

Harnessing Resilience: Overcoming Trauma Through Targeted Intervention Efforts

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Abstract

This paper explores the critical role of resilience in mitigating the adverse effects of trauma on individuals and communities, drawing insights from various disciplines including psychiatry, social sciences, and public health. It highlights the importance of resilience as a natural defense mechanism, citing examples from Nelson Mandela's experiences to contemporary psychiatric research. The paper examines the short-term and long-term impacts of trauma on mental health, particularly emphasizing the risk of developing psychiatric disorders such as PTSD and substance use disorders. It underscores the necessity of tailored interventions to foster resilience, especially in marginalized and disadvantaged communities lacking access to social support structures and resources. While acknowledging novel approaches such as the use of ketamine, the paper advocates for a traditional intervention strategy focusing on strengthening social bonds and providing equitable access to resources as the most effective means of promoting resilience and mitigating the effects of trauma on communities worldwide.

Introduction

"There were many dark moments when my faith in humanity was sorely tested, but I would not and could not give myself up to despair," writes Nelson Mandela in his seminal 1994 work *Long Walk to Freedom* [1]. Recounting his 18 years spent in a South African prison, Mandela emphasizes the significance of resilience and perseverance in the face of adversity. Utilized by communities and individuals around the world to adapt to adverse circumstances—whether in the form of brutal oppression from prison authorities or environmental disasters—resilience allows humans to "adapt swiftly and successfully to stressful/traumatic events and manage to revert to a positive state," acknowledge psychiatric researchers Amresh Shrivastava and Avinash Desousa [2]. Building on this perspective, Davydov et al. claim "Resilience can be viewed as a defense mechanism, which enables people to thrive in the face of adversity," in much the same fashion as Mandela, and emerge as part of a more robust and resilient community [3]. However,

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various marginalized or disadvantaged communities with unequal access to the social support structures and recovery resources traditionally associated with resilient communities may struggle to foster a sense of resilience and effectively utilize man's natural defense mechanism against trauma. Recognizing the need to foster resilience among communities unable to do so as a combative measure against the potentially disastrous effects of trauma on the brain, numerous resilience-fostering intervention methods have been developed. Such a statement begs the question: what is the most effective method of fostering resilience among communities affected by trauma? An examination of the issue's social, historical, and medical aspects yields a traditional approach emphasizing access to resources and social support structures to be the most effective at mitigating the effects of trauma.

Background

If left untreated, exposure to a traumatic event may have significant short-term effects on one's psychological well-being. Initial negative responses to trauma are characterized by the Substance Abuse and Mental Health Services Administration (SAMHSA) as including but not limited to "exhaustion, confusion, sadness, anxiety, agitation, numbness, and dissociation . . ." [4]. Elaborating upon SAMHSA's list, a meta-analysis of various studies examining risk factors for PTSD asserts intrusive thoughts, atypical behaviors, and a constant state of hyperarousal to be the short-term factors most detrimental to individuals' mental health [5]. Community-wide occurrences of such initial negative emotional states and traumatic "after-shocks" may be mitigated through effective interventions seeking to foster resilience and prevent the onset of long-term symptoms.

In communities lacking resilience-building interventions, however, prolonged periods of initial emotional states provide a breeding ground for the onset of serious psychiatric disorders such as post-traumatic stress disorder (PTSD) one to three months after the traumatic event. Most notably, exposure to a traumatic shock can, according to Douglas Bremner, Professor of Psychiatry at Emory University, gradually lead to the onset of PTSD by tampering with the hippocampus (the region of the brain involved in memory function), resulting in "a broad range of problems with memory, including gaps in memory, problems with declarative memory . . . and intrusive memories" [6]. Memory loss or impairment may cause affected individuals to feel distanced from the outside world and "forgotten," increasing

the chance that said individuals turn to substance use as a coping mechanism. Recent studies have found increasing evidence for a link between PTSD and the development of a substance use disorder (SUD), branding it “comorbid PTSD/SUD” [7]. Commenting on data collected by the 2010 National Epidemiologic Survey on Alcohol and Related Conditions, for instance, a team of trauma researchers from the Medical University of Charleston underscore the finding that “Among individuals with PTSD, nearly half (46.4%) also met criteria for an SUD and more than one-in-five (22.3%) met criteria for substance dependence” [8]. Aside from the clear harmful repercussions PTSD and comorbid PTSD/SUD have on one’s brain and emotional wellbeing, they also frequently exacerbate the negative emotional states experienced in the immediate aftermath of a traumatic event.

Resilience, acting as a natural defense mechanism against trauma, is crucial in preventing initial negative responses to a traumatic shock from developing into chronic psychiatric disorders. Corroborating this perspective, a study assessing resilience among survivors of the September 11th attack notes that “resilience was observed in 65.1%” of individuals exposed to the traumatic event and significantly aided in slowing the development of PTSD among affected individuals, as well as contributing to a lower risk of developing a SUD among individuals diagnosed with PTSD in the aftermath of the attack [9]. Clearly, communities able to independently develop resilience, such as the New York City borough of Lower Manhattan following the September 11th attack, are able to successfully prevent or slow the development of psychiatric disorders from the initial short-term effects of exposure to a traumatic event. In most instances, therefore, they do not necessitate community-wide intervention efforts designed to foster resilience.

Contrary to naturally resilient communities, marginalized or developing communities may lack the social support structures and access to resources necessary to effectively develop resilience among their inhabitants. Historically speaking, marginalized groups have experienced limited access to resources and social support structures as a consequence of systemic inequality and discrimination, contributing to weaker resilience in the event of trauma. Long-standing prejudice towards the Māori community native to New Zealand by white settlers has resulted in a noticeable decrease in the mental health of Māoris and “an increase in depressive symptoms” [10]. As a result of long-standing bias, Māoris lack equal access to mental health resources and struggle to form widespread social support through integra-

tion into a broader community network. Hence, if exposed to a traumatic event in the near future, the Māori community will be left without the resources required to foster resilience. A similar development can be seen among impoverished communities. According to a report published by a team of professors from the University of California Los Angeles' Department of Health services, there are "large inequities in access for low-income and minority populations" to medical care [11]. Additionally, impoverished communities do not have access to community support structures and, much like marginalized communities, struggle to develop resilience in the face of a traumatic event. Marginalized and impoverished communities, therefore, cannot be expected to develop resilience effectively by themselves and require resilience-building interventions.

"One-Size-Fits-All" Intervention

In order for interventions to prove effective, they will need to take into account the differing needs and values of affected communities to not be culturally insensitive. Thus, interventions seeking to foster resilience in trauma-affected communities based on a "one-size-fits-all" approach will prove ineffective as they are not tailored to the specific affected community and will be culturally insensitive. Resilience itself, assert professors Ann S. Masten and Angela J. Narayan of the University of Minnesota's Institute of Child Development, is context-specific, meaning it is influenced by the political, economic, cultural, and social contexts in which individuals and communities reside [12]. For instance, Haitians displayed tremendous resilience in the aftermath of the devastating 2010 earthquake through their ability to adapt to a new, harrowing reality [13]. Yet, perhaps the most significant contribution to the resilience of the Haitian people in the wake of such unprecedented trauma proved to be their tendency to gravitate towards their Catholic faith as a source of comfort, seeing as though "the hope born of their faith in God seemed to mitigate abject despair" [13]. If interventions seeking to alleviate the effects of the trauma experienced by the Haitian people adopted a one-size-fits-all approach and ignored the prominence of faith in Haitian culture, such efforts would have proven to be culturally insensitive and thus distance Haitians from the resilience-building intervention. Michael Ungar at Dalhousie University's Resilience Research Center builds upon this perspective and asserts that cultural insensitivity through the ignorance of certain social values or customs may result in

a lack of involvement in the intervention [14]. As a result, its ability to foster resilience in a community affected by trauma would be significantly undermined.

Medical Intervention

An alternative, novel approach to fostering resilience is the application of laboratory-grade ketamine (a dissociative drug utilized by anesthesiologists) as a direct, medical intervention. Studies into the possible use of ketamine as a resilience-fostering mechanism highlight its potential value, however, it is important to note that misaligning variables and the limited research conducted on the subject mean that the findings cannot be generalized and definite conclusions on ketamine's effectiveness cannot be drawn. For instance, a recent study conducted by PTSD researchers at Ohio State University's Department of Psychology examining the resilience-stimulating potential of ketamine "found that ketamine promoted resilience in male mice, but not in female mice" [15]. While ketamine was technically proven to be effective to a noticeable extent, this discrepancy between male and female mice signals inconsistencies in ketamine's use that significantly hinder its practical applicability. Similarly, a team of pharmaceutical researchers from the Icahn School of Medicine recently conducted a study utilizing a placebo-pill framework to test whether taking sustained doses of either ketamine or midazolam (a common sedative used as a placebo in the experiment) lowers high-stress levels in participants [16]. The authors concluded that "Compared to the midazolam group, the ketamine group showed a moderate to large reduction in levels of anxiety immediately following stress, although this was not significant" as the partition coefficient was calculated to be 0.06, correlating to a non-significant statistical difference [16]. Taken together, these two studies support the conclusion that although ketamine's resilience-fostering ability appears promising to some degree, more testing and further research need to be conducted in order to prove a statistically significant correlation between ketamine use and greater resilience. If further examination into the resilience-stimulating potential of ketamine is carried out, perhaps eventually enough evidence will support its application and allow this unique resilience-building intervention to become commonly used. For now, however, it is still unclear whether it will prove widely effective in mitigating the effects of exposure to trauma and, if applied, must be done in conjunction with more classical resilience-building interventions

for there to be a noticeable result.

Traditional Intervention

Historical precedent reveals a traditional intervention emphasizing social support structures and wider access to resources essential to recovery to be the most effective approach to fostering resilience among disadvantaged communities affected by trauma. Social support structures, referring to the intricate relationships and communal bonds individuals share with other members of their community, are essential in fostering a sense of resilience in the aftermath of a traumatic event. Said relationships provide emotional support, a sense of belonging, practical assistance, and contribute to the emergence of an overall communal spirit integral to the development of community-wide resilience. A team of psychiatric researchers underscores the necessity of social support in combating the adverse psychological effects of prolonged exposure to trauma and stress, noting that it “moderate[s] genetic and environmental vulnerabilities and confer[s] resilience to stress” [17]. Resilience-building interventions, therefore, should aim to strengthen such relationships.

Effective social support structures, however, mean little without equitable access to resources essential to trauma recovery. Material, financial, and human resources allow affected individuals and communities at large to adapt to adverse and traumatic circumstances, providing a foundation for the community-wide development of resilience. For instance, according to a literature review conducted by Professors at Dartmouth University’s Department of Psychiatry, programs providing essential resources to affected communities in the wake of Hurricane Hugo were effective in fostering both recovery and resilience [18]. Said programs, in conjunction with an ongoing effort designed to strengthen community-wide social support structures, “offset some of Hugo’s adverse effects” and ultimately lowered the risk of PTSD developing in affected individuals [18]. Yet, despite its historical effectiveness, some scholars remain uncertain regarding the traditional intervention, arguing its highly individualistic approach to resilience-building may overlook the larger societal inequalities that contribute to vulnerability to trauma within communities [19]. In contrast, Sampson et al. note the traditional intervention, promoting social cohesion and access to resources, may address systemic issues such as poverty and crime that contribute to community vulnerability to trauma [20]. While worthy of consideration, the

worry expressed by Elliott and Pais is not entirely warranted as addressing systemic issues will occur as a byproduct of pursuing resilience-building initiatives.

Conclusion

Whether exposed to environmental calamities, terror attacks, or systemic discrimination, developing and marginalized communities around the world require interventions designed to mitigate the harmful effects of trauma and prevent the onset of serious trauma-related psychiatric disorders. The traditional intervention approach, targeted at strengthening social support structures and widening access to recovery resources, has proven widely successful in fostering resilience in communities exposed to trauma without being culturally insensitive. New advances towards a medically-oriented intervention are being made, yet for the time being a focus on strengthening community-wide bonds and ensuring wider access to essential resources will see traumatized communities adapt the fastest and emerge most resilient. If executed effectively, the traditional intervention will allow traumatized communities to withstand the potentially disastrous effects of trauma and contribute to the development of a more robust and resilient world.

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