for poorer mental health in healthcare workers [45]. Specifically, loneliness was found to predict lower levels of hope in the healthcare workers and subsequently poorer mental health [45]. In sum, despite the challenges healthcare workers have experienced during the pandemic, they have shown tremendous hope and resilience.

Hope cross-culturally

In addition to hope's effects transcending populations, it has been examined in the context of various cultures prior to the pandemic [46–48] and during it in multiple countries [25]. Some of the countries hope's effects have been investigated in during the pandemic are Japan, Turkey, Spain, the U.S., China, Brazil, and many others with a total of 13 countries [18,19,25,40,45,49]. Hope seems to have similar effects of buffering negative outcomes and predicting positive ones across the various countries [18,19,25,40,45,49]. In one of the few studies that compared hope's functioning across countries, perceived social support was a predictor of hope in the United Kingdom (UK), the United States, and Israel [50]. The authors found that the smallest effects of this relationship were in the UK [50]. Hope's effects transcending cultures and countries during times of chronic stress demonstrates its utility as a modifiable resilience factor.

Limitations of current research/future directions

Some of the limitations of the current body of literature on hope and its relationship to mental health and resilience during the pandemic are the limited number of longitudinal studies, a limited number of studies in patients with chronic illness and healthcare professionals,

and no research has examined these relationships in first responders. Although the current article did identify some longitudinal studies, the scientific body of literature would benefit from replications and extensions of the current longitudinal work, such as lengthier longitudinal studies. Secondly, it would be helpful to have additional studies where hope as a resilience factor is investigated in patients with a wider variety of chronic illnesses, especially those pertinent to the pandemic such as autoimmune diseases or chronic respiratory illnesses. Additionally, healthcare workers and first responders who have experienced high levels of stress due to the pandemic have few research studies investigating hope as a resilience factor during the COVID-19 pandemic. Future research may investigate if these relationships extend to these vulnerable populations.

Conclusion

Hope has previously been demonstrated to effectively buffer against negative mental health outcomes such as stress, anxiety and depression and research to date suggests that hope had a similar function during the COVID-19 pandemic. Additionally, hope has predicted positive outcomes such as PTG, well-being, and positive health behaviors, such as health eating during the COVID-19 outbreak. Hope's effects replicate across contexts and countries in the midst of a global pandemic. Given these findings, hope is a protective resilience factor that promotes holistic wellness across culture, physical health status, or occupation while individuals are experiencing stress and effects on their mental health from the pandemic. Of note, hope appeared to be most impactful for engendering positive outcomes. These findings may lend support for hope to be leveraged as a resilience factor and promote psychological and physical wellness in future times of turmoil. Future research may address the need for longitudinal designs and investigate if these findings extend further to additional populations affected by the pandemic such as first responders. In sum, hope is a valuable resilience factor and remains impactful in the face of international crises such as the COVID-19 pandemic.

Conflict of interest statement

Nothing declared.

Data availability

No data was used for the research described in the article.

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- * of special interest
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