

# Psychological Trauma: Theory, Research, Practice, and Policy

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# Therapists' Resilience and Posttraumatic Growth During the COVID-19 Pandemic

Katie Aafjes-van Doorn<sup>1</sup>, Vera Békés<sup>1</sup>, Xiaochen Luo<sup>2</sup>, Tracy A. Prout<sup>1</sup>, and Leon Hoffman<sup>3</sup>

<sup>1</sup> Ferkauf Graduate School of Psychology, Yeshiva University

<sup>2</sup> Department of Counseling Psychology, Santa Clara University

<sup>3</sup> New York Psychoanalytic Society & Institute, New York, New York, United States

**Objective:** This study aimed to examine therapists' unfolding response to the challenges of vicarious traumatization and transitioning to online therapy in the wake of the pandemic. This is the first study to empirically examine therapists' experience of resilience and posttraumatic growth during COVID-19.

**Method:** This longitudinal study reports on the self-reported resilience and posttraumatic growth of 185 psychotherapists (mostly White, female and North American) across 4 time points during the COVID-19 pandemic. Therapist-reported working alliance, vicarious traumatization, and acceptance of online therapy at baseline were examined as potential predictors of professional self-doubt at baseline as well as potential predictors of subsequent resilience (e.g., reduction of professional self-doubt) and posttraumatic growth. **Results:** Therapists experienced moderate levels of professional self-doubt, more than outside pandemic times, and this self-doubt decreased over time, thus showing a resilient trajectory. Professional self-doubt at baseline was predicted by higher vicarious trauma and weaker working alliance, less clinical experience, and less acceptance of online therapy technology. Higher levels of resilience over time were predicted by less acceptance of online therapy. Moreover, therapists reported relatively low levels of posttraumatic growth, and this remained consistent during the subsequent 12 weeks. Posttraumatic growth was predicted by high levels of vicarious trauma, and acceptance of online therapy technology. **Conclusions:** Therapists in our study reported resilience during the initial months of COVID-19. Those who were relatively more traumatized and more comfortable in their online work during the pandemic experienced more posttraumatic growth.

### Clinical Impact Statement

In the face of COVID-19, many therapists experienced vicarious traumatization and struggled with the transition to online therapy. Over the course of the first 12 weeks of the pandemic, therapists demonstrated resilience, in that they reported a decrease in professional self-doubt over time. For most therapists, their experience of vicarious trauma, within the context of COVID-19 and a transition to online therapy might not have been sufficiently troublesome to allow them to experience posttraumatic growth.

**Keywords:** online therapy, therapists, resilience, posttraumatic growth, COVID-19


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Resilience—often referred to as “ordinary magic” (Masten, 2001)—has been conceptualized as an individual's ability to return


to previous levels of functioning after experiencing some kind of adversity or trauma (Bonanno et al., 2004). Resilience reflects an ability to engage in a healthy dynamic rebound process (Richardson, 2002) and wards off long-term negative psychological impact of traumatic experiences. The ability to be resilient has been linked to epigenetic and personality characteristics (e.g., hardiness and optimism) as well as a range of coping abilities (Chmitorz et al., 2018).

The concept of resilience is multifaceted and is understood and operationalized in various ways in the literature. A recent review of the literature found that although there is no unifying definition, a limited number of concepts can be identified as proxies for resilience. These include overcoming adversity, adaptation and adjustment, and positive mental health outcomes (Aburn et al., 2016).

Katie Aafjes-van Doorn  <https://orcid.org/0000-0003-2584-5897>

Vera Békés  <https://orcid.org/0000-0003-3043-5155>

Tracy A. Prout  <https://orcid.org/0000-0002-3650-5890>

Leon Hoffman  <https://orcid.org/0000-0001-7466-5513>

Katie Aafjes-van Doorn and Vera Békés shared first authorship.

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Correspondence concerning this article should be addressed to Katie Aafjes-van Doorn, Ferkauf Graduate School of Psychology, Yeshiva University, 165 Morris Park Avenue, Bronx, NY 1046, United States. Email: [katie.aafjes@yu.edu](mailto:katie.aafjes@yu.edu)

Whereas negative mental health consequences are routinely measured with a range of standardized methods, resilience appears to be more elusive to assess empirically (Windle et al., 2011). Resilience can be measured with self-designed scales (Barzilay et al., 2020) or different validated standardized scales (for a review see Ahern et al., 2006); many other studies capture resilience as a reduction of mental health symptoms, such as low levels of anxiety, depression, or posttraumatic stress disorder. Most recently, research on the effects of the ongoing COVID-19 pandemic, a traumatic experience for many (Griffin, 2020; Prout et al., 2020; Sawhney et al., 2020); has indicated that some individuals experience a decrease in symptoms and distress over time (in U.S.A.; Barzilay et al., 2020; in China; Ran et al., 2020).

Despite the lack of a unifying definition, there appears to be a consensus that studies investigating resilience need to provide a definition contextual to the field and population studied (Aburn et al., 2016; Aburn et al., 2020). For example, resilience of physicians (West et al., 2020) will have to be operationalized differently from resilience in social workers, psychotherapists or their patients. Moreover, there is consensus that resilience reflects a process over time. Bonanno and colleagues' (2004) model of resilience emphasizes the trajectory of adaptation unfolding with time after an adverse event. Resilience is characterized by a temporary decrease in functioning followed by a stable trajectory toward recovery and an ability to adapt and move forward in a positive, integrated way (Bonanno et al., 2004; Chen & Bonanno, 2020; Southwick et al., 2014).

While bouncing back to preadversity levels of functioning is helpful, some individuals are able to take this resilience a step further by achieving higher levels of functioning compared to before the traumatic event, in the form of posttraumatic growth. Posttraumatic growth (PTG), arguably superior to resilience (Tedeschi et al., 2007); is defined as the experience of significant positive change arising from the struggle with a major life crisis (Tedeschi & Calhoun, 2004); and commonly assessed with the gold standard self-report measure of PTG (e.g., Posttraumatic Growth Inventory; Tedeschi & Calhoun, 1996). It reflects a positive byproduct of attempts to cope with a life-changing, traumatic event (Zoellner & Maercker, 2006); and is sometimes also called 'personal growth' (Schaefer & Moos, 1992). Examples include increased appreciation of life, setting of new life priorities, a sense of increased personal strength, identification of new possibilities, greater closeness in intimate relationships, or positive spiritual change (Tedeschi & Calhoun, 2004; Zoellner & Maercker, 2006). Many people (an estimated 50%) who experience extremely stressful situations such as the death of a partner, or being confronted with having a terminal disease, experience some level of PTG afterward (Linley et al., 2008). Most recently, the negative impact of the COVID-19 pandemic (for a review, see Bonanno et al., 2010) has also resulted in PTG for some individuals (Chen et al., 2020; Cui et al., 2021; Prieto-Ursúa & Jódar, 2020).

### COVID-19 Challenges for Therapists

Being a psychotherapist is stressful at the best of times (Briggs & Munley, 2008; Nelson, 2019); and tends to stir up emotional responses (Hayes et al., 2011). Moreover, therapists themselves

also report symptoms of anxiety and depression (Guy & Liaboe, 1986); and are often seeing a therapist themselves (Moe & Thimm, 2021; Orlinsky et al., 2011). In previous years, clinical papers have emphasized the importance of enhancing therapists' resilience when working with relational trauma (MacKay, 2017) or with an offender population (Dreier, 2012) and have highlighted the experience of PTG in some clinicians treating accident victims (Koch & Cann, 2013).

In 2020; the COVID-19 pandemic has posed additional challenges for therapists. Besides the general societal impact of the pandemic-related restrictions and personal impact of therapists' own losses and health concerns, the pandemic also increased the likelihood of vicarious traumatization and increased professional self-doubt (PSD). First, when patients are traumatized, therapists are likely to experience vicarious traumatization, described as a cumulative and deleterious effect on therapists who empathically engage with traumatized patients (McCann & Pearlman, 1990). Studies from before the pandemic show that the experience of vicarious trauma is especially impactful when the therapist and patient are simultaneously experiencing a disaster, such as in Hurricane Katrina (Culver et al., 2011) or 9/11 (Boscarino et al., 2004). Most recently, since the start of the pandemic, therapists have reported high levels of vicarious traumatization (Aafjes-van Doorn, Békés, Prout, et al., 2020). Besides the immediate negative impact of vicarious traumatization on therapists' wellbeing, therapists may experience compassion fatigue and subsequent burnout (O'Connor et al., 2018).

Moreover, due to the social restrictions imposed by health authorities, millions of in-person therapies transitioned to online therapy via videoconferencing at once, without much preparation, training or support. Whereas using a video platform allowed therapists and patients to continue ongoing treatments, the involuntary and sudden nature of this transition might have influenced the therapists' view of the therapeutic relationship and created a sense of PSD about their ability to deliver quality therapy remotely (Aafjes-van Doorn, Békés, & Prout, 2020). Regardless of the therapeutic reality, the therapist's view of the quality of the therapeutic relationship they can facilitate in online therapy warrants our attention. Arguably, the quality of the therapeutic relationship is even more important during the COVID-19 pandemic, a time of global crisis, social isolation, and forced changes in the way in which people conduct their lives. From previous exploratory research we know that therapists with less clinical experience struggled more with the transition to online therapy in the early days of the pandemic, in that they experienced lower working alliances with their patients and higher levels of PSD (Aafjes-van Doorn, Békés, & Prout, 2020), and thus impacts patient treatments indirectly during the sessions.

In sum, the COVID-19 pandemic has had an immediate traumatic impact on therapists, not only due to therapists' personal stressors and anxieties, but also due to professional experiences of vicarious traumatization, and the sudden transition to online therapy with its new therapeutic challenges. We propose that it is important to examine therapists' unfolding response to these challenges (Chen & Bonanno, 2020), their ability to adjust to the changes and bounce back, or even experience PTG in the wake of the pandemic.

## Aims

With this study we aimed to examine therapists' level of resilience in dealing with the professional challenges posed by the COVID-19 pandemic, during the first 24 weeks after the pandemic was declared by the World Health Organization. To our knowledge, no other empirical studies to date have examined therapists' experience of resilience during COVID-19. Given the lack of a resilience measure applicable to the psychotherapy profession, in this study we used the construct of PSD, and change in PSD over time, to assess therapists' resilience in their professional context. The construct of PSD, and its self-report scale (PSD; Nissen-Lie et al., 2017) were developed out of a large international survey study on therapists' professional growth and development. In line with the resilience literature, we conceptualized therapists' resilience as an adaptation process, where after an initial increase in response to the stressor, the distressing experience of PSD would decrease over time.

In line with Bonanno et al. (2004)'s conceptualization of resilience as a trajectory of adaptation, we aimed to assess the trajectory of temporal changes in level of PSD, and possible PTG. Our research questions were threefold: 1) How did therapists experience the initial weeks of the pandemic while suddenly transitioning to providing online therapy? More specifically, during these early days of the pandemic, what was their level of PSD and experience of PTG? 2) How did their experience of PSD and PTG change over the course of 24 weeks following the initial transition to online therapy? 3) What professional factors predicted a positive resilience trajectory—characterized by less PSD and more PTG—over time?

We hypothesized that therapists' response to the professional challenge related to the pandemic would follow a resilient trajectory, in that they would show a relatively high level of PSD during the initial weeks, and that this would decrease over the course of 12 to 24 weeks following the transition to online therapy. In addition, we expected therapists to demonstrate resilience by reporting a positive, PTG experience 12 weeks into the pandemic, as well as an increase in reported PTG at 24 weeks. Moreover, based on the previous literature (Aafjes-van Doorn, Békés, & Prout, 2020; Aafjes-van Doorn, Békés, Prout, et al., 2020; Békés & Aafjes-van Doorn, 2020), we expected the therapists' level of clinical experience, the quality of therapeutic alliance, level of experienced vicarious trauma, and acceptance of online therapy technology to predict their subsequent PSD and PTG.

## Method

### Procedures

Data were collected during the COVID-19 pandemic in four measurement points. The first data collection was administered between March 25, 2020 and June 16, 2020; with follow-ups conducted at 12, 18 and 24 weeks later. The study was approved by [removed for blinded review]'s Institutional Review Board and included an informed consent form at the start of the first online survey.

Participants were recruited online, via professional e-mail lists, social media, and personal contacts across the United States of America, Canada, China and Europe. Potential participants were

invited to an online platform, where they provided informed consent form before completing the online survey. Both licensed and training therapists were eligible if they had provided at least one online therapy session since the beginning of the pandemic. Those therapists who consented to participate in follow-up, received the next surveys 12, 18 and 24 weeks later. The online survey included individual demographic items, and measures of working alliance, vicarious trauma, and acceptance of online therapy technology at baseline, as well as measures of therapist resilience at the follow-up timepoints (i.e., PSD and PTG). Results of the baseline data have been reported elsewhere (Békés et al., 2021).

### Sample Demographics

Of the 185 therapists who completed the online survey at multiple time points (at least one follow-up measurement), 146 were female (78%) and 157 identified as White (84%). The average age of therapists in this sample was 53 years ( $SD = 15.9$ ), ranging from 23 to 84 years old. The majority resided in North America ( $N = 170$ ; 91%), others resided in Europe ( $N = 9$ ; 4.8%), Asia ( $N = 3$ ; 1.6%), Australia ( $N = 2$ ; 1.1%), or Africa ( $N = 1$ ; .5%). The majority of therapists were licensed clinicians ( $N = 167$ ; 89.3%) and had 17 years or more of clinical experience ( $N = 106$ ; 56.7%). A small group of 17 therapists (9.1%) were relatively inexperienced, reporting four or less years of clinical experience. Many therapists had had no experience with providing online therapy before the pandemic ( $N = 76$ ; 40.6%), and others had seen patients for online sessions previously, but only after meeting them in-person first ( $N = 63$ ; 33.7%). A small group of therapists ( $N = 25$ ; 13.4%) had seen several patients for online treatment before the start of the pandemic. The majority of therapists did not have any training in how to provide online therapy ( $N = 156$ ; 83.4%). The current study sample of participants who completed at least one follow-up measurement did not differ significantly on any demographic variables from the therapists who only provided baseline data.

### Measures

#### *Working Alliance Inventory*

The Working-Alliance Inventory-Short Form (WAI-SF; Hatcher & Gillaspay, 2006) assesses Bordin's (1979) conceptualization of the working alliance, including the level of agreement on the goals of treatment, the therapeutic tasks and the bond between the patient and therapist. The ten items are rated on a Likert scale ranging from 1 (never) to 7 (always). A global WAI rating provides a broad measure of the quality of the therapeutic relationship. A global WAI rating of 4 (sometimes), the middle point of the scale, is interpreted as a neutral relationship, with no evidence in either positive or negative direction (Horvath & Greenberg, 1989). The WAI-SF has shown adequate reliability and validity (Hatcher & Gillaspay, 2006). Previous studies showed support for the convergent validity of the WAI-SF and its use in the prediction of treatment outcome (Munder et al., 2010; Zilcha-Mano, 2017). Cronbach's alpha in the current study was .84 at baseline.

#### *Vicarious Trauma*

The Vicarious Trauma Survey (VTS; Vrkleviski & Franklin, 2008) is a self-report measure of subjective distress related to

working with traumatized clients. The VTS includes eight items. The first two are screening questions about vicarious trauma exposure (e.g., “My job involves exposure to distressing material and experiences”), and the other six items ask about distress due to the exposure (e.g., “It is hard to stay positive and optimistic given some of the things I encounter in my work.”). In the present study only the six distress items were included (see Aparicio et al., 2013). Items are rated on a 7-point Likert scale from strongly disagree (1) to strongly agree (7), with higher scores indicating more distress. The VTS has strong psychometric properties (Aparicio et al., 2013; Benuto et al., 2018). The VTS was assessed at baseline and Cronbach’s alpha was .83.

### **Acceptance of Online Psychotherapy Technology**

The Unified Theory of Acceptance and Use of Technology Therapist Version (UTAUT-T; Békés et al., 2021) was used to assess acceptance and usage of online therapy technology. The UTAUT-T is a novel measure based on the UTAUT framework (Venkatesh et al., 2003), a comprehensive model of acceptance and subsequent utilization of technological innovations that has been adapted for a wide variety of contexts (Connolly et al., 2020; Liu et al., 2015; for a review see Venkatesh et al., 2012).

The UTAUT-T includes 21 items that assess various aspects of online therapy. For example, “*I find online therapy works well for patients,*” and “*I feel apprehensive about using online therapy*” (reverse item). Items of the UTAUT-T scales are scored on a Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree), with higher scores indicating more acceptance of online therapy. The UTAUT-T was assessed at baseline, and Cronbach’s alpha was .64.

### **Professional Self-Doubt**

The Professional Self-Doubt scale (PSD; Nissen-Lie et al., 2017) is a nine-item scale derived from the larger Development of Psychotherapists Common Core Questionnaire (DPCCQ; Orlinsky et al., 1999). The PSD assesses therapists’ level of uncertainty in their ability to be helpful for a patient with items such as feeling “*Afraid that you are doing more harm than good in treating a client*”, or “*Distressed by powerlessness to affect a patient’s tragic life situation.*” Items are rated on a six-point Likert scale from 0 (never) to 5 (very often), with higher total score indicating more PSD. Therapist PSD was assessed at each timepoint in this study, and the Cronbach’s alpha were .84, .85, and .92, and .95 at the first, second, third and fourth measurements, respectively.

### **Posttraumatic Growth**

The Posttraumatic Growth Inventory-Short Form (PTGI-SF; Cann et al., 2010). Was used to assess potential psychological growth following traumatic experiences. The PTGI-SF consists of 10 items, such as “*I changed my priorities about what is important in life,*” and “*I have a greater sense of closeness with others.*” The response scale ranges from 0 (“*I did not experience this change as a result of the crisis*”) to 5 (“*I experienced this change to a great degree as a result of the crisis*”). Higher total score reflects more growth after experiencing a traumatic event. A total mean item score of 3 is generally used as cutoff for the existence of PTG (e.g., Jansen et al., 2011). The PTGI-SF total score has shown good internal consistency (Cronbach alphas around .90) across multiple samples (Cann et al., 2010; Horswill et al., 2016). The

PTGI-SF was included at all follow-up measurements. Cronbach’s alpha for the PTGI-SF were .90, .90 and .85 at second, third and fourth timepoints, respectively.

### **Data Analytic Strategy**

The reported analyses were based on baseline scores on the WAI, VTS and UTAUT-T, as well as ratings of PSD at all four timepoints and PTG at the three follow-up measurements. For comparison of baseline data in the present study with data on the same constructs reported prepandemic, we conducted two-sample t-tests on available published estimates of means of studies that used the same measures, in a similar psychotherapy context (online therapy, if this data was available).

Latent growth curve models (LGCM) were used to assess within-person changes and between-person differences across 24 weeks for PSD and PTG, as well as the impacts of potential predictors (Bollen & Curran, 2006; McArdle & Nesselrode, 2003). Data were modeled with Mplus Version 8.2. Full information maximum likelihood estimation was used to handle missing data. We conducted modeling for PSD and PTG separately. We included assessments of PSD in four waves (baseline, 12, 18, and 24-weeks during the pandemic) and assessments of PTG at three measurement waves (12, 18, and 24-weeks).

For each outcome variable, modeling was conducted in two steps. We first fit a series of univariate latent growth curve models without covariates to identify the appropriate change pattern over time (Bollen & Curran, 2006). After identifying the best-fitting models to describe the trajectories, we then examined how the predictors influence the trajectories. Thus, no-change and change models were compared to examine the change trajectory patterns initially. Data were first modeled with 1) a no-change model: an intercept-only model with three parameters (intercept mean, intercept variance, and residual variance) representing stability over time; 2) a constant change model: a linear model with six parameters (intercept and slope means, intercept and slope variances and their covariance, and residual variance) representing a constant rate of linear change; and 3) a nonlinear change model: a latent basis growth curve model with eight parameters (intercept and slope means, intercept and slope variances and their covariance, residual variance, and basis coefficients at 18 weeks and 24 weeks), representing a nonlinear change pattern indicated by the data. In latent basis models, we set the basis coefficients for baseline and 12 weeks as 0 and 1, respectively, and freely estimated basis coefficients for 18 and 24 weeks for PSD. The latent intercept is interpreted as the level of the variable at the baseline assessment and the latent change (the slope parameter) is interpreted as the amount of change between baseline and 12 weeks for PSD. For PTG, the number of parameters for the latent basis growth curve model was seven instead of eight given that PTG was not assessed at baseline. Consequently, we set the basis coefficients for 12 weeks and 18 weeks as 0 and 1, respectively, and freely estimated basis coefficients for 24 weeks for PTG.

After comparing these nonchange and change models, we identified the best-fitting models and then included the predictors as covariates to examine hypotheses of how predictors influence longitudinal changes in PSD and PTG. Predictors include WAI, VTS, UTAUT-T, and clinical experiences, all of which were assessed at baseline and included in the best-fitting models as time-invariant

covariates. All the covariates except for clinical experiences were grand mean centered. Clinical experiences were assessed dichotomously for people who have clinical experiences of 0–12 years (coded as 0) or 13 years and more (coded as 1).

We evaluated and compared the model fit based on three model indices: chi-square ( $\chi^2$ ) (Bollen, 1989); comparative fit index (CFI; Bentler, 1990; values  $> .90$  indicate acceptable fit), and root mean square error of approximation (RMSEA; Hu & Bentler, 1999;  $< .08$  indicates acceptable fit). We compared nested models by calculating a chi-square difference test ( $\Delta\chi^2$ ), such that a non-significant  $\Delta\chi^2$  indicates a preference for the nested, more parsimonious model.

## Results

On average, therapists reported that they experienced PSD 'sometimes' or 'frequently' at baseline. This was higher (although nonsignificantly) than the level of PSD reported by therapists in a pre-pandemic naturalistic study (Nissen-Lie et al., 2017;  $M = 1.24$  [70],  $t(253) = .11$ ,  $p = .910$ ). Therapists' level of PSD decreased from baseline to the 12-week follow-up and stayed at a relatively stable level between 12 to 24 weeks after the start of the pandemic.

Therapists, on average, experienced PTG at 12 weeks to a 'very small degree' or 'small degree'. This level was comparable to patients with cancer five years after the diagnosis ( $M = 2.00$ [1.1],  $t(659) = .104$ ,  $p = .917$ ; Jansen et al., 2011); but significantly lower than a sample of mental health nurses who were frequently exposed to violence ( $M = 3.45$ [.82],  $t(297) = 17.61$   $p = .000$ ; Itzhaki et al., 2015). The therapists' score for PTG was relatively stable throughout the 12-week to 24-week follow-up period (see Supplemental Table 1). Descriptives and correlations between all variables are presented in Supplemental Table 1.

### Modeling Longitudinal Trajectories and Predictors of Professional Self-Doubt

The latent basis model was selected as the best-fitting model for PSD, given the excellent model fit performance metrics ( $\chi^2 = 10.14$  [ $df = 6$ ],  $CFI = .98$ ,  $RMSEA = .06$ ) and the significant chi-square difference compared to the no-change model and the linear change model (in Supplemental Table 2). Subsequently, WAI, VTS, UTAUT-T, and clinical experiences were included as covariates in the latent basis model to predict how these variables influenced the initial level of PSD and the change rate of PSD. The LCGM model with covariates resulted in an excellent model fit ( $\chi^2 = 15.85$  [ $df = 14$ ],  $CFI = .99$ ,  $RMSEA = .03$ ). Path diagrams with estimates for the best-fitting model with covariates are displayed in Supplemental Figure 1. Estimations and more detailed interpretations of all results are presented in the online supplemental material.

The best-fitting model with covariates indicated that PSD decreased significantly between baseline and 12 weeks while remaining at the same level for the subsequent 12 weeks. All covariates in the model (WAI, VTS, UTAUT-T, and clinical experience) at baseline significantly predicted the intercept of PSD ( $p < .002$  for all covariates). This indicated that baseline levels of higher working alliance (WAI), greater acceptance of online therapy technology (UTAUT-T), more clinical experience, and lower levels of vicarious trauma (VTS), all predicted a lower initial level of PSD.

When examining the predictors of PSD trajectories of change (i.e., slope), we found that therapists with more acceptance of online therapy at baseline positively predicted the change rate of PSD ( $p = .001$ ), indicating that individuals with higher baseline acceptance of online therapy technology (UTAUT-T) had a slower decline in PSD over time, and especially from baseline to 12 week follow-up.

### Modeling Longitudinal Trajectories and Predictors of Posttraumatic Growth

The no-change model was selected as the model for scores on the PTG (see Supplemental Table 2) as it showed adequate model fit ( $\chi^2 = 12.28$  [ $df = 6$ ],  $CFI = .94$ ,  $RMSEA = .08$ ). The LCGM model with all the covariates also resulted in an adequate model fit ( $\chi^2 = 24.74$  [ $df = 14$ ],  $CFI = .90$ ,  $RMSEA = .07$ ). See Supplemental Figure 2 for path diagrams with estimates for the best-fitting model with covariates. The score on the UTAUT-T and VTS at baseline significantly predicted the intercept of PTG positively ( $p = .009$  and  $.02$ , respectively), indicating that greater acceptance of online therapy at baseline and more vicarious trauma at baseline both predicted constant, higher levels of PTG for 12 to 24 week follow-up after the start of the pandemic.

## Discussion

We aimed to explore therapists' resilience and potential PTG amid the rapid changes in professional experiences during the transition to online therapy due to the pandemic-related restrictions. We conceptualized therapists' resilience in this context as their ability to adjust to the changing professional environment and adapt to the new circumstances by ways of self-reported professional confidence and competence (i.e., low levels of PSD) and their ability to personally grow from these adverse experiences (i.e., PTG). Moreover, we examined if and how their resilience and PTG were predicted by the therapists' reported quality of the therapeutic relationship, their experienced vicarious trauma, their acceptance of online therapy and their level of clinical experience.

We found that initially, during the first weeks of the pandemic, therapists reported moderate levels of PSD, somewhat higher levels than therapists in a pre-pandemic, naturalistic study of PSD (Nissen-Lie et al., 2017). Levels of PSD significantly decreased by the time of the first follow-up assessment at 12 weeks and remained about the same afterward by the time of the second and third follow-ups at 18 and 24 weeks, suggesting that the therapists' resilience was most prominent in the first 12 weeks after the transition. Moreover, initial levels of PSD were related to therapists' experience of more vicarious trauma and weaker working alliance with their patients, less clinical experience, and less acceptance of online therapy technology. On the other hand, more stable trajectories of PSD over time, especially in the first 12 weeks, was predicted by higher levels of acceptance of online therapy technology at baseline.

That is, acceptance of online therapy technology at the first assessment point appeared to impact levels and changes of PSD in two different directions. On one hand, higher levels of acceptance of online therapy in the initial weeks of the pandemic appeared to make therapists less doubtful about themselves during the transition to online therapy. However, over time, this higher level of acceptance of online therapy technology made these therapists less likely to report a decrease of PSD. At this stage, therapists might

have already been comfortable using the online therapy platform and thus might have attributed challenges in therapy to their own therapeutic abilities rather than the change in technology.

Therapists reported relatively low levels of PTG at the first follow-up measurement at 12 weeks, lower than a previous sample of mental health nurses (Itzhaki et al., 2015); but comparable to cancer patients (Jansen et al., 2011). In our therapist sample, level of PTG did not change significantly over the four timepoints assessed. Thus, it appears that most pandemic-related growth experience occurred during the initial phase of the pandemic. The different trajectories of professional doubt (i.e., decrease) and PTG (i.e., stable trajectory) highlight the conceptual difference between bouncing back to a normal level of functioning over time (i.e., resilience), and the ability to turn adversity into a positive experience of post-traumatic growth and strength later (Tedeschi et al., 2007).

Therapists who reported higher levels of vicarious trauma reported higher levels of PTG consistently throughout the 12 to 24 weeks follow-up assessments. This is in line with previous studies showing that adverse consequences of traumatic experiences (i.e., PTSD; here: vicarious trauma) are related to more PTG (Schubert et al., 2016). Additionally, therapists who reported greater acceptance of online therapy also reported consistently higher levels of PTG across all follow-ups. This fits with prior research suggesting that PTG also involves an ability for positive experiences (Jansen et al., 2011; Richardson, 2002); acceptance and openness to online therapy, which predicted PTG in our sample, may reflect these positive experiences.

The relatively low level of PTG reported in the current sample can be understood if we consider the quadratic relationship found between stress symptoms (as in PTSD) and PTG (for a review, see Shakespeare-Finch & Lurie-Beck, 2014). This implies that PTG is highest when PTSD levels are at an intermediate level and PTG is lower at either relatively low or high levels of PTSD. Overwhelming PTSD symptoms are thought to prevent the individual from mobilizing cognitive resources necessary for the development of growth (Schubert et al., 2016). It is possible that the pandemic-related stress, even though highly stressful for many, on average did not have the potential to impact existing world views and beliefs and, therefore, did not lead to significant growth. It is possible that the therapists who responded to this online survey on at least two measurement points were relatively less traumatized and comfortable in their professional work during the pandemic.

### Clinical and Research Implications

The relatively higher levels of PSD in the early weeks of the pandemic are unsurprising given the novelty of the treatment delivery method and the lack of preparedness for this new situation. Based on previous findings, it is possible that young/inexperienced therapists report simultaneously higher levels of PSD (Aafjes-van Doorn, Békés, & Prout, 2020) and higher levels of online technology acceptance. Future research might explore the role of technology acceptance as mediator between therapists' clinical experience and subsequent PSD.

It is suggested that therapists might benefit from training to help improve their own well-being and resilience (Nelson, 2019). Following previous nationwide traumatic events, professional agencies rose to the occasion to offer support to therapists. For example, the American group Psychotherapy Association (AGPA) offered its

members support and guidance in their Institute 2012 to provide a boost to therapist resilience in a post9/11 world (Buchele, 2012).

Notably, these research findings are not just interesting in looking back at therapists' past experiences of dealing with a pandemic; they are also relevant for future practice. Future pandemics and natural disasters are possible in the future; it is also estimated that many more therapists and patients will use online therapy technology going forward, even after the end of the pandemic. This means that it will be worthwhile to systematically address the predictors of therapists' resilience in graduate training, supervision, professional development initiatives, and policies and guidelines.

In the future it may be helpful to assess therapists' attitudes toward online therapy, for example by using the UTAUT-T therapist as a screening tool in graduate programs, and train therapists not only in the relational aspects of clinical work, but also in the practicalities and technicalities of applying these skills to an online therapy format. Since trying out online therapy is likely to lead to more acceptance of online technology (Connolly et al., 2020); and many therapists will be using online therapy again in the future, training might be an important investment. It is possible that once the initial stress subsides and therapists gain more experience and more training, they will feel more at ease using online therapy. Thus, a potential larger uptake of training on and provision of online therapy might be one of the few positive outcomes of this COVID-19 pandemic (Békés & Aafjes-van Doorn, 2020).

There is a pressing need for more research, not only about the experience of vicarious traumatization, but also how academic institutions can best prepare graduate students in this regard (Baker, 2012). Doctoral trainees might benefit from graduate-level education around the shared, lived experience of vicarious traumatization, its consequences, as well as effective coping strategies (Baker, 2012). In other words, although these professional challenges are part and parcel of the therapist profession, education around vicarious traumatization and resilience and PTG will be important to prepare therapists accordingly.

### Limitations

First, although our sample was diverse in many ways, the reported sample might reflect a particular compliant or conscientious subgroup of psychotherapists, in that they not only completed the initial online survey but also at least one of the follow-up measurements. Follow-up data was available for a relatively small proportion of therapists; therefore, the model might be less accurate in its estimations of changes over time. Although the demographics of this subgroup did not differ significantly from the larger sample of therapists who only completed the first online survey measurement (Békés et al., 2021), it is possible that their experience of online therapy was more positive or noteworthy, than the experiences from the therapists who did not participate in the follow-up measurements. Second, the findings in this study only reflect the therapists' perspective on their professional experiences and resilience. Future studies on therapists' resilience might benefit from a 360-degree perspective on the online therapy experiences during COVID-19, including viewpoints from patients, clinical supervisors, and objective researcher ratings of videoed therapy sessions. Including multiple perspectives might be especially relevant because therapists are known to overestimate their competence and well-being and tend to continue working despite burnout or compassion fatigue. Third,

although this was a longitudinal study, it only included follow-up measurements in the subsequent months. To examine therapists' ability to remain resilient over time, it could be informative to track experiences over multiple years following the initial transition to online therapy during the COVID-19 pandemic.

Moreover, although it is important to measure resilience within each unique professional context (Aburn et al., 2020); and the PSD scale was designed for therapists specifically (Nissen-Lie et al., 2017); it was not developed as a measure of therapists' resilience per *SE*. Future research could validate the PSD as a measure of therapists' resilience, by using additional self-report resilience scales that have been used in clinical and community settings more generally (e.g., Brief Resilience Scale; Smith et al., 2008; Resilience Scale; Wagnild, 2009; See Ahern et al., 2006 for a review of resilience measures). To further validate the use of the PSD scale as an assessment of therapists' resilience, future empirical research could examine if the PSD is indeed negatively correlated to other broader resiliency traits in therapists, such as therapists' personality (e.g., flexibility or openness to new experiences), and coping skills.

Furthermore, in our study, resilience was examined as a response to traumatic events, rather than as a preexisting trait before the start of the pandemic. Previous research suggests that individuals might have more or less resilient qualities before the occurrence of a stressful event, depending on their development experiences and existing protective factors (Richardson, 2002). Similarly, many theorists acknowledge that PTG can be both a coping style and a coping outcome, and these two modes can include differentially adaptive proportions (e.g., Tedeschi & Calhoun, 2004; Zoellner & Maercker, 2006). In the present study PTG was examined as a coping outcome, following the initial weeks of the COVID-19 pandemic. Further research on therapists' coping styles and patterns of defense mechanism might be able to shed light on the relationship between therapists preexisting traits and subsequent coping outcomes following adverse experiences. For the most comprehensive examination of therapists' resilience, it will also be important to assess the disruption in functioning, acuteness or chronicity of the aversive circumstances, as well as predictors of resilient outcomes, such as the exposure severity, individual differences, family context and community characteristics (see Chen & Bonanno, 2020s model of the temporal elements of psychological resilience).

## Conclusion

Therapists are expected to be resilient in the context of patients' suffering, and to show personal and professional growth throughout their careers. However, no research has empirically examined the extent to which therapists are indeed managing their professional self-doubt over time or are able to turn their professional stressors into an opportunity for growth. The COVID-19 pandemic has provided a unique context in which to examine therapists' resilience and posttraumatic growth trajectories. More research and professional support are needed to ensure therapists' wellbeing and continued resilience.

## References

Aafjes-van Doorn, K., Békés, V., & Prout, T. A. (2020). Grappling with our therapeutic relationship and professional self-doubt during COVID-19: Will we use video therapy again? *Counselling Psychology*

*Quarterly*. Advance online publication. <https://doi.org/10.1080/09515070.2020.1773404>

- Aafjes-van Doorn, K., Békés, V., Prout, T. A., & Hoffman, L. (2020). Psychotherapists' vicarious traumatization during the COVID-19 pandemic. *Psychological Trauma: Theory, Research, Practice, and Policy*, *12*(S1), S148–S150. <https://doi.org/10.1037/tra0000868>
- Aburn, G., Gott, M., & Hoare, K. (2016). What is resilience? An Integrative Review of the empirical literature. *Journal of Advanced Nursing*, *72*(5), 980–1000. <https://doi.org/10.1111/jan.12888>
- Aburn, G., Hoare, K., Adams, P., & Gott, M. (2020). Connecting theory with practice: Time to explore social reality and rethink resilience among health professionals. *International Journal of Nursing Practice*, *26*(6), e12893. <https://doi.org/10.1111/ijn.12893>
- Ahern, N. R., Kiehl, E. M., Sole, M. L., & Byers, J. (2006). A review of instruments measuring resilience. *Issues in Comprehensive Pediatric Nursing*, *29*(2), 103–125. <https://doi.org/10.1080/01460860600677643>
- Aparicio, E., Michalopoulos, L. M., & Unick, G. J. (2013). An examination of the psychometric properties of the Vicarious Trauma Scale in a sample of licensed social workers. *Health & Social Work*, *38*(4), 199–206. <https://doi.org/10.1093/hsw/hlt017>
- Baker, A. (2012). Training the resilient psychotherapist: What graduate students need to know about vicarious traumatization. *Journal of Social, Behavioral and Health Sciences*, *6*(1), 1–12.
- Barzilay, R., Moore, T. M., Greenberg, D. M., DiDomenico, G. E., Brown, L. A., White, L. K., Gur, R. C., & Gur, R. E. (2020). Resilience, COVID-19-related stress, anxiety and depression during the pandemic in a large population enriched for healthcare providers. *Translational Psychiatry*, *10*(1), 291. <https://doi.org/10.1038/s41398-020-00982-4>
- Békés, V., & Aafjes-van Doorn, K. (2020). Psychotherapists' attitudes toward online therapy during the COVID-19 pandemic. *Journal of Psychotherapy Integration*, *30*(2), 238–247. <https://doi.org/10.1037/int0000214>
- Békés, V., Aafjes-van Doorn, V., McCollum, J., Prout, T. R., & Hoffman, L. (2021). *The development of a self-report scale to assess therapists' acceptance of online psychotherapy via video conferencing*. Article submitted for publication.
- Békés, V., Aafjes-van Doorn, K., Zilcha-Mano, S., Prout, T. R., & Hoffman, L. (2021). *Psychotherapists' acceptance of online therapy during the COVID-19 pandemic: A machine learning approach*. Article submitted for publication.
- Bentler, P. M. (1990). Comparative fit indexes in structural models. *Psychological Bulletin*, *107*(2), 238–246. <https://doi.org/10.1037/0033-2909.107.2.238>
- Benuto, L., Singer, J., Cummings, C., & Ahrendt, A. (2018). The Vicarious Trauma Scale: Confirmatory factor analysis and psychometric properties with a sample of victim advocates. *Health & Social Care in the Community*, *26*(4), 564–571. <https://doi.org/10.1111/hsc.12554>
- Bollen, K. A. (1989). A new incremental fit index for general structural equation models. *Sociological Methods & Research*, *17*(3), 303–316. <https://doi.org/10.1177/0049124189017003004>
- Bollen, K. A., & Curran, P. J. (2006). *Latent curve models: A structural equation perspective* (Vol. 467). Wiley.
- Bonanno, G. A., Brewin, C. R., Kaniasty, K., & Greca, A. M. L. (2010). Weighing the costs of disaster: Consequences, risks, and resilience in individuals, families, and communities. *Psychological Science in the Public Interest*, *11*(1), 1–49. <https://doi.org/10.1177/1529100610387086>
- Bonanno, G. A., Papa, A., Lalande, K., Westphal, M., & Coifman, K. (2004). The importance of being flexible: The ability to both enhance and suppress emotional expression predicts long-term adjustment. *Psychological Science*, *15*(7), 482–487. <https://doi.org/10.1111/j.0956-7976.2004.00705.x>



- Bordin, E. S., (1979). The generalizability of the psychoanalytic concept of the working alliance. *Psychotherapy: Theory, Research & Practice*, 16(3), 252–260. <https://doi.org/10.1037/h0085885>
- Boscarino, J. A., Figley, C. R., & Adams, R. E. (2004). Compassion fatigue following the September 11 terrorist attacks: A study of secondary trauma among New York City social workers. *International Journal of Emergency Mental Health*, 6(2), 57–66.
- Briggs, D. B., & Munley, P. H. (2008). Therapist stress, coping, career sustaining behavior and the working alliance. *Psychological Reports*, 103(2), 443–454. <https://doi.org/10.2466/pr0.103.2.443-454>
- Buchele, B. J. (2012). The AGPA institute as a boost to therapist resilience in a post-9/11 world. *International Journal of Group Psychotherapy*, 62(4), 615–625. <https://doi.org/10.1521/ijgp.2012.62.4.615>
- Cann, A., Calhoun, L. G., Tedeschi, R. G., Taku, K., Vishnevsky, T., Triplett, K. N., & Danhauer, S. C. (2010). A short form of the Posttraumatic Growth Inventory. *Anxiety, Stress, and Coping*, 23(2), 127–137. <https://doi.org/10.1080/10615800903094273>
- Chen, R., Sun, C., Chen, J., Jen, H., Kang, X. L., Kao, C., & Chou, K. (2020). A Large-Scale Survey on Trauma, Burnout, and Posttraumatic Growth among Nurses during the COVID-19 pandemic. *International Journal of Mental Health Nursing*, 30(1), 102–116. <https://doi.org/10.1111/inm.12796>
- Chen, S., & Bonanno, G. A. (2020). Psychological adjustment during the global outbreak of COVID-19: A resilience perspective. *Psychological Trauma: Theory, Research, Practice, and Policy*, 12(S1), S51–S54. <https://doi.org/10.1037/tra0000685>
- Chmitorz, A., Kunzler, A., Helmreich, I., Tüscher, O., Kalisch, R., Kubiak, T., Wessa, M., & Lieb, K. (2018). Intervention studies to foster resilience - A systematic review and proposal for a resilience framework in future intervention studies. *Clinical Psychology Review*, 59, 78–100. <https://doi.org/10.1016/j.cpr.2017.11.002>
- Connolly, S. L., Miller, C. J., Lindsay, J. A., & Bauer, M. S. (2020). A systematic review of providers' attitudes toward telehealth via videoconferencing. *Clinical Psychology: Science and Practice*, 27(2), Article e12311. <https://doi.org/10.1111/cpsp.12311>
- Cui, P. P., Wang, P. P., Wang, P., Ping, Z., Wang, P., & Chen, C. (2021). Post-traumatic growth and influencing factors among frontline nurses fighting against COVID-19. *Occupational and Environmental Medicine*, 78, 129–135. <https://doi.org/10.1136/oemed-2020-106540>
- Culver, L. M., McKinney, B. L., & Paradise, L. V. (2011). Mental health professionals' experiences of vicarious traumatization in post-Hurricane Katrina New Orleans. *Journal of Loss and Trauma*, 16(1), 33–42. <https://doi.org/10.1080/15325024.2010.519279>
- Dreier, A. S. (2012). *Defining an impact construct applicable to offender therapists, therapist resilience theory*. University of Northern Colorado.
- Griffin, G., (2020). Defining trauma and a trauma-informed COVID-19 response. *Psychological Trauma: Theory, Research, Practice, and Policy*, 12(S1), S279. <https://doi.org/10.1037/tra0000828>
- Guy, J. D., & Liaboe, G. P. (1986). The impact of conducting psychotherapy on psychotherapists' interpersonal functioning. *Professional Psychology, Research and Practice*, 17(2), 111–114. <https://doi.org/10.1037/0735-7028.17.2.111>
- Hatcher, R. L., & Gillaspay, J. A. (2006). Development and validation of a revised short version of the working alliance inventory. *Psychotherapy Research*, 16(1), 12–25. <https://doi.org/10.1080/10503300500352500>
- Hayes, J. A., Gelso, C. J., & Hummel, A. M. (2011). Managing countertransference. *Psychotherapy: Theory, Research, & Practice*, 48(1), 88–97. <https://doi.org/10.1037/a0022182>
- Horswill, S. C., Desgagné, G., Parkerson, H. A., Carleton, R. N., & Asmundson, G. J. G. (2016). A psychometric evaluation of hierarchical and oblique versions of five variants of the Posttraumatic Growth Inventory. *Psychiatry Research*, 246, 438–446. <https://doi.org/10.1016/j.psychres.2016.10.027>
- Horvath, A. O., & Greenberg, L. S. (1989). Development and validation of the Working Alliance Inventory. *Journal of Counseling Psychology*, 36(2), 223–233. <https://doi.org/10.1037/0022-0167.36.2.223>
- Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling*, 6(1), 1–55. <https://doi.org/10.1080/10705519909540118>
- Itzhaki, M., Peles-Bortz, A., Kostistky, H., Barnoy, D., Filshtinsky, V., & Bluvstein, I. (2015). Exposure of mental health nurses to violence associated with job stress, life satisfaction, staff resilience, and post-traumatic growth. *International Journal of Mental Health Nursing*, 24(5), 403–412. <https://doi.org/10.1111/inm.12151>
- Jansen, L., Hoffmeister, M., Chang-Claude, J., Brenner, H., & Arndt, V. (2011). Benefit finding and post-traumatic growth in long-term colorectal cancer survivors: Prevalence, determinants, and associations with quality of life. *British Journal of Cancer*, 105(8), 1158–1165. <https://doi.org/10.1038/bjc.2011.335>
- Koch, H., & Cann, A. (2013). Trauma: Narrative perspectives on growth and therapist resilience. *British Journal of Mental Health Nursing*, 2(5), 234–237. <https://doi.org/10.12968/bjmh.2013.2.5.234>
- Linley, P. A., Joseph, S., & Goodfellow, B. (2008). Positive changes in outlook following trauma and their relationship to subsequent posttraumatic stress, depression, and anxiety. *Journal of Social and Clinical Psychology*, 27(8), 877–891. <https://doi.org/10.1521/jscp.2008.27.8.877>
- Liu, L., Miguel Cruz, A., Rios Rincon, A., Buttar, V., Ranson, Q., & Goertzen, D. (2015). What factors determine therapists' acceptance of new technologies for rehabilitation – a study using the Unified Theory of Acceptance and Use of Technology (UTAUT). *Disability and Rehabilitation*, 37(5), 447–455. <https://doi.org/10.3109/09638288.2014.923529>
- MacKay, L. M. (2017). Differentiation of self: Enhancing therapist resilience when working with relational trauma. *Australian and New Zealand Journal of Family Therapy*, 38(4), 637–656. <https://doi.org/10.1002/anzf.1276>
- Masten, A. S. (2001). Ordinary magic. Resilience processes in development. *American Psychologist*, 56(3), 227–238. <https://doi.org/10.1037/0003-066X.56.3.227>
- McArdle, J. J., & Nesselroade, J. R. (2003). Growth curve analysis in contemporary psychological research. In J. A. Schinka, & W. F. Velicer (Eds.), *Handbook of psychology volume 2 research methods in psychology* (pp. 447–480). John Wiley & Sons.
- McCann, I. L., & Pearlman, L. A. (1990). Vicarious traumatization: A framework for understanding the psychological effects of working with victims. *Journal of Traumatic Stress*, 3(1), 131–149. <https://doi.org/10.1007/BF00975140>
- Moe, F. D., & Thimm, J. (2021). Personal therapy and the personal therapist. *Nordic Psychology*, 73(1), 1–26. <https://doi.org/10.1080/19012276.2020.1762713>
- Munder, T., Wilmers, F., Leonhart, R., Linster, H. W., & Barth, J. (2010). Working Alliance Inventory-Short Revised (WAI-SR): Psychometric properties in outpatients and inpatients. *Clinical Psychology & Psychotherapy*, 17(3), 231–239. <https://doi.org/10.1002/cpp.658>
- Nelson, R. S. (2019). *Improving therapist wellbeing and the role of resilience* [unpublished doctoral dissertation] University of Sheffield.
- Nissen-Lie, H. A., Rønnestad, M. H., Høglend, P. A., Havik, O. E., Solbakken, O. A., Stiles, T. C., & Monsen, J. T. (2017). Love yourself as a person, doubt yourself as a therapist?: Relationship of therapist professional and personal functioning to therapeutic outcome. *Clinical Psychology & Psychotherapy*, 24(1), 48–60. <https://doi.org/10.1002/cpp.1977>
- O'Connor, K., Muller Neff, D., & Pitman, S. (2018). Burnout in mental health professionals: A systematic review and meta-analysis of prevalence and determinants. *European Psychiatry*, 53, 74–99. <https://doi.org/10.1016/j.eurpsy.2018.06.003>

- Orlinsky, D., Ambühl, H., Rønnestad, M., Davis, J., Gerin, P., Davis, M., Willutzki, U., Botermans, J. F., Dazord, A., Cierpka, M., & Aapro, N. (1999). Development of psychotherapists: Concepts, questions, and methods of a collaborative international study. *Psychotherapy Research*, 9(2), 127–153. <https://doi.org/10.1093/ptr/9.2.127>
- Orlinsky, D. E., Schofield, M. J., Schroder, T., & Kazantzis, N. (2011). Utilization of personal therapy by psychotherapists: A practice-friendly review and a new study. *Journal of Clinical Psychology*, 67(8), 828–842. <https://doi.org/10.1002/jclp.20821>
- Prieto-Ursúa, M., & Jódar, R. (2020). Finding meaning in hell. The role of meaning, religiosity and spirituality in posttraumatic growth during the coronavirus crisis in Spain. *Frontiers in Psychology*, 11, 567836. <https://doi.org/10.3389/fpsyg.2020.567836>
- Prout, T. A., Zilcha-Mano, S., Aafjes-van Doorn, K., Békés, V., Christman-Cohen, I., Whistler, K., Kui, T., & Di Giuseppe, M. (2020). Identifying predictors of psychological distress during COVID-19: A machine learning approach. *Frontiers in Psychology*, 11, 586202. <https://doi.org/10.3389/fpsyg.2020.586202>
- Ran, L., Wang, W., Ai, M., Kong, Y., Chen, J., & Kuang, L. (2020). Psychological resilience, depression, anxiety, and somatization symptoms in response to COVID-19: A study of the general population in China at the peak of its epidemic. *Social Science & Medicine*, 262, 113261. <https://doi.org/10.1016/j.socscimed.2020.113261>
- Richardson, G. E. (2002). The metatheory of resilience and resiliency. *Journal of Clinical Psychology*, 58(3), 307–321. <https://doi.org/10.1002/jclp.10020>
- Sawhney, C., Singh, Y., Jain, K., Sawhney, R., & Trikha, A. (2020). Trauma care and COVID-19 pandemic. *Journal of Anaesthesiology, Clinical Pharmacology*, 36(Suppl. 1), S115–S120. [https://doi.org/10.4103/joacp.JOACP\\_272\\_20](https://doi.org/10.4103/joacp.JOACP_272_20)
- Schaefer, J. A., & Moos, R. H. (1992). *Life crises and personal growth*.
- Schubert, C. F., Schmidt, U., & Rosner, R. (2016). Posttraumatic growth in populations with posttraumatic stress disorder: A systematic review on growth-related psychological constructs and biological variables. *Clinical Psychology & Psychotherapy*, 23(6), 469–486. <https://doi.org/10.1002/cpp.1985>
- Shakespeare-Finch, J., & Lurie-Beck, J. (2014). A meta-analytic clarification of the relationship between posttraumatic growth and symptoms of posttraumatic distress disorder. *Journal of Anxiety Disorders*, 28(2), 223–229. <https://doi.org/10.1016/j.janxdis.2013.10.005>
- Smith, B. W., Dalen, J., Wiggins, K., Tooley, E., Christopher, P., & Bernard, J. (2008). The brief resilience scale: Assessing the ability to bounce back. *International Journal of Behavioral Medicine*, 15(3), 194–200. <https://doi.org/10.1080/10705500802222972>
- Southwick, S. M., Bonanno, G. A., Masten, A. S., Panter-Brick, C., & Yehuda, R. (2014). Resilience definitions, theory, and challenges: Interdisciplinary perspectives. *European Journal of Psychotraumatology*, 5(1), 25338. <https://doi.org/10.3402/ejpt.v5.25338>
- Tedeschi, R. G., & Calhoun, L. G. (1996). The Posttraumatic Growth Inventory: Measuring the positive legacy of trauma. *Journal of Traumatic Stress*, 9(3), 455–471. <https://doi.org/10.1002/jts.2490090305>
- Tedeschi, R. G., & Calhoun, L. G. (2004). Posttraumatic growth: Conceptual foundations and empirical evidence. *Psychological Inquiry*, 15(1), 1–18. [https://doi.org/10.1207/s15327965pli1501\\_01](https://doi.org/10.1207/s15327965pli1501_01)
- Tedeschi, R. G., Calhoun, L. G., & Cann, A. (2007). Evaluating resource gain: Understanding and misunderstanding posttraumatic growth. *Applied Psychology*, 56(3), 396–406. <https://doi.org/10.1111/j.1464-0597.2007.00299.x>
- Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *Management Information Systems Quarterly*, 27(3), 425–478. <https://doi.org/10.2307/30036540>
- Venkatesh, V., Thong, J. Y. L., & Xu, X. (2012). Consumer acceptance and use of information technology: Extending the unified theory of acceptance and Use of technology. *Management Information Systems Quarterly*, 36(1), 157–178. <https://doi.org/10.2307/41410412>
- Vrklevski, L. P., & Franklin, J. (2008). Vicarious trauma: The impact on solicitors of exposure to traumatic material. *Traumatology*, 14(1), 106–118. <https://doi.org/10.1177/1534765607309961>
- Wagnild, G. (2009). A review of the Resilience Scale. *Journal of Nursing Measurement*, 17(2), 105–113. <https://doi.org/10.1891/1061-3749.17.2.105>
- West, C. P., Dyrbye, L. N., Sinsky, C., Trockel, M., Tutty, M., Nedelec, L., Carlsare, L. E., & Shanafelt, T. D. (2020). Resilience and burnout among physicians and the general U.S. working population. *JAMA Network Open*, 3(7), Article e209385. <https://doi.org/10.1001/jamanetworkopen.2020.9385>
- Windle, G., Bennett, K. M., & Noyes, J. (2011). A methodological review of resilience measurement scales. *Health and Quality of Life Outcomes*, 9(1), 8. <https://doi.org/10.1186/1477-7525-9-8>
- Zilcha-Mano, S. (2017). Is the alliance really therapeutic? Revisiting this question in light of recent methodological advances. *American Psychologist*, 72(4), 311–325. <https://doi.org/10.1037/a0040435>
- Zoellner, T., & Maercker, A. (2006). Posttraumatic growth in clinical psychology - a critical review and introduction of a two component model. *Clinical Psychology Review*, 26(5), 626–653. <https://doi.org/10.1016/j.cpr.2006.01.008>

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