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## Positive psychology in a pandemic: buffering, bolstering, and building mental health

Lea Waters<sup>a</sup>, Sara B. Algoe, Jane Dutton<sup>b</sup>, Robert Emmons<sup>c</sup>, Barbara L. Fredrickson<sup>d</sup>, Emily Heaphy<sup>e</sup>, Judith T. Moskowitz<sup>f</sup>, Kristin Neff<sup>g</sup>, Ryan Niemiec<sup>h</sup>, Cynthia Pury<sup>i</sup> and Michael Steger<sup>j</sup>

<sup>a</sup>Centre for Positive Psychology, University of Melbourne, Melbourne, Australia; <sup>b</sup>Ross School of Business, University of Michigan, Ann Arbor, USA; <sup>c</sup>Department of Psychology, University of California, Davis; <sup>d</sup>Department of Psychology, University of North Carolina, Chapel Hill, USA; <sup>e</sup>Isenberg School of Management, University of Massachusetts, Amherst, USA; <sup>f</sup>Department of Medical Social Sciences, Northwestern University Feinberg School of Medicine, Chicago, USA; <sup>g</sup>Educational Psychology Department, University of Texas at Austin, Austin, TX, USA; <sup>h</sup>VIA Institute on Character, Cincinnati, OH, USA; <sup>i</sup>Clemson University Department of Psychology, Clemson University, Clemson, SC, USA; <sup>j</sup>Center for Meaning and Purpose, Department of Psychology, Optentia Research Programme, Colorado State University, North-West University, Fort Collins, Vanderbijlpark, CO, USA, South Africa

### ABSTRACT

As the COVID-19 global health disaster continues to unfold across the world, calls have been made to address the associated mental illness public crisis. The current paper seeks to broaden these calls by considering the role that positive psychology factors can play in buffering against mental illness, bolstering mental health during COVID-19 and building positive processes and capacities that may help to strengthen future mental health. The paper explores evidence and applications from nine topics in positive psychology that support people through a pandemic: meaning, coping, self-compassion, courage, gratitude, character strengths, positive emotions, positive interpersonal processes and high-quality connections. In times of intense crisis, such as COVID-19, it is understandable that research is heavily directed towards addressing the ways in which people are wounded and weakened. However, this need not come at the expense of also investigating the ways in which people are sustained and strengthened.

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Positive psychology; growth; coping; mental health

### “Faced with uncertainty, it is common for people to seek positive solutions”

Soklaridis et al. (2020)

Positive psychology conducts research into the emotions, strengths, processes, conditions, and relationships that foster optimal functioning and flourishing in people, groups, and institutions (Aspinwall & Staudinger, 2003; Cameron et al., 2003; Gable & Haidt, 2005; Peterson & Seligman, 2004; Seligman, 1999). Launched in the late 1990s as a way to counterbalance the intense research focus on psychopathology (Seligman, 1999), positive psychology called for an emphasis on what is good about people (Seligman & Csikszentmihalyi, 2000; Sheldon & King, 2001) and was described by Peterson (2006) as ‘the scientific study of what goes right in life’ (p. 4). The current paper explores the role that positive psychology can play when life does *not* go right – in fact, when life goes very wrong. Specifically, we examine the role that positive psychology plays in helping the general public cope (i.e., buffer against distress and bolster mental health) with COVID-19 and grow through this crisis (i.e., build new capacities).

Novel coronavirus (COVID-19) spread rapidly across the globe in 2020, infecting more than 70 million people and causing more than 1.5 million deaths at the time of submitting this paper (8 December 2020; World Health Organization, World Health Organization (WHO), 2020). Following the recommendations of the World Health Organization in March 2020, many governments swiftly enacted states of emergency, involving stay-at-home orders, school closures, physical distancing requirements, enforced personal protective equipment and quarantine measures for exposed individuals (Imai et al., 2020; Sohrabia et al., 2020).

These changes were vital but, nevertheless, put untold pressure on individuals and what has followed is the widespread deterioration of public mental health (Fiorillo & Gorwood, 2020; Salari et al., 2020; Shi et al., 2020; Van Agteren et al., 2020). People in the general population, who may not have direct exposure to COVID-19 like certain segments of populations (e.g., healthcare workers, front-line workers, marginalized groups<sup>1</sup>), are nevertheless experiencing heightened distress due to fear of contracting the virus and of family or

**CONTACT** Lea Waters  [l.waters@unimelb.edu.au](mailto:l.waters@unimelb.edu.au)

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friends contracting the virus (Mertens et al., 2020), economic hardship and job loss (Dorn et al., 2020), social isolation (Galea et al., 2020) and abrupt disturbances to daily life, schooling and working (Giuntella et al., 2020), to name a few.

These stressors have led to high levels of generalized anxiety, depressive symptoms, psychological distress, sleep disorders and post-traumatic stress disorder (PTSD) (Rajkumar, 2020; Wang et al., 2020). Psychopathology symptoms range from 18.2% to 37% across China (Huang & Zhao, 2020), Spain (González-Sanguino et al., 2020); South Africa (Roberts, 2020), the Netherlands (Statista, 2020), Iran (Jahanshahi et al., 2020) and Italy (Rossi et al., 2020). Those countries that have been able to compare psychological illness before and during the pandemic show significant increases in psychopathology in 2020. For example, in the United States, 13.6% of people in a large-scale national survey showed symptoms of serious psychological distress compared to 3.9% in 2018 (McGinty et al., 2020). In Germany, researchers have found a 10% increase in clinically significant psychopathological symptoms (Schäfer et al., 2020). In Australia, mental health problems were at least twice as prevalent in 2020 as in non-pandemic circumstances (Fisher et al., 2020). Not surprisingly, there have been widespread calls to alleviate psychological distress amongst the community ("American Psychological Association," 2020; Bao et al., 2020; Kaslow et al., 2020; Soklaridis et al., 2020). For those who are not experiencing psychopathology symptoms but are still having strong negative emotions (which is a healthy response to COVID-19), minimizing suffering and keeping the negative emotions from becoming overgeneralized is also an important public health concern to address.

The current paper seeks to broaden the conversation about mental health during COVID-19 by considering the role that positive psychology states, skills, approaches and practices can play in helping individuals to cope with, and grow through, the pandemic. Positive psychology adopts a strengths-based, generative and prosocial view of human capacities – in good times and in bad (Sheldon & King, 2001). In a large-scale review of positive psychology (n = 18,000+ studies), Rusk and Waters (2013) found that suffering was a common feature in positive psychology research and many of the studies in their review focused on positive processes that help individuals recover and rebuild from adversity (e.g., mental toughness, resilience, hardiness, meaning, compassion, forgiveness, and post-traumatic growth). Three notable examples of how positive psychology factors help in bad times include: (1) Shoshani and Slone (2016) study of the moderating role that character

strengths play in the relationship between political violence and PTSD for young people exposed to lengthy periods of war and political conflict; (2) Emmons and McCullough (2003) study of the bolstering effects that gratitude has on positive affect in patients who have neuromuscular disease; and (3) Fredrickson et al.'s (2003) study of the way positive emotions created growth in psychological resources (life satisfaction, optimism, tranquility) from before to after the September 11 terrorist attacks in the USA.

Aligned with the two continua model of mental illness (Westerhof & Keyes, 2010) we suggest that individuals can endure high levels of distress during this medical pandemic and yet still experience positive mental health (i.e., feeling good, functioning well and doing good), Waters et al., *in press*. Indeed, Li et al.'s (2020) analysis of word use on social media in China, immediately before and soon after COVID-19 emerged, showed that even with an increase in anxiety and depression, happiness and life satisfaction were still present (albeit reduced). Furthermore, some positive reactions increased, such as a focus on family, feeling blessed for what one has, and having faith in the future. This finding mirrors earlier research conducted during the Severe Acute Respiratory Syndrome (SARS) pandemic which found that anxiety, isolation, and sleeping problems co-existed with social growth, personal growth, and gratitude in the general public (J. T. F. Lau et al., 2006).

The current literature goes beyond the idea that mental distress and mental health *co-exist* to also explore how they can *interact* (Lomas & Ivtzan, 2015; Wong, 2011). More specifically, we discuss three types of interactions: buffering, bolstering, and building. A buffering effect occurs when positive emotions, processes, conditions, and/or relationships serve to diminish or stave off psychological ill health during the crisis. The bolstering effect of positive psychology is seen when positive emotions, processes, conditions, and/or relationships act to maintain mental health despite the crisis. The building effect emerges when the individual is able to use the crisis in a transformative way to develop new practices (e.g., greater strengths use), new processes (e.g., more self-compassion), and new outlooks (e.g., enhanced meaning) that can lead on to improved mental health in the future.

Although nascent, early evidence on the buffering, bolstering, and building processes and outcomes during COVID-19 has been shown and 22 studies were found to date (21<sup>2</sup> x quantitative; 1 x case study). The bulk of the research has so far focused on the *buffering* interaction between positive psychology constructs and psychological distress. For example, in a short-term longitudinal study where U.S. college students (n = 86) completed

a psychological survey early in the semester, prior to campus closure (January 27 – March 10) and then again at the end of the semester when students had moved to remote learning (April 30 – May 20), grit was shown to buffer against psychological distress during the Pandemic (Bono et al., 2020). In another study of university students ( $n = 384$ ; sourced from 4 Chinese universities), Yang et al. (2020) conducted a cross-sectional analysis of the mediating relationship of three positive psychology variables (resilience, social support, and adaptive coping mechanisms) between COVID-19 stress and acute stress disorder. The results showed that students who used higher levels of positive refocusing (e.g., turning one's attention towards the positive things in their life), positive reappraisal (e.g., focusing on what one can learn from the situation), and positive planning (e.g., thinking about the future) had lower levels of psychological distress (e.g., tension, fear of infection, insomnia, and moodiness) (Yang et al., 2020).

The buffering effect of several positive psychology factors has also been studied in adult samples. In Germany, Schäfer et al. (2020) conducted survey research into psychopathological symptoms (e.g., anxiety and depressiveness) using a one-month, test-retest design from February 2020 (prior to COVID-19 being announced as a global pandemic;  $n = 2,007$ ) and then again in March 2020 (after restrictions were put in place;  $n = 1,591$ ). In this study, psychopathology was buffered by a sense of coherence during the outbreak. (i.e., perceiving life as comprehensible and manageable and belief that life challenges reflect a potential source of growth). Two cross-sectional survey studies conducted with adult samples in Turkey found that optimism was inversely related to anxiety, somatization, and depression during the pandemic (Arslan et al., 2020;  $n =$ , p. 451) and that positivity mediated the relationship between perceived risk of death distress and happiness (Yıldırım & Güler, 2021;  $n = 3$ , p. 109). In a further cross-sectional survey study of adults, this time in Poland ( $n = 317$ ), anxiety and COVID-19 stress were inversely related to hope, meaning, and life satisfaction (Trzebiński et al., 2020). Finally, two large-scale nationwide surveys ( $n1 = 11,131$ ;  $n2 = 3,000$ ) conducted in China immediately before the Coronavirus outbreak (December 2019) and then at the start of the Pandemic (February, 2020) studied the factors that predict emotional wellbeing during the COVID-19 crisis. Emotional wellbeing was calculated by subtracting negative affect (anger, sadness, stress, and worry) from the positive affect measures (smiling a lot, laughing, enjoyment, and happiness) and was found to drop significantly between time one and time two of data collection. At time two, during the initial phases of the virus outbreak, participants'

perceived knowledge about coronavirus infection was associated with a higher sense of control, which in turn was positively associated with emotional wellbeing (Yang & Ma, 2020).

In terms of the *bolstering* effect of positive psychology constructs, at the time of writing, four empirical studies and one case study have been published that have studied how positive psychology can boost aspects of positive mental health (as opposed to reducing mental distress). The study of U.S college students by Bono et al. (2020) (outlined above) found that grit prior to the pandemic was positively related to levels of resilience during the pandemic. Kavčič et al.' s (2020) cross-sectional survey research on Slovene adults ( $n = 2,722$ ) found that resilience promoted good psychological functioning at the beginning of the COVID-19 outbreak. Results by Prinzing et al. (in press) in a national cross-sectional survey study with U.S adults ( $n = 1,059$ ) showed that positivity resonance (i.e., shared positive emotions involving caring and synchrony) and resilience predicted positive mental health during the COVID-19 crisis.<sup>3</sup> A case study by Rhoads (2020) outlined the therapeutic use of webinars on 'healing through humor' during COVID-19 and found that these sessions sparked surprise, playfulness, and joy in participants.

Folk et al., (2020) used a short-term longitudinal design to investigate the impact of COVID-19 on social connection, relatedness, loneliness and life satisfaction in two samples (sample 1, Canadian university,  $n = 467$ ; sample 2, adults primarily from the United States and the United Kingdom,  $n = 336$ ). Measures of social connection (i.e., social connection, relatedness and loneliness) and life satisfaction obtained prior to the COVID-19 were compared to those collected in the early stage of the pandemic. Results found that, despite adhering to the physical distancing measures (and having no one outside their household come within 6 feet of them the day before) people were essentially able to maintain pre-pandemic levels of social connection. In the student sample there was a small decline in social connectedness at time two (just over a tenth of a point on a 6-point scale). In the adult sample, loneliness showed a small decline but no differences were found between participants' scores on relatedness prior to and during the pandemic. A positive relationship was found between relatedness and life satisfaction during COVID-19 suggesting that connectedness plays a bolstering role.

In another study that focused on wellbeing (as opposed to illbeing) measures, Makowiecki et al. (2020) examined emotional wellbeing, job satisfaction, global happiness and life satisfaction in Italian hospital workers ( $n = 616$ ) who were surveyed in 2018 and then again at the onset of the Coronavirus pandemic in 2020. Compared

to pre-pandemic levels, hospital workers showed declines in emotional wellbeing and global happiness but no change in life satisfaction and an increase job satisfaction. The authors suggested that job satisfaction increased in hospital workers because they found a higher meaning in their work and on account of being the recipients of gratitude. The bolstering role of meaning and gratitude will be discussed in sections below.

Also using a worker sample, Pacheco and colleagues (2020) conducted cross-section survey research on 1,073 Canadian workers sourced from 17 industries and found that job security and workplace ‘resilience levers’ (i.e., workplace disaster preparedness, policy, social capital) were positively related to thriving at work.

In terms of the *building* effect, past research has shown that traumatic events can be a trigger for positive growth in a range of areas including self-perception, interpersonal relationships, knowledge of one’s strengths, life philosophy, appreciation of life and spirituality – a constellation of outcomes variously referred to as adversarial growth (Linley & Joseph, 2005), stress-related growth (Park et al., 1996), and/or post-traumatic growth (Helgeson et al., 2006). In J. T. F. Lau et al.’s (2006) research on SARS mentioned earlier, people reported social growth (i.e., taking greater care of family members and giving friends more support during the pandemic) and spiritual growth (i.e., higher levels of appreciation for life).

Prior research shows that positive psychology factors play a significant role in the likelihood of growing stronger through adversity. Intrapersonal variables that prompt growth include positive appraisal and optimism (Prati & Pietrantonio, 2009), reflective modes of thinking (García et al., 2015), capacity for dialectical thinking (Waters & Strauss, 2016), and the process of benefit finding (Danoff-Burg & Revenson, 2005). Positive extrapersonal factors that contribute to growth during challenging times include social support (Scrignaro et al., 2011) and strengths-based parenting (Zavala & Waters, 2020).

To date, there have been two empirical studies conducted on post-traumatic growth (PTG) during COVID-19. Vazquez et al. (2020) studied PTG in a nationally representative sample of adults in Spain ( $n = 2,122$ ) during a period of strict national confinement and found evidence of moderate levels of PTG, with a mean score of 36.5 (7.60) out of 70. Moreover, PTG was higher when people believed they were living in a good world and had a positive outlook for the future. In Australia, Waters et al. (in press) studied stress-related growth in teenagers and found that the use of strengths and positive reinterpretation by middle school and high school

students during COVID-19 predicted levels of growth (i.e., learning to deal with uncertainty, learning not to be bothered by small hassles, discovering one’s inner strength, and becoming more accepting of others). The findings from Vazquez et al. and Waters et al. show that belief in a good life, hope for a positive future, use of strengths and positive reinterpretation are factors that apply to the third way in which positive psychology can help during this pandemic – that is, to *build* and expand coping processes that foster growth.

As outlined above, positive psychology’s focus on human capacities (actual and potential) provides a valuable lens through which to understand how people can cope with, and grow through, times of crisis. This paper will now consider how the processes of buffering, bolstering and building can be generated through nine positive psychology topics: meaning, coping, self-compassion, courage, gratitude, character strengths, positive emotions, positive interpersonal processes and high-quality connections. Each section will provide a brief description of the topic, a snapshot of the scientific findings pertaining to this topic (pre-pandemic and, in some sections, during COVID-19) as well as suggestions for how to put positive psychology into practice to ensure the buffering, bolstering and/or building effects.

### Meaning

Meaning in life refers to the degree to which people have made sense of their lives and the world around them, perceive their own lives to have inherent value and to be worth living, and identify highly valued and long-term aspirations towards which they strive (Steger, 2021). These three elements are referred to as coherence, significance, and purpose (Martela & Steger, 2016). Meaning is a foundational component of wellbeing in the most prominent models (e.g., Ryff, 1989) and thousands of studies confirm robust and extensive links with the full range of indicators of health and thriving. Among many other findings, here is a taste. People who report higher levels of meaning in life also are happier, express more frequent and strong positive emotions, endorse and use their character strengths more, have more satisfying relationships and are viewed as more desirable potential friends, help others more, feel better subjective health, report fewer health symptoms, have better functioning immune systems, lower levels of inflammatory cytokines, engage in less risky sexual and substance behaviors, show slower advancement of cognitive decline and Alzheimer’s disease, and live longer (for reviews, see Cohen et al., 2016; Roepke et al., 2014; Steger, 2012).



Meaning plays an important role in coping with stress, trauma, and adversity, including greater use of effective coping strategies, such as using cognitive reappraisal of stressors and avoiding emotional suppression. Meaning has both buffering and building effects. Recent research conducted during the pandemic shows that meaning in life buffers against COVID-19-specific stress (Trzebiński et al., 2020), and general levels of boredom, depression, anxiety, and stress (Chao et al., 2020). In other research, meaning has been linked with higher levels of PTG following trauma, including natural disasters (Dursun et al., 2016; Park, 2010).

Meaning in life not only serves to protect during trying times, it can also be enhanced or even discovered in adversity. This is typified by a COVID-19 study showing that despite spikes in acute stress, depression, and anxiety among front-line healthcare workers, an astonishing 61% of them said they had found increased meaning and purpose in life (Shechter et al., 2020). This study is an example of how research within a central positive psychology topic – meaning – reveals a key path through which individuals can cope and grow during a time of crisis.

The pandemic presents many of us with this galvanizing adversity. Within meaning theory, the pandemic can be seen to directly threaten the three elements of meaning- coherence, significance, and purpose. The pandemic threatens *coherence* by creating chaos and upheaval in our routines, beliefs about government and safety, sense of predictability and even our sense of identity. It threatens *significance* by making us feel powerless and swept up amidst influences we cannot control, by taking away relationships and activities that make life feel worthwhile, and threatening the sense that we matter by causing widespread illness, prolonged disability, or death. It threatens *purpose* by sundering our plans and aspirations for the future, sapping our motivation, and severing connections to our goals and aims in life.

Recognizing the threat identified where to place effort in order to protect and build mental health. We can tend to our *coherence* by exploring how our basic beliefs about life have been disrupted and investing the time to consciously construct a modified yet still optimistic set of beliefs. We can tend to our *significance* by accounting for all the ways in which we have felt diminished or aggrieved by recent changes and take steps to support, or even increase, our ongoing ability to make a difference and connect with others. We can tend to our *purpose* by understanding which of our goals and missions have been blocked by the pandemic as a way to more clearly see what motivates us and by seeking ways to provide greater service to others and/or the planet going forward.

As the world confronts the COVID-19 pandemic and its repercussions, finding meaning is a particularly relevant focal point for one's mental health.

### Coping

Stress is defined by Lazarus and Folkman (1984) as the internal or external demands appraised as taxing or exceeding the resources of the individual. The COVID-19 pandemic certainly meets the definition of stress for most people who have faced multiple additional demands such as the requirement for drastic behavioral changes to fight the threat of serious illness in themselves or loved ones whilst at the same time losing the usual resources such as employment and income, child-care, supportive in-person interactions, and opportunities for recreation and replenishment, thus creating a marked imbalance between demands and resources.

The high levels of stress experienced during Covid-19 (Taylor et al., 2020) can be combatted through the intentional use of adaptive coping strategies (i.e. cognitive and behavioral efforts that foster adaptation in times of challenge). Although coping research historically focused on approaches that reduce negative affective states like depression and anxiety, a significant body of work demonstrates that even in the midst of significant life stress, individuals can and do experience positive affective states (Folkman, 1997). As such, positive psychological interventions that boost a person's coping repertoire by helping them increase the experience of positive cognitions (e.g., positive reappraisal) and positive emotions (e.g., gratitude) hold significant promise for helping people bolster their mental health.

In a body of research conducted with people experiencing other types of significant life stress such as HIV diagnosis (Moskowitz et al., 2017), metastatic breast cancer (Cheung et al., 2016) and dementia caregiving (Moskowitz et al., 2019), randomized controlled trials of the multi-component positive psychology intervention (PPI) developed Moskowitz and colleagues (Cheung et al., 2018; J. Moskowitz et al., 2014; Verstaen et al., 2018) have demonstrated effects on a number of indicators of psychological wellbeing such as positive affect, meaning and purpose, and depression. This PPI teaches skills to help build positive internal resources that can support adaptive coping with a variety of life stressors. More specifically the PPI teaches skill such as noticing positive events, savoring, gratitude, mindful awareness, positive reappraisal, personal strengths, acts of kindness, and self-compassion (Cheung et al., 2018; J. Moskowitz et al., 2014; Verstaen et al., 2018).

In the early months of the COVID epidemic in the US, the program was made openly available, in a self-guided

online format and tested whether learning the positive coping skills helped people manage the stress of the pandemic as indicated by their scores on PROMIS computer adaptive tests for depression and anxiety (Pilkonis et al., 2011) and positive affect (Salsman et al., 2014). In the initial wave of participants who completed the assessments before and after the 8 week intervention ( $N = 68$ ), anxiety ( $t(109) = -4.38, p < .001$ ) and depression ( $t(95) = -4.24, p < .001$ ), decreased significantly, and positive affect ( $t(3.76) p < .001$ ) increased significantly. Notably, on average, participants started the study with elevated levels of anxiety and depression; approximately +1SD above the population norms on these PROMIS measures and at the post assessment, participants' average anxiety and depression levels had dropped to within the normative range.

Although it is early in the study, data so far support the idea that individuals can use these positive skills to build their personal resources and maintain their psychological wellbeing even when facing serious life stress like the global COVID-19 pandemic. However, these findings are based on a small sample and as this is not a randomized controlled trial, we cannot definitively link the improvements in wellbeing to use of these positive psychological skills. It could be that respondents were reporting improvements in their wellbeing over time simply because COVID was becoming 'the new normal.' However, these early results suggest that positive psychology interventions have much to offer to help everyone cope better with both day-to-day stress as well as more major stressors such as the COVID-19 pandemic.

### **Self-compassion**

Self-compassion is a powerful way to cope with the curveballs life throws – like the COVID-19 pandemic. It involves treating yourself with the same kindness, care, and concern you would show to a good friend when they are struggling in some way (Neff, 2003). It is the Golden Rule in reverse – do unto yourself as you would do unto others. We are typically much colder and crueler to ourselves than to those we care about, and self-compassion turns this around so that we include ourselves in the circle of compassion (Neff & Pommier, 2013). In addition to self-kindness, self-compassion includes the elements of mindfulness and common humanity, which are necessary to make it a stable and healthy mindset (Neff, 2003). First, to give ourselves compassion we need to be mindful of our pain (Neff & Dahm, 2014). We need to be willing to turn toward it, acknowledge and validate it rather than ignore or suppress it. At the same time, we need to see our situation with perspective and balance rather than exaggerating

how bad things are. Self-compassion also involves recognition of the shared nature of suffering. Rather than feeling isolated and alone in our struggles, we remember that everyone is imperfect and encounters challenges in life. This is what differentiates self-compassion from self-pity (Neff, 2003).

Self-compassion buffers the negative effects of suffering, meaning that people who are compassionate towards themselves are much less likely to be anxious, depressed, and stressed from the struggles of life compared to their self-critical counterparts (MacBeth & Gumley, 2012). Moreover, longitudinal research shows that self-compassion helps us over the long run by reducing the negative effects of perceived stress over time (Stutts et al., 2018). This is not because self-compassionate individuals are good at tuning out negative emotions, however. In fact, self-compassion involves being *more* willing to experience difficult feelings and to acknowledge them as valid and important (Allen & Leary, 2010). In a self-compassionate approach, instead of trying to get rid of painful feelings and replace them with 'better' ones, positive emotions are generated by *embracing* our suffering with kindness and care, so that light and dark are experienced simultaneously. This friendly and benevolent attitude strengthens our ability to cope with difficulties and find their silver linings, helping to explain why self-compassionate people are happier, more optimistic, and satisfied with their lives than those who give themselves the cold shoulder (Neff & Germer, 2017). Inner warmth also bolsters the immune system and enhances physical health by decreasing cortisol and increasing heart rate variability (Phillips & Hine, 2019).

Self-compassion helps people face the daily stress and anxiety of the COVID-19 pandemic in a self-supportive, rather than self-defeating, manner. Showing compassion towards the continual uncertainty experienced as a result of the pandemic provides the sense of emotional safety needed to prevent being overtaken by fear. For instance, cross-sectional research demonstrates that people with more self-compassion felt less traumatized by COVID-19 (Jiménez et al., 2020) and had less COVID-19 related anxiety (Mohammadpour et al., 2020; Taubman-Ben-Ari et al., 2020, October 14). In addition, a cross-sectional study in Hong Kong (B. H. P. Lau et al., 2020) found that self-compassion served both a buffering and bolstering role by helping individuals to feel less threatened and distressed about the pandemic (i.e., buffering distress) and also by helping them see potential benefits to the situation such as having more time for relaxation (i.e., bolstering wellbeing). Beyond these cross-sectional studies,

a randomized controlled trial among individuals in COVID-19 lockdown found that two weeks of online self-compassion training (consisting of journaling, meditation and other daily exercises) significantly increased self-compassion and reduced stress and emotional eating compared to a waitlist control group (Schnepper et al., 2020).

The above findings show that self-compassion can be learned during the pandemic, helping to reduce illbeing and promote wellbeing, and suggest it is an approach worth taking. Neff and Germer (2013) have developed a comprehensive self-compassion training program called Mindful Self-Compassion (MSC) that is available to the general public online (CenterforMSC.org) and in workbook format (Neff & Germer, 2018). A randomized waitlist-controlled trial (Neff & Germer, 2013) found that MSC increased self-compassion, mindfulness, compassion for others, happiness, social connectedness and life satisfaction as well as decreased depression, anxiety, stress and emotional avoidance. These buffering and building benefits were found to last for at least one year, and life satisfaction actually increased over time. A 'practice effect' was also found showing that those who practiced self-compassion more often experienced greater benefits.

Such findings suggest that the more we intentionally support ourselves when confronting the difficult feelings aroused by the pandemic, the more resilient we will be in the long term (e.g., a building effect). Bringing the three components of self-compassion to bear on our experience of the pandemic may look something like this: First, being mindful of our distress, making space for emotions like fear, uncertainty or sadness without trying to suppress them or make them go away. Second, look at the common humanity experienced during the pandemic which allows us realize that this is shared experience and that, although we may feel lonely because of social distancing, we're all in this boat together. Thirdly, self-kindness might involve talking to ourselves with a warm, compassionate tone, saying the words we need to hear to comfort or reassure ourselves: 'I'm so sorry you're struggling;' 'It's going to be okay;' 'I'm here for you.' By giving ourselves compassion for the pain we're going through, we will be stronger, more stable, and more able to cope with the stress of the Covid-19 pandemic without becoming overwhelmed.

### **Courage**

Courage, or *taking a worthwhile risk* (Pury & Saylor, 2017; Rate et al., 2007), sits squarely within the virtues and strengths end of positive psychology, allowing individuals to act towards valued goals despite the

possibility of personal negative consequences and resulting negative emotional states (e.g., Peterson & Seligman, 2004). Courageous actions are taken as the individual's free and conscious choice, despite risk to the actor, and for a good or noble goal (Rate, 2010; Rate et al., 2007). Taking a very large risk for a minimally valuable goal is foolhardy, while taking a very small risk for an extremely valuable goal does not rise to the level of courage (Pury & Starkey, 2010).

The relative proportionality of the risk compared to the value of the goal is based on the subjective assessment of the individual taking or observing the action. Actions hailed as generally courageous by all tend to be those in which everyone agrees that the risk is substantial and the goal is valuable: saving a child's life by running into a burning building, for example, features an obvious, universal risk and clear and compelling noble goal. Yet many actions are courageous only for specific individuals. *Personal courage* describes actions assessed as risky just to or by the actor themselves but which, for most people, would not be risky: a person with a fear of public speaking giving a talk to a medium-sized crowd, for example, (Pury et al., 2007). When a goal is valued by the actor but actively opposed by society, such acts of terrorism or suicide, *bad courage* occurs (Pury et al., 2015).

In crisis times, the two key elements of courage – risks and goals – are often suddenly and drastically altered. In COVID-19 times people across the globe are facing the risks of catching a deadly virus and many other 'ripple effect risks' such as the risk of job loss stemming from the economic fallout and the risk of depression stemming from social isolation. At the same time COVID-19 has drastically curtailed or altered the goals of many people including financial career, and educational goals, leisure goals, and relationship goals (e.g., Akkermans et al., 2020; Goodwin et al., 2020; Martin et al., 2020; Middleton, 2020; Nicola et al., 2020; Singh et al., 2020; Stodolska, 2020). As such, COVID-19 requires people to draw on their courage as well as more intentionally and more frequently consider the relative proportionality of the risk compared to the value of the goal. This is as much the case for the front-line medical workers who are taking big, socially valued, risks as it is for the lay person who decides to share their pain on social media or to take a risk by pivoting their business model to an online space. Thus, courage is a pivotal strength to be drawn upon during this global pandemic.

There are widespread differences in what people perceive as risky (including the risks of the virus itself as well as the chance of catching it in the first place), and different perceptions of the worthiness of a variety of goals (including in-person events and occasions). The



persistence of these differences may result in strongly differing opinions about the courageousness versus foolhardiness of any particular action. What one person sees as a reasonable risk another may see as bad courage.

How can general courage and personal courage be harnessed during COVID-19? Preliminary research has found that participants commonly describe trying to increase their own sense of courage by reminding themselves of the value of the goal they are pursuing (Pury, 2020). Other research has shown that being reminded of a time where one successfully faced their fears (Kramer & Zinbarg, 2018) and being rewarded for getting closer to a phobic object (Chockalingam & Norton, 2019) helps to increase courage. Additionally, drawing on other strengths can likely make that path easier. For example, when asked to apply the definitions of VIA strengths to a past self-identified courageous action, people give high ratings to hope for courageous actions taken for any reason, and to kindness for courageous actions taken to help another (Pury et al., 2007). For example, during a surge of COVID-19 cases in one's local area, kindness may motivate a person to risk exposure to ensure an elderly neighbor has groceries and medicine. Although speculative, courage may also be aided by wisdom and perspective, both of which may help in deciding if a specific risk is worth taking in pursuit of a specific goal.

Courage plays a special role during a time of crisis. Ensuring the worth and value of one's own goals, reminding one's self of them, and taking steps to mitigate risk – including the risk to others – can likely foster courage in these difficult times.

### **Gratitude**

Gratitude, the affirmation and recognition of benefits received, is both a personal good and a social good, valuable for the person who possesses it and valuable for society at large. Gratitude is an essential element of human flourishing, critical to harmonious functioning (Henning et al., 2017). As the positive emotional response to benevolence, it is perhaps the quintessential positive trait, an amplifier of goodness in oneself, the world, and others. Empirical research conducted into the nature and effects of gratitude for more than two decades has convincingly revealed its benefits for psychological, physical, relational, and spiritual wellbeing (Watkins, 2014). As a loosely coherent spectrum of responsive attitudes manifest by persons in their dealings with one another and the cosmos, gratitude is an essential part of one's orienting system. It aids in recovery from loss and trauma as it widens the perceptual

field and helps people see the big picture and the opportunities in it (Vernon et al., 2009).

Grateful feelings serve both as buffering and bolstering through lowering stress levels and increasing positive emotions, life satisfaction, and resilience. Perhaps most uniquely, gratitude facilitates the development and maintenance of social relationships (Algoe et al., 2019). As a morally compelling emotion, it motivates recipients of aid to express appreciation toward benefactors and reciprocate in some normatively appropriate way. However, gratitude goes beyond mere reciprocity because it also motivates people to help strangers – behavior evident during the COVID pandemic. A declaration of appreciation for some act of kindness received may thus function as a reliable signal of a person's inclination to cooperate with others in everyday exchanges.

The benefits of a grateful mindset and grateful orientation toward life would appear to be especially valuable in the midst of uncontrollable stress, such as that engendered by the coronavirus crisis. Evidence of gratitude's bolstering role during COVID-19 was collected in survey research conducted by Watkins et al. (2021). Their study examined the frequency of grateful feelings within the unique challenges offered by the pandemic. Moreover, it was the first study to investigate prospective anticipated gratitude: how grateful people expect to feel in the future. They also examined whether gratitude was related to perceived positive changes in the self during the pandemic. The sample consisted of 511 adult participants who were surveyed online from March to May, 2020. Participants were asked about their current and future emotions, as well as self-change variables. People reported that they were quite grateful, even in the midst of the pandemic. Over 56% of respondents reported being very grateful, which was 17% greater than any other positive emotion (happy, hopeful, relieved, joyful). People also expected to be even more grateful in the future (69%). Gratitude strongly predicted happiness during the pandemic ( $r = 0.56$ ), and hierarchical multiple regression analyses showed that after controlling for positive states, gratitude significantly predicted social variables important to wellbeing (e.g., 'I am more likely to help others'). Furthermore, three significant gratitude-related areas of perceived changes in the self were observed during this period: 'Are more grateful for the positive aspects of life'; 'Have a greater understanding each day that we are alive'; and 'Have a better sense of what is important to me.' The more grateful people were, the more they reported these positive self-changes. This is important because people can increase their levels of gratitude with simple practices such as journaling. As gratitude amplifies one's perspective on

the world (Watkins, 2014) gratitude can open the door to seeing other positive life changes and personal growth during a time of crisis and beyond.

This study showed that even in the pandemic, people reported being very grateful, and they expect their gratitude to grow in the future. In the face of crises and during troubling times, people rely on positive feelings to cope, and they seem to turn to gratitude more than any other positive emotion, lending empirical support to the claim that ‘gratitude is not only the best answer to the tragedies of life. It is the best approach to life itself’ (Solomon, 2006, p. 105).

### **Character strengths**

There are many strengths in human beings – skills, interests, talents, values, and resources. However, it is strengths of character, 24 in particular, as uncovered by a large number of scientists (for a list of the 24 character strengths, see Peterson & Seligman, 2004), that are central to who we are and highly applicable for wellbeing, growth, and coping (see “VIA Institute,” 2020, for summaries of over 700 findings). The accumulation of science has revealed we can define character strengths in a multi-dimensional way, as positive personality qualities that reflect our core identity, create positive outcomes for ourselves and others, and contribute to the greater good (Niemi, 2018). Each of these are crucial at times of pandemic.

The science reveals two general pathways through which character strengths help individuals to navigate life – a wellbeing (or opportunistic) path and an adversity path (Niemi, 2020). During the COVID-19 crisis, the adversity pathway of strengths becomes vitally important. Research has highlighted the beneficial role that character strengths play in mitigating a range of different aspects of adversity and suffering – many of which are emerging during this pandemic including depression (Schutte & Malouff, 2019), anxiety (Freidlin et al., 2017; Huta & Hawley, 2010), work stress (Harzer & Ruch, 2015), hopelessness (Huffman et al., 2013), alcohol consumption (Logan et al., 2010), and obsessive-compulsive disorder (Littman-Ovadia & Freidlin, 2020).

In circumstances of direct trauma, character strengths have also been shown to play an important role. For example, Shoshani and Slone (2016), examined resilience of young people in the face of prolonged war, terrorism, and political conflict and found that interpersonal, temperance, and transcendence character strengths were negatively associated with psychiatric symptoms. Furthermore, Duan and Guo (2015) and Duan et al. (2015) have shown that character strengths play a significant positive role in posttraumatic growth

and trait resilience among people who experienced the trauma of a natural disaster or a range of traumatic experiences.

Interestingly, character strengths have been shown to play a role in building resilience in adults (Meneghel et al., 2016) and building psychological immunity through pragmatic actions to purposefully boost coping (Rashid & McGrath, 2020) – both of which are useful internal resources for people during the COVID-19 pandemic.

A focus on character strengths may bolster mental health by helping one to identify and use their best qualities, or signature strengths, in new ways, thus boosting their wellbeing, energy, and connectedness (e.g., Schutte & Malouff, 2019) (Niemi, 2020). For example, one person might use their highest strength of humor to share funny stories in social media and thereby bringing levity to tense situations and connecting socially with others, while another person might deploy their top strength of leadership to lead an online webinar that educates the public about wellbeing during the pandemic and as a result feels as if they are contributing to the greater good.

Taking a strength-based approach may also build up a person’s capacity for learning how to generate positive experiences during adversity so that COVID-19 is not solely viewed through ‘pain-colored-glasses’. While there is indeed suffering and distress to acknowledge, people are using their character strengths to generate positive outcomes. For example, the actions of individuals’ using creativity to adapt their new work arrangements, the abundance of newfound widespread humor on social media, new kindness expressions to one’s neighbors, the perspective to see the bigger picture of pandemic coping, and the use of transcendence strengths such as hope, gratitude, and spirituality to positively re-interpret the pandemic, find new structures of meaning (see the meaning section above), and a newfound connectedness with the larger human family (see positive relational processes and high quality connections below). In these ways, character strengths can foster processes that build mental health and bring out the best in humanity.

Using strengths to build capacity and create positive outcomes during COVID-19 not only occurs at the individual level but also at the collective level where we see the use of ‘collective prudence’ in regard to new planning and cautionary measures (e.g., widespread mask-wearing, physical distancing, limiting exposure to groups) and ‘collective self-regulation’ to pursue more disciplined and healthy routines. New research underlines important connections between character strengths and an orientation to promote good, and

points to this importance for public policy and collective health issues (Weziak-Bialowolska et al., 2020). Indeed, there is plenty that individuals and groups can reap-praise amidst a pandemic and character strengths help us to do this.

Another adversity function that strengths offer is that of resilience (Niemic, 2020). For example, an individual can use character strengths to handle a setback directly (e.g., bravery, perspective), to identify an alternative solution to overcome a setback (e.g., wisdom, hope), and/or to carry out actions to push through the challenge (i.e., perseverance). While each of the 24 character strengths has shown some linkage with resilience (see Niemic, 2020, for a review), individuals might start by targeting and leveraging specific character strengths during COVID-19 that are particularly aligned with resilience (e.g., hope) or choosing a strength by which they can 'rise to the occasion'. The individual might call forth a specific strength, examine which strengths one has learned as a result of the setback, use a strength mindset to approach the setback, and use the setback as an opportunity to set a new personal, familial, or professional goal.

### **Positive emotions**

Emotions, both positive and negative, are brief, multi-system activation patterns related to changes in the way individuals' make sense of their current, in-the-moment circumstances, a process shaped by the particulars of their unique past experiences (Barrett, 2017). One's current circumstances include happenings in both their external environment (e.g., economic gains and losses, others' actions) and their internal environment (e.g., core affect, pain, hunger). When individuals register (consciously or not) that their current circumstances are somehow bad for the self, an unpleasant affective state unfurls across multiple systems, spanning experiential, behavioral, and biological. By contrast, when individuals take their current circumstances to represent good fortune or good prospects, a pleasant affective state is experienced.

The COVID-19 pandemic provides ample and just causes for negative emotions. People can be expected to feel fear and anxiety about contracting the virus, sadness about diminished social connectedness, grief about extraordinary loss of human life, and anger and frustration about loss of jobs, income, and freedom of movement. Yet the backdrop of this widespread emotional pain makes stark the need for people to deploy positive psychology strategies that boost their positive emotions in the service of caring for themselves, their loved ones, and their community.

Often mild and always fleeting, positive emotions both reflect and produce health and wellbeing. Scientifically, positive emotions refer to a range of uplifted affective states, including joy, gratitude, serenity, interest, hope, pride, amusement, inspiration, and awe. When two or more individuals co-experience pleasant states like these, together with elements of caring and synchrony, a unique state of collective affect emerges, one called 'positivity resonance,' taken to be a defining feature of the emotion of love (Fredrickson, 2016).

Although positive emotions, by definition, are light-hearted, they are not trivial. Decades of empirical evidence now support the Broaden-and-Build Theory of positive emotions which frames these fleeting states as evolved adaptations that, over millennia, have aided human survival (Fredrickson, 1998, 2013). For instance, positive emotions fundamentally change the way the human brain works to broaden cognitive awareness. This allows greater information intake that in turn helps people enact and build resilience, ingenuity, social connectedness, and other resources that can help individuals and groups cope with adversity (Fredrickson, 2013). Research has shown that an upward spiral dynamic, with its signature reciprocal causality, is at play here: Positive emotions not only reflect good fortune and good prospects, but – incrementally and over time through broaden-and-build processes – positive emotions also help to create future moments of good fortune and good prospects (Fredrickson & Joiner, 2018).

Especially during trying times, like the current COVID-19 pandemic, it's vital to recognize that positive emotions can co-exist with negative emotions and that engaging in strategies to boost joy and love during this global crisis does not require us to turn a blind eye to fear and grief. Even in the midst of fearing the worst, humans reliably yearn for better. That, indeed, is the textbook definition of the positive emotion of hope (Lazarus, 1991) and the empirical description of resilience (Tugade & Fredrickson, 2004). In a sample of Americans following the terrorist attacks of September 11<sup>th</sup>, 2001, positive emotions were a key active ingredient that enabled resilient individuals to ward off symptoms of depression (Fredrickson et al., 2003). The contribution of positive emotions to resilient coping is now well-established across a range of contexts, both for individuals (Gloria & Steinhardt, 2014; Ong, Bergeman, Bisconti & Wallace, 2006) and for teams (Meneghel et al., 2016). Data gathered from Americans ( $N = 1,059$ ) in the early months of the COVID-19 pandemic (April-May, 2020), when 'stay-at-home' mandates were common, once again confirms the value of ordinary daily experiences of positive

emotions (Prinzing et al., *in press*). These same data also show, for the first time, that the positive emotions people experience collectively with others in daily life (i.e., positivity resonance) independently contribute to the maintenance of mental health during challenging times.

Even in pandemic times, then, individuals can cultivate authentic, contextually-appropriate positive emotions, whether experienced solo or collaboratively with others. Many approaches to doing so have been empirically-validated, including the contemplative practices of mindfulness and loving-kindness meditation (Fredrickson et al., 2019, 2017), enacting kindness (Nelson et al., 2016), prioritizing positivity (Fredrickson et al., 2019) and social connectedness (Zhou et al., 2020).

The consequences of positive emotions for mental (Prinzing et al., *in press*), physical (Kok et al., 2013; Le Nguyen et al., 2019), and indeed public health (West et al., *in press*) are too great to overlook and serve to highlight the benefit of adopting a positive psychology approach in this time of crisis.

### **Positive interpersonal processes**

Of the many challenges brought about by the COVID-19 pandemic, undoubtedly one the most common sources of distress (beyond the existential threat of the virus itself) is the disruption caused to our relationships. We all need other people – they make life richer, help us when we're down and out, open doors to new opportunities, and good relationships even forecast longer life (e.g., Holt-Lunstad et al., 2010; Reis et al., 2000; Thoits, 2011). But at a time where we arguably need the connection and support of others the most, the need to remain physically distant has altered our relationships in ways that threaten to undermine the health and well-being of many people across the globe. At the same time as dealing with not being able to see certain friends and loved ones, many are adjusting to the new reality of having their immediate 'family' (including platonic roommates) as their primary source of social connection, day in and day out. No matter whether one is trying to stay connected to people they can't see or make the most of their time in tight quarters with the ones they can, positive psychological science offers tools for resilience.

Specifically, research into positive interpersonal processes (Algoe, 2019) has much significance for connection during the COVID-19 pandemic. Positive interpersonal processes are everyday experiences like sharing laughter, being kind, experiencing and expressing gratitude, feeling admiration, and being loved. These interpersonal processes are fueled by positive emotions and have the potential to impact both people

in the interaction (Algoe, 2019). For example, beyond either person's individual laughter, *sharing* laughter increases connection by making people feel more similar to one another (Kurtz & Algoe, 2017). In daily life, beyond how well a partner responds when something bad actually happens, how they respond when something *good* happens is more strongly related to the perception that the person will be there for them in future challenging times (Gable et al., 2012). And there is even nuance among these positive interpersonal processes: an expression of gratitude – relative to the same person expressing joy – prompts the perception that the grateful person is understanding, validating, and caring (Algoe et al., 2019, 2016), which is an important foundation for high-functioning relationships (Reis et al., 2004). In short, the evidence suggests that focusing on the *quality* of one's interactions, perhaps even more than the quantity, can go a long way.

What this may mean is that while we cannot spend as much time (if any) with friends and family, we can make up for the lower quantity by intentionally building up the quality. Conversely, we can help to ensure that the extra enforced time we are spending with others does not run the risk of cabin fever or conflict by focusing on positive interpersonal processes. Putting this research into action could include taking the time to tell someone you appreciate something kind they did for you, organizing a game night to induce shared laughter (even if virtual), letting someone know how much you admire the way they are coping in these trying times. All of these actions are about intentionally squeezing in one enjoyable moment with another person each day of this pandemic.

Another key finding from positive psychology worth noting is the value in being other-focused during the pandemic. Being kind incidentally reaps dividends: People are happier when they do good for others rather than the self (e.g., Dunn et al., 2008); talking to strangers boosts mood (e.g., Sandstrom & Dunn, 2014); expressing gratitude increases others' estimation of the grateful person (e.g., Algoe et al., 2019), and more. In turn, the other person's mood is boosted, people feel closer (e.g., Reis et al., 2010), and relationships can thrive. It is fair to say that many people across the globe have ramped up their kindness towards others during the COVID-19 pandemic. Take, for example, the people in many cities (e.g., Rome, Madrid, New York, Philadelphia etc ...) standing on their balconies each evening to clang pots and pans together as a way to thank essential workers (Hess, 2020). Kindness has also become a major theme on social media, including dedicated pages for people to record acts of kindness during COVID-19 (kindness pandemic <https://www.facebook.com/groups/>



[515507852491119/](#)); people are donating food, money, blood, and even giving away goods, on request, that would get more use by someone in need. Many of these kind actions take just a few seconds or minutes. Yet they can have ripple effects throughout a community, while incidentally feeding back to bolster one's own wellbeing.

Altogether, despite the many interpersonal challenges inflicted by the pandemic, positive psychological science shows that these little positive moments with other people can help keep us and those around us shored up; more than that, they can even provide opportunities to rekindle and strengthen connections with the people we hold most dear.

### **High-quality connections**

While the above section concerns ongoing relationships (e.g., roommates, friends, family, work colleagues), this section concentrates on smaller units of relationships, the moments of human connection, be they virtual or in person. Moments that create a high-quality connection (HQC) are defined as those where both people in the connection sense enhanced vitality, mutuality, and positive regard (Dutton & Heaphy, 2003). Connections can be short, as in a momentary interaction, or they can be more enduring as in an extended zoom call or face-to-face visit. HQCs can be thought of as moments of positivity resonance when individuals share positive affect, mutual care and concern, and behavioral and biological synchrony (Major et al., 2018).

As a micro-unit of human relationships, HQCs act as social boosters that contribute to individuals' capacities to endure, cope and potentially thrive in challenging times. Research suggests that HQCs are potent contributors to wellbeing and higher functioning of individuals. When people experience HQCs they undergo physiological changes that contribute to health, such as decreased cardiovascular reactivity, strengthening immune responsiveness to stress, and the release of oxytocin (Heaphy & Dutton, 2008). Psychologists have shown us that this form of human connection is associated with buffering against depressive and illness symptoms together with bolstering mental health and flourishing (Major et al., 2018). Beyond health-related outcomes, research suggests HQCs are associated with higher cognitive performance (Ybarra et al., 2008).

Importantly, HQCs may also have a building effect in that they have been linked to faster recovery following loss and illness (Lilius et al., 2008), which is a finding that is highly relevant during the COVID-19 pandemic, given that so many people have suffered losses of various

kinds. In a recent correlational study of wellbeing for individuals during the pandemic, positivity resonance mediated the impact of trait resilience on mental health (Prinzling et al., *in press*), suggesting that HQCs have an important bolstering effect and, thus, are a resource worthy of being developed during this global pandemic.

At the same time that HQCs can help individuals during COVID-19, they also compose the social tissue that make up work teams and organizations and, thus, can have beneficial effects by keeping people connected during an era of physical distancing. Where social groups enjoy HQCs, members tend to experience higher levels of psychological safety, greater learning and knowledge creation, more extensive collaboration, greater unit attachment, and higher unit-level resilience (Stephens et al., 2011). The pandemic conditions have ushered in greater physical distance (Salari et al., 2020) while also accentuating social inequalities and cultural divides (Dorn et al., 2020; Kim & Bostwick, 2020), making the cultivation of HQCs more challenging and yet more essential.

Individuals and groups can use an HQC mindset to identify and deploy approaches to virtual or in-person interaction that make them more likely to generate HQCs and reap the beneficial impacts. First, individuals can actively create greater 'psychological presence,' defined as removing distractions and actively focusing attention on the immediate and proximate interaction with another person (Kahn, 1992), which facilitates creating an HQC. Second, individuals can focus on being curious and interested in the other person or group during an interaction as an intentional strategy to build connection. Offering help to others, being vulnerable or conveying trust are further moves that individuals can intentionally make to foster an HQC (Dutton, 2012). Finally, anyone who is a member of a group or team can think proactively about designing team meetings to intentionally cultivate more HQCs through creating norms for respect, fostering interpersonal affirmation and helping, and fostering a trusting team climate. These trying times require that we do not take the quality of connections we create for granted. Rather, a pandemic calls out for our care and attention to be directed toward making every interaction a potential booster shot by creating the conditions for HQCs.

### **Conclusion**

Global guidelines to influenza pandemics provided by the World Health Organization explicitly state the need to 'Address the psychological impacts of the pandemic' (2017, p. 39). This is certainly the case for COVID-19 given the drastic rises in psychopathology and increases



in negative emotional states in the general public and in certain segments of the population (Fiorillo & Gorwood, 2020; Skoda et al., 2020). In addressing the short-term and longer-term 'mental health fall-out' from the coronavirus pandemic, calls have been made for psychological approaches to incorporate multidisciplinary lines of action (Bavel et al., 2020; Holmes et al., 2020). The current paper advocates for the incorporation of positive psychology practices to be part of a multi-disciplinary approach. More specifically, we have provided evidence and suggestions about the ways in which positive psychological knowledge, skills, approaches and practices can help to reduce mental illness (i.e., buffering), maintain mental health (i.e., bolstering), and strengthen one's psychological resources and capacities (i.e., building). Importantly all the topics covered in this paper are aspects that a person can cultivate through practice and intention. We can build up our meaning, self-compassion, capacity to cope, positive emotions, strengths and so on. Indeed, this paper has provided evidence-based suggestions for how this can be done during the pandemic with the hope that the cultivation of these outcomes continues beyond this crisis and leads to sustained positive outcomes.

Sheldon and King (2001) assert that most people manage to live lives of 'dignity and purpose' despite difficulties and challenges. As an example of this, Biswas-Diener and Diener (2001) found that even under the extreme adversity of living in the slums of Calcutta, people still find satisfaction. Similarly, Masten (2001) found that resilience was common in children growing up in harmful and disadvantaged environments. Bonanno (2004) reviewed evidence across a range of different losses and traumas (e.g., grief, PTSD, exposure to violence, life-threatening events) and concluded that large numbers of adults manage to endure and successfully move on from upheaval after the initial 'time-limited disruptions in functioning' such as sleep problems, preoccupation, restlessness, cognitive disorganization, and disrupted social and occupational functioning. Beyond resilience, meta-analysis research has found that more than 50% of people who endure trauma come out stronger from the experience (Helgeson et al., 2006). Such findings provide hope for a prognosis of widespread psychological recovery and growth following the COVID-19 pandemic provided that people are equipped with the right knowledge, skills, supports, and practices.

The research and insights in this paper have pointed to a raft of positive psychology factors that can be incorporated into interventions, including helping people find a sense meaning and coherence, providing information on coping skills and how to engage in positive refocusing and re-appraisal, highlighting the

importance of drawing upon one's self-compassion, courage, grit, gratitude, hope, and other character strengths, giving priority to the things that foster positive emotions and optimism, and, finally, finding ways to foster positive relationships, positive resonance and HQCs. These positive psychology factors can be woven into new public interventions and/or incorporated into existing programs that have proven to be successful during past pandemics such as self-administered computer training (Maunder et al., 2003), mental health first aid (Horn et al., 2019), and cognitive behavioral therapy groups (Cole et al., 2020,) together with those that have shown early effectiveness in the COVID-19 pandemic such as mobile phone delivery of music therapy (Giordano et al., 2020), mobile phone counseling and social media interventions (J. Zhou et al., 2020).

According to Buheji et al. (2020), 'Managing COVID-19 is more than hand washing and social distancing; instead, it is a story between hope and despair' (p. 9). Our wish is that this paper helps people to constructively navigate their way out of despair and bring hope to themselves and others.

## Notes

1. Certain segments of the population have done the heavy lifting when it comes to the risk of contracting the virus and working under highly pressurized conditions, including healthcare professionals, medical responders (e.g., ambulance drivers) and those in the critical infrastructure workforce (i.e., essential workers). Research on people in these professions/work roles, together with people bereaved by COVID-19 (Eisma et al., 2021), marginalized communities (Warren et al., 2020) and those who have existing mental illness (Asmundson et al., 2020), has shown dramatical elevations in levels of mental illness and PTSD (Buheji et al., 2020; Eisma et al., 2021; Groenewold et al., 2020; Shreffler et al., 2020; Skoda et al., 2020; Vindegaard & Benros, 2020).
2. seven of these studies have been conducted by authors in this paper or are related directly to a section below and are outlined in the coping, self-compassion, gratitude and positive emotions sections below.
3. More information about this study is provided in the Positive Emotions section below.

## Disclosure statement

No potential conflict of interest was reported by the authors.

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