

## ORIGINAL ARTICLE

# Psychosocial support for providers working high-risk exposure settings during a pandemic: A critical discussion

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**Abstract**

Psychological first aid is a form of support designed to lessen disaster-related distress. In a pandemic, providers may need such support but with the high risk of exposure, such a program is offered only virtually. The research is scant for traditional post-disaster support and non-existent for virtual; therefore, by using related research this discussion considers the likelihood of providers accessing and benefiting from this program. The virtual platform is heralded as the responsible way to provide support in a pandemic but this standard may be ineffective and is inherently inequitable. As a global event, pandemics require containment strategies applicable on an international level; therefore, psychosocial support should also be developed with an international audience in mind. Online psychosocial support falls short of being such a strategy as it incorrectly assumes global internet access. Many low-income areas such as Sub-Saharan Africa will need support strategies which compliment local frontline staff and fit with community-driven initiatives, whereas wealthier countries may use a combination of onsite and online support. Provider psychosocial support needs in a pandemic, if articulated, are globally similar but how this support is offered requires contextually sensitive considerations not yet found in the literature.

**KEYWORDS**

healthcare providers, pandemics, post-trauma, psychological first aid, stress disorder, traumatic distress

## 1 | INTRODUCTION

Disaster mental health, psychological first aid (PFA), and critical incident stress debriefing (CISD) are terms used to describe the emotional support offered to survivors of large-scale traumas (Berkowitz et al., 2010; Gurwitch et al., 2010; McNally et al., 2003). The historical origin of post-trauma support is debatable but a framework mentioned early in the literature is crisis intervention. Designed and practiced by Erich Lindemann, crisis intervention was offered to the survivors of a tragic fire, the 1942 Coconut Grove Night Club Fire (1944). The PFA approach is described as the humane and supportive response to another's distress. The post-disaster PFA framework is used by many international groups

due to the culturally sensitive support and its easy adaptability to local contexts (Bisson & Lewis, 2009; Fox et al., 2012; Inter-Agency Standing Committee [IASC], 2007; Weaver et al., 2000; World Health Organization, War Trauma Foundation, World Vision International, 2011). Despite the recommendation for international use, empirical evidence supporting PFA is lacking but evidence extrapolated from related fields of research do indirectly support the strategies for distress mitigation (Hobfoll et al., 2007). Current literature and expert opinion suggest PFA strategies are likely helpful for disaster survivors and are unlikely to cause harm (Dieljtens et al., 2014; Schafer et al., 2016).

Healthcare providers are typically involved with disaster response, reporting to work, and caring for the injured (Simonds &

Sokol, 2009). Historically, some disasters create hesitancy such as the involvement of radioactive material or infectious disease outbreaks (Barnett et al., 2009; Bell et al., 2014; Chaffee, 2009; Ives et al., 2009; Qureshi et al., 2005). There is great personal risk for providers during such disasters, a justified rationale for hesitancy and angst (de Boer et al., 2011, 2013; McMahon et al., 2016; Shiao et al., 2007; Wong et al., 2005). Unfavorable mental health outcomes across all disciplines occurred following severe acute respiratory syndrome (SARS) epidemic in China (Lung et al., 2009), Taiwan (Chou et al., 2010; Lin et al., 2007), Hong Kong (McAlonan et al., 2005), and Canada (Styra et al., 2008) and following the Middle East respiratory syndrome (MERS) (Kim & Choi, 2016) and H1 N1 Avian influenza outbreak (Corley et al., 2010). These outcomes highlight the importance of including provider mental health needs in any pre-pandemic planning.

Disaster distress level is generally correlated with the degree of or proximity to risk, but traumatic impact of a disaster is not only confined to the directly exposed (Shultz et al., 2011). Findings of traumatic impact with indirect exposures were noted in the 2007 London bombings (Misra et al., 2009) and the September 11th terrorist attack studies (Galea et al., 2002; North et al., 2011; Zimering et al., 2006). Direct exposure to the contagion will occur in high-risk settings, but with a pandemic the risk permeates all treatment settings. During the early stages of the outbreak, there is minimal contagion information and inadequate personal protective equipment (PPE), making all settings high-risk (Chersich et al., 2020) then risk shifts, though not entirely, to the contained treatment settings. In wealthy countries these settings are intensive care units (ICU) and emergency rooms (Ran et al., 2020). In low-income areas where ICU beds are limited or hospitals are too far away (Ouma et al., 2018), treatment may also occur in the community. Any setting where control of the environment is unpredictable or access to PPE is poor can be considered a high-risk setting (Chersich et al., 2020).

The aim of this paper was to consider whether PFA can mitigate healthcare provider's traumatic distress during a pandemic and consider whether the current online PFA format is effective. Negative mental health outcomes for providers during a pandemic are demonstrated globally, supporting the need for a standardized yet international psychosocial plan. Traditional PFA is heralded as culturally and contextually sensitive, making it an appropriate strategy to consider. Though designed for an international audience, PFA is also conceptualized individually as one human supporting another human in a time of distress (WHO, 2011). Being present in the immediate aftermath of a disaster means the focus is to calm, to bring about a sense of safety and assist with the mobilization of resources (Hobfoll et al., 2007). Providing PFA online means sacrificing the elements of immediacy and in-person support, as well as global accessibility, raising concerns about effectiveness of distress mitigation. The psychological well-being of the healthcare workforce impacts the overall health of the general public (Chersich et al., 2020); therefore, ensuring traumatic distress is adequately mitigated must be a priority.

## 2 | INFECTIOUS DISEASE OUTBREAKS

Before 2000, the pandemic risk was believed to be relatively small, accounting for only 8% of disasters worldwide (Eshghi & Larson, 2008), but global warming, overpopulation, and world travel raised the risk (van Aalst, 2006; United States Agency for International Development [USAID], 2013). A global monitoring program for zoonotic viruses provides early identification of emerging viruses where limited human immunity is suspected (USAID, 2013). Such an outbreak could escalate to pandemic status quickly and threaten human survival (National Center for Immunization & Respiratory Diseases [NCIRD], 2017; Occupational Safety & Health Administration [OSHA], 2009; WHO, 2020). Preparing for a large-scale infectious outbreak would need to begin years in advance and incorporate lessons learned from the past. The H1 N1 Avian influenza outbreak (Santos et al., 2010) and the 2001 Anthrax crisis highlighted the US healthcare system's weaknesses of limited bed capacity, supply chain difficulties, and an industry at capacity at baseline (Gursky et al., 2003). Early events in the current pandemic suggest lessons of the past had not been heeded.

The handling of the COVID-19 pandemic by China and the United States has been poor, fueling collective-level fears, suspiciousness, and conspiracy theories (Khanna et al., 2020). The erosion of trust in the government stems from the lack of adequate supplies, lack of transparency and the politicization of the outbreak with misinformation campaigns, and the use of resources as bargaining chips (Khanna et al., 2020; National Center for PTSD, 2020; Williams et al., 2020). To mitigate the impact of traumatic distress those in-charge must assure providers their safety is paramount (Dong & Bouey, 2020; Pfefferbaum & North, 2020). Without this assurance, willingness to report to work and take on the personal risk may be hampered (Bell et al., 2014). Providers need to be adequately prepared, protected, and supported by employers and the government to remain engaged in this dangerous work (Shanafelt et al., 2020).

The African Union is approaching this pandemic quite differently by using lessons from prior epidemics such as Ebola and by relying on their newly established African Union Centers for Disease Control (AUCDC) agency (Loembé et al., 2020; Wadoum & Clarke, 2020). Proactively, the organization re-affirmed the relationship with China to ensure an adequate PPE stockpile and rallied economic support in preparation for COVID-19. Such support is especially needed in the Sub-Saharan regions where healthcare infrastructure remains weak. The AUCDC has made great strides in demonstrating how to learn from the past and take action to enhance trust in the future (Loembé et al., 2020).

Even with trust present, pandemics can generate images similar to zombie movies, especially in the context of quarantine measures and hazmat suits (Huremovic, 2019; Khan & Huremovic, 2019; Qualls et al., 2017; Wu et al., 2009). Most disasters are typically sudden in onset and short in duration but pandemics are sustained without a defined timeframe or predictable endpoint and do not occur as a single moment-in-time but instead cyclically unfolds (Eshghi & Larson, 2008). The unpredictability of a new outbreak

or the repeated threats of another surge compound distress levels (Greenberg et al., 2015; Lung et al., 2009; Ruotsalainen et al., 2015), as does the uncontained nature of the “disaster site.” There is a sense of inescapability, and this is linked to higher PTSD rates even with indirect exposure (Kar et al., 2014). By forcing a redesign of how individuals spend time together, it is easy to understand how and why pandemics can be so devastating, create such distress, and require such unique considerations when attempting to provide comfort and support (Bai et al., 2004; Huremovic, 2019; Khan & Huremovic, 2019; Wu et al., 2009). There is no one-size-fits-all and to blanketly apply research from prior disasters without considering the uniqueness of a pandemic will create an option inadequate to meet the distress mitigation needs of the healthcare provider.

### 3 | DISASTER-RELATED DISTRESS

Disaster-related distress does not have a consistent manner of expression and is influenced by cultural, historical, sociopolitical, and even neurobiological factors (Nichter, 2010; Sapolsky, 2017). A history of personal or cultural trauma is a possible predictor of PTSD in future trauma (Kessler et al., 2017; Shalev et al., 2019), but this is not a consistent research finding (Te Brake & Dücker, 2013). Such inconsistencies are possibly linked to trauma type, trauma type and culture, or even resilience-building cultural practices which may offer some emotional protection from the effects of trauma (Sapolsky, 2017). Child soldiers in Sierra Leone, forced to fight in a lengthy civil war, did not empirically display the long-term psychological sequela expected (Betancourt et al., 2016). As a collectivist, oral society strong community support is highly valued and may have contributed to the child soldier's resilience (Betancourt et al., 2016; Betancourt & Khan, 2008; Raven et al., 2018).

Regional-level resilience was seen again in the West African communities affected by Ebola. Widespread depression, anxiety, and trauma-related symptoms were found in these communities but given the high mortality of the virus and the regional historical trauma these rates were also lower than anticipated (Jalloh et al., 2018; O'Leary et al., 2018; Raven et al., 2018). The use of story-telling and the comfort of sharing one's distress with the community further support the potential for these cultural practices to offer some protection against emotional distress (O'Leary et al., 2018). Unfortunately, the PTSD rate for providers during Ebola was 15%–17%, a rate higher than seen with other epidemics (Jalloh et al., 2018). This may have been a reflection of the outbreak duration and of the graphic and frightening presentation of the virus, but also the lack of access to supports may have played a role. The reliance on family and social supports was limited due to quarantine measures, work demands, and even stigma from family and friends who feared being infected (O'Leary et al., 2018).

There are cultural differences in what is perceived as traumatic or stressful, but once a threat is perceived the neurocircuitry of fear and the hypothalamic–pituitary–adrenal response will be fairly consistent (Jovanovic et al., 2012). Cultural uniqueness is in the threat

perception, which does come into play again during the acute post-trauma phase, a heightened noradrenergic state vulnerable to misinterpretation and erroneous evaluation of benign stressors as threats (Campbell & Ehler, 2012; Dan-Glauser & Gross, 2015). Such misinterpretation of the benign can perpetuate the fear response and the risk of pathological distress. Neurobiological correlates of fear do facilitate pathological memory imprinting, which is a process related to the development of PTSD (American Psychiatric Association, 2013; Rodrigues et al., 2009).

Critical incident stress debriefing, a post-disaster support strategy, is no longer recommended by the WHO (2011); out of concern, it may cause additional psychological harm (van Emmerick et al., 2002). These findings may demonstrate just how important this acute post-trauma phase is in terms of recovery. The cultural and neurobiological influence on threat perception occurs in this phase; inaccurate interpretation of a benign stressor (CISD) leads to continued distress and perpetuation of the fear circuitry. CISD encourages the recall of personal trauma with others but in the North American and Western European cultures, which are individualist societies, such sharing may be an unfamiliar, potentially stressful experience, and therefore re-traumatizing if the stressor is perceived as a threat. In comparison, collectivist societies such as the West African countries experience group or community-level sharing as culturally acceptable and expected, therefore familiar, not stressful or re-traumatizing (Kim et al., 2016; Sapolsky, 2017). It is important to tread carefully and remain culturally aware during this neurobiologically vulnerable post-trauma phase to avoid prolonged fear activation. Further research on the impact of select strategies with different cultural groups may prove helpful but the genuine human-to-human support of PFA has not been shown to cause harm, does not re-activate fear, and, according to indirect evidence, is likely helpful (Fox et al., 2012).

A pandemic creates several unique sources of distress including quarantine, which providers experience as traumatic (Bai et al., 2004). PTS symptoms were reported in 10% of providers following SARS (Wu et al., 2009) with a 40% persistence rate three years later (Mak et al., 2009; Wu et al., 2009). Vulnerability to traumatic distress is found across all disciplines (Chen et al., 2005; Grace et al., 2005; Lin et al., 2007; Lung et al., 2009; Nickell et al., 2004) and with most contagions (Greenberg et al., 2015; Ji et al., 2017). Early COVID-19 studies were no different with providers reporting high levels of depression, anxiety, insomnia, and distress (Lai et al., 2020; Luo et al., 2020; Shaukat et al., 2020; Tan et al., 2020).

More than fearing infection for themselves, providers fear infecting loved ones (Ho et al., 2005; Maunder et al., 2003). Already struggling with loneliness from strict biosecurity measures, providers further isolate by imposing a self-quarantine to protect family (Maunder et al., 2003). Limiting access to social support is concerning given the emotional protection and resilience such supports can offer (Allen & Palk, 2018; Barnett et al., 2007; McMahan et al., 2016; Sun et al., 2020; Wu et al., 2009). If providers become emotionally unwell, the impact of traumatic distress is greater as is the risk for moral distress, a state which occurs when providers recognize that

the right thing to do is not going to be possible (Simonds & Sokol, 2009; Williams et al., 2020). Moral distress is common if providers are forced to choose between altruism and personal safety or forced to make clinical decisions based on treatment availability as opposed to patient needs (Pfefferbaum & North, 2020; Sun et al., 2020). PFA may offer relief with moral distress as well (Williams et al., 2020).

#### 4 | PSYCHOLOGICAL FIRST AID

Acute distress, anxiety, and fear in the immediate aftermath of a disaster are normal responses to an abnormal event from which most survivors fully recover on their own (Bonanno et al., 2006; Hobfoll et al., 2007; Norris et al., 2002). The post-disaster strategies for distress relief most frequently studied are PFA, CISD, and single-session debriefing (Everly & Lating, 2017; Roberts & Everly, 2006). Debriefing and CISD encourage verbalization immediately following a trauma and is an approach criticized for causing additional psychological harm (Carlier et al., 2000; van Emmerick et al., 2002; Rose et al., 2003). The same concern was not found with PFA (Bisson & Lewis, 2009; Dieltjens et al., 2014; Fox et al., 2012) indicating why this has become the global post-disaster support strategy (WHO, 2011).

Disaster mental health responders arrive onsite in the early aftermath of a disaster and begin with unobtrusive monitoring for acute distress (Everly & Lating, 2017; McCabe et al., 2013). Observation allows for early identification of distress and rapid provision of support, important as survivors in acute distress rarely recognize the distressed state and simultaneously experience some cognitive challenges making it difficult to mobilize toward next steps (Cooper, 2015; WHO, 2011). PFA support and comfort measures are meant to calm the survivor and create a sense of safety (Hobfoll et al., 2007), further enhanced if the survivors' distress is framed in a manner which normalizes the response (Blake et al., 2020). Once calm and assured, the survivor can be helped to recognize their resilience and use adaptive coping to begin to move toward additional resources (Hobfoll et al., 2007).

Empirical support for PFA is missing but indirect evidence justifies the approach as evidence-informed (Hobfoll et al., 2007), and this same evidence may shed light on the important facets or core elements of the approach. Core program elements are those factors empirically shown to contribute to a program's effectiveness and guide evaluation (Carroll et al., 2007). Ensuring support is provided early in the immediate aftermath of a large-scale trauma appears to be a main tenet of PFA (Hobfoll et al., 2007). The indirect evidence from the related literature supports the same.

A military PFA-like program called PIE, the acronym representing proximity, immediacy, and expectancy (Farrell & Appel, 1944; Solomon & Benbenishty, 1986), found less combat-related distress for soldiers exposed to PIE support than those not exposed and longitudinally found lower rates of PTSD after 20 years (Solomon et al., 2005). Similar to PFA, PIE emphasizes psychological support onsite (proximity), provided quickly (immediacy), and with the

return to prior functioning being the goal (expectancy) (Solomon & Benbenishty, 1986). This indirect evidence highlights the importance of early support offered and also indicates this is likely a core element for PFA in distress mitigation. Neuroscience research offers similar support by highlighting the favorable impact PFA strategies may have on the hyperactive noradrenergic system (Jovanovic et al., 2012). By providing calm and a sense of safety in the immediate aftermath, PFA can potentially lower the risk for PTSD (Oz et al., 2016).

Psychological first aid provides support using the five principles of safety, calming, connectedness, self-efficacy, and hope while ensuring survivors' biopsychosocial needs are being met (Everly et al., 2010; Hobfoll et al., 2007). Providing PFA enhances coping, stress tolerance, resilience (McCann et al., 2013), and other skills linked to emotional well-being (Atkins & Burnett, 2016; Eckroth-Bucher, 2010). Though the findings have been inconsistent (Sijbrandij et al., 2020), there is some evidence that individuals trained to provide PFA may also personally benefit from the PFA training with enhanced resilience and a greater sense of well-being (Everly et al., 2010; Kılıça & Şimşek, 2019). Trainees may internalize the educational content and apply the principles to their own lives including resilience-building skills (Blake et al., 2020). Resilience is a concept found throughout the disaster literature and is described as the ability to bounce back from adversity (Shakespeare-Finch et al., 2005; Tugade & Fredrickson, 2004). Resilience aids in disaster recovery perhaps by offering some level of protection from the initial impact of traumatic distress (Everly et al., 2008; Schiraldi et al., 2010).

#### 5 | PFA AND THE HEALTHCARE SYSTEM

In response to COVID-19, healthcare organizations in the US, UK, and other middle-to-high-income countries developed online PFA and other psychosocial supports for providers (Blake et al., 2020). Without a standardized format for the approach, the majority of the COVID-19 PFA programs were developed by mental health professionals not necessarily trained in disaster response (Herbert et al., 2001). Behavioral health professionals often believe they are already well-versed in disaster psychology by virtue of their professional training alone but this is inaccurate (Everly et al., 2010; Reyes & Elhai, 2004). PFA can and is safely delivered by the trained layperson or healthcare professional, but core elements of PFA are not foundational to healthcare curriculums (Subbarao et al., 2008). Professionals without proper PFA training may inadvertently select an approach such as a formal trauma-related intervention which, in the early post-disaster phase, may prove ineffective (Boscarino et al., 2011), obstructive of "normal" post-disaster recovery (Cornum et al., 2011), or, as previously highlighted, cause additional harm (van Emmerick et al., 2002; Herbert et al., 2001).

To mitigate provider distress in China during COVID-19, online peer support, telephone hotlines, and online psychoeducational sessions were developed. Providers, however, did not access these programs, citing the need for rest not psychological support (Chen et al., 2020). Rest spaces were then created and used

regularly by providers and eventually the support programs not accessed online were available there in-person (Chen et al., 2020). Additional barriers to accessing the original online programming were not reported, but the provider's denial of distress despite the observable signs suggest stigma and provider coping styles may be involved (Cieslak et al., 2013; Clement et al., 2015). This is not to say providers' exhaustion was not real, but the exhaustion may have just been the priority. If basic physical needs are not met, recognizing and attending to other self-care and emotional needs will not be possible (Maslow, 1943). Coping styles may play a role in whether providers access supports. In training, the tacit messaging is to need mental health support is to be weak and this stigma encourages the use of avoidance and denial as principle coping mechanisms (Dyrbye et al., 2015; Greenberg et al., 2015; McAllister & McKinnon, 2008). Research in high-to-middle-income countries demonstrate providers continue to rely on similar coping mechanisms post-training (DeVillers & DeVon, 2013; Lambert et al., 2004) but these studies were conducted as part of providers' routine workday; therefore, coping behavior could differ in disaster-related contexts (McAllister & McKinnon, 2008; Zander et al., 2010). Much of the literature suggests resilience is common in providers who must and generally do see themselves as immune to the repeated trauma of their work (McCann et al., 2013) but this trait in combination with typical coping styles suggest it highly unlikely providers will seek out support on their own.

The coping styles of avoidance and denial for providers are linked to poorer mental health outcomes (Chang et al., 2007; DeVillers & DeVon, 2013; Lambert et al., 2004; Lazarus, 1993). Over the last decade, studies across North America, Australia, and China demonstrate an alarming rate of mental health difficulties for providers (Beck, 2011) including an elevated risk for PTSD (Dominguez-Gomez & Rutledge, 2009; Lavoie et al., 2011; Luftman et al., 2016) and risk for suicide (Davidson et al., 2018; Hawton et al., 2011; Skegg et al., 2010; Zeng et al., 2018). These data suggest the healthcare workforce, who are already help-reluctant, may not be psychologically ready for the prolonged distress associated with a pandemic. With this awareness, ensuring adequate support is available and organically emerges from the environment and peers is a priority (Agarwal et al., 2019; Brewin et al., 2000).

Less is known about provider coping or willingness to openly seek out support in low-income countries where working conditions at baseline are already challenging (Wurie et al., 2016). Different ways of coping may correlate with disaster types (Stephen, 2017), but this was not seen in Sierra Leone where coping was similar across the post-conflict period and the post-Ebola disaster. Across both events, providers coped by the strength of their faith and their pride to serve their community (Namakula & Witter, 2014; Wurie et al., 2016). One difference noted in the epidemic was that provider fear generated a lot of distress, but this was confined to the early phase and lessened as more information and training became available. Knowing what to expect and how to handle it helped providers cope with the personal risk and the

additional stressors they would face such as community stigma (Raven et al., 2018). Social support and social media were identified as a source of relief and comfort, but it was the peer and managerial support that had the greatest impact for providers, but this was true only in the disaster context and not in the stable work environment (Raven et al., 2018). The significance of support may carry more weight when in distress.

## 6 | PROGRAM TIMING AND ACCESS

Large-scale infectious disease outbreaks bring international organizations and global health agencies together, collaborating to develop containment and treatment options. A psychosocial support plan for providers is also needed with development being accomplished on a similar scale, but the online PFA format does not meet that global requirement (Cash & Patel, 2020). First and foremost, the lack of global Internet capability in some lower-income or poorly resourced regions demonstrates its limited use (Gostin, 2014). Addressing accessibility, however, would not quell additional questions about program fidelity, likelihood of use, and effectiveness. The international pandemic psychosocial support plan for providers will need to include the more salient struggles found in the literature including stigma (McMahon et al., 2016), social isolation, lack of access to supports (Lehmann et al., 2016), and psychological distress (Khanna et al., 2020).

The PFA literature does not specifically identify the rationale for immediate and onsite design but one could assume the timing of the service is correlated with the timing of the need. The military support program also speaks to the importance of an early response and is a program designed to anticipate or observe distress in real time (Solomon & Benbenishty, 1986). Online PFA does not allow for observation and ultimately could be a barrier if access is dependent upon provider initiation. If early support is a core element and if providers must initiate access to the support, then it is a fair assumption, based on the literature, that traffic for online PFA will be low however not an accurate reflection of what providers may need (Chang et al., 2007; Clement et al., 2015; Lambert et al., 2004; Vashdi et al., 2012).

Without providing an effective, usable psychosocial support option the mental health consequence could be debilitating and persistent (Pfefferbaum et al., 2012). Unfortunately, the practice of pushing psychosocial needs down the priority list when there are competing medical concerns is a common action (Funk et al., 2010; Shultz, 2014). Much lip service has been paid to the importance of mental health during disasters, but still very little economic or planning resources have been put forth (Pfefferbaum et al., 2012; Ransing et al., 2020; Tribe, 2014). Determining what is essential for provider health is at the heart of this discussion, and if emotional well-being is essential, then an effective and accessible psychosocial support plan is essential as well (Chersich et al., 2020) but full integration of mental health into pandemic planning has not occurred (Shah et al., 2020).

## 7 | DISCUSSION

The aim of this discussion was to understand traumatic distress as experienced by providers during a pandemic and to consider whether currently utilized strategies to mitigate this distress are helpful. The provider is a pivotal factor in maintaining the health and safety of the larger public; therefore, protecting their health and lowering their risk of infection is paramount (Chersich et al., 2020). Equally important, but frequently overlooked, is the need to protect providers' psychological well-being (Mohammed et al., 2015; WHO, 2011), a need not addressed in recent epidemics as traumatic distress was globally experienced across diverse provider groups (Chew et al., 2020; Chou et al., 2010; Jalloh et al., 2018; Kim & Choi, 2016; Lung et al., 2009; Mak et al., 2009; McMahon et al., 2016; Wu et al., 2009). Pre-pandemic psychosocial planning has long been recommended (HHS, 2016) but did not occur prior to COVID-19 and now we face the pandemic without having ensured the emotional readiness of the healthcare workforce and without a developed psychosocial support plan. PFA-like support strategies are being offered to providers online as psychoeducational modules or person-to-person remote support (Wu et al., 2020), but utilization and effectiveness of these programs need a critical exploration.

Online mental health services are growing in popularity, being used for self-help, computer-assisted cognitive behavioral therapy, and even for psychotherapy (Knaevelsrud & Maercker, 2006). Due to COVID-19, many of these services needed to switch to remote platforms to continue to safely provide treatment for already established clients. Though the impact of moving mental health services to an online platform during the pandemic is not yet known (Arevian et al., 2020), the impact of attempting to provide online PFA support may not be comparable. Psychotherapy is a treatment with interventions embedded within a theoretical model, whereas PFA is an intentional interpersonal connection with one individual offering support to a second individual in distress (Everly & Lating, 2017). PFA is not an intervention or a treatment but rather an informed attempt to provide comfort and support through a genuine personal connection between two individuals (Hobfoll et al., 2007). It is unclear whether the online platform can effectively facilitate the connectedness and the perception of support needed to mitigate traumatic distress.

Targeted audiences must be considered with all program development but providers were not factored into the development of this online support as the program requires providers to acknowledge the need for emotional support and to initiate this support, both of which are of low probability (DeVillers & DeVon, 2013; Lambert et al., 2004). Providers in China reinforced this informed impression by not accessing newly developed online psychosocial supports in early COVID-19, yet later did avail themselves of the resource when it was offered in-person (Chen et al., 2020). Provider engagement may be more likely if support were onsite, organically unfolding from the workplace setting or even if initiated by peers, none of which are possible with the online format (Barnett et al., 2007; Greenberg et al., 2015).

Most disaster survivors consistently identify the importance of receiving support when experiencing traumatic distress (McMahon et al., 2016; Raven et al., 2018). The successful provision of support is determined by the receiver as opposed to the sender but can come from several different sources. The comfort may come from the social support of family and friends (Chersich et al., 2020), the peer support of co-workers (Lehmann et al., 2016), the managerial support of a supervisor which motivates the return to work (Raven et al., 2018), and finally the employer or government support which lets providers know their safety is important and sacrifice is appreciated (Shanafelt et al., 2020). Since the strategies of PFA are built around the concept of support, this is the logical choice for a pandemic-related psychosocial support for providers.

Traditional PFA is culturally and contextually sensitive but it is unknown whether the modifications made to offer the program online impact this sensitivity or otherwise fall short of program fidelity. Determining program fidelity is difficult without any program research; therefore, we sought to clarify the core program elements in a manner similar to how PFA was identified as evidence-informed: by exploring related fields of research. To identify what might be core elements of PFA, research from the fields of neuroscience (Sapolsky, 2017), military science (Solomon & Benbenishty, 1986), and psychology were explored (DeVillers & DeVon, 2013; Lambert et al., 2004). The elements highlighted in the PFA literature are supported by this indirect evidence, and they include onsite, in-person, and early provision of support (Hobfoll et al., 2007). To be onsite allows for the observation and identification of distress (Solomon et al., 2005), to be in-person allows for the support to be initiated by someone other than the one in distress (Cooper, 2015; WHO, 2011), and to provide support early on allows for the quick restoration of calm, a sense of safety and ultimately neurobiological homeostasis (Hobfoll et al., 2007; Sapolsky, 2017). PFA core elements are those elements most central to the program's perceived effectiveness in survivor distress mitigation. Importantly, these are the same elements sacrificed in the online PFA modification, and strongly suggesting program fidelity is violated.

Though the goal of this discussion was not to offer solutions but to discuss whether the current solution was needed and effective, some considerations are briefly outlined. In high-income countries, a hybrid-PFA approach could be considered. Online programming will be for psychoeducational or self-help purposes (Villani et al., 2013) or for remote follow-up but the initial support will be in-person with details of how being context-dependent. A rest area for providers could be developed as a common area for providers and PFA-trained staff (Chen et al., 2020) where paths will cross and interpersonal familiarity gained and where ultimately PFA could be provided.

Care being provided in the community could be addressed by working in pairs, providers trained to offer support to each other. Shared mobile phones are also a great resource. Check-ins can occur with known colleagues similar to the use of phones to connect physicians with community patients in remote areas of Sierra Leone and Nigeria during the Ebola outbreak (Mohammed et al., 2015). Community workers have been identified as an underutilized

resource in West African countries (Marsella & Christopher, 2004; Miller et al., 2018; Perry et al., 2016) and if these workers were PFA-trained distress mitigation could be provided for other community workers and members of the community (Greenberg et al., 2015; Raven et al., 2018).

The notion of support being provided by someone familiar is an interesting consideration. According to the literature, support provided at work tends to be more readily accepted if provided by co-workers and peer support is linked to improved mental health outcomes for providers under stress (McAllister & McKinnon, 2008; Raven et al., 2018). Pre-pandemic planning could consider the prospect of all providers being trained in PFA as peers are the most available and often the first to witness distress in colleagues. A few studies report providers trained in PFA demonstrate greater resilience to traumatic distress suggesting the training may be protective (Atkins & Burnett, 2016; Everly et al., 2008; Schiraldi et al., 2010). Though studies were small and further research is needed, training all providers in PFA could be part of a pre-pandemic provider readiness plan.

Though a pre-pandemic plan was not developed prior to COVID-19, a during-pandemic support program is needed now to supplement the current online programming. To ensure providers remain healthy and to enhance resilience, support should be provided through the traditional PFA framework of onsite, in-person, and early on (Perrin et al., 2009; Zander et al., 2010). Traditional PFA is geared toward the international audience; therefore, culture will drive how the support is provided. The PFA framework is broad and flexible so it does not need to modify the program's edges to retrofit aspects of culture, but instead allows the culture or context to be the central concept. PFA molds itself around the culture instead of expecting the culture to do the fitting in (Tribe, 2014). Whether it be PFA or a different support program, ensuring full integration of behavioral health provisions into a pandemic plan must occur so system and societal needs are addressed at all phases (Patel et al., 2013; Shah et al., 2020).

## 8 | CONCLUSION

Biological contagions are a dialectic; they create an environment where humanity is fearful of being close to another yet in need of that closeness at the same time. The dialectic moves deeper into the medical setting where healthcare providers are caring for the very individuals who also place them at risk. The isolation units protect those outside the unit from those inside the unit, but it is the provider who manages the strain of straddling both worlds. While inside the provider looks to protect the patient and themselves and while outside the provider looks to protect their family from themselves. Often denying themselves access to the support they need, providers will self-quarantine to protect loved ones. Extensive social isolation, however, raises stress levels therefore increasing vulnerability to the impact of traumatic distress (McMahon et al., 2016).

Epidemics over the last decade have demonstrated providers can experience negative mental health outcomes following this type of disaster. It is generally accepted that disaster survivors need support in the immediate aftermath, recognizing they are often unaware of their distressed state and unaware of cognitive limits while in this state. An awareness of providers experience of traumatic distress during a pandemic has yet to change expectations of their functioning. The treatment setting is demanding, patient care is complex, and biosecurity measures are exhausting but providers will continue to function at this level as there is no encouragement to pause. Research on the providers experience is minimal but there is evidence that providers suffer various levels of distress and episodes of trauma similar to other disaster survivors but without the same supports (Chew et al., 2020).

The recommendation to provide PFA onsite is not an easily accepted option, but by using a hybrid approach with some of the included suggestions can be offered as an accessible and effective support, unlike the online programming alone. Being able to provide comfort and support in-person and to offer relief as soon as possible are key aspects to mitigating distress. Pandemic planning is built on assumptions, making this plan only as good as that assumption (Chaffee, 2009). If the assumption is online PFA is adequate but, in fact, it is not, then providers psychosocial needs will not be met, providers will be less apt to engage healthy coping and self-care and providers will be at increased risk for traumatic distress (Allen & Palk, 2018).

The need for disaster research has loomed for decades, but the challenges remain the same. The disaster environment is chaotic, unpredictable, and vastly heterogeneous posing significant methodological challenges. Ethical challenges are also present as disaster survivors are certainly a vulnerable population and require special consideration to ensure they are not subjected to any additional distress (Collogan et al., 2004). Future research considerations should include determining the overall effectiveness of PFA in lowering traumatic distress and PTSD risk in the healthcare discipline. Trauma research provides data on several biomarkers possibly predictive of eventual PTSD development, and such measures may offer additional methods for intervention evaluation. To ensure a comprehensive understanding, qualitatively exploring providers experiences and distress profiles during a pandemic will aid in developing a plan on how to best offer support in the future. Finally, given the global landscape of pandemics, researchers must explore provider experiences across cultures to ensure the development of an empirically supported psychosocial program that is internationally applicable, avoiding ethnocentrism (Marsella & Christopher, 2004).

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