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Reducing the Risk of Developing Mental Health Issues through Effective Crisis Management

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Abstract

Emergency plans of medical response have developed and been implemented in most of the US communities; however, the majority of these medical plans doesn't have formal intervention procedures of mental health. Usually, the communities ask a national group such as FEMA or the Red Cross to provide the psychological support needed to survivors. Even though these kinds of support are found helpful by many people, they lower the ability to offer expedient assistance, especially to those who need it the most. These external institutions may not be familiar with the population's totality of social, economic, cultural, psychological, and institutional factors that shape people's capacity for recovery. A community has the ability to self-replicate networks and practices of care that can build its resilience, which is common to see in the mutual efforts of aids which come to the fore during disasters.

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1. Introduction and literature review

Even with the accelerated devastation and growing severity of natural hazards over the past decades in the US, most of the American communities have limited preparedness planning for the various impacts on mental health ^[1]. Very frequently, responding nonprofit and government institutions compete in providing services; however, they under-estimate the needs for support ^[2], and are usually found unfamiliar with the populations' cultural and psychosocial needs^{[1][3]}. As a result, many direct survivors end up developing acute and post-traumatic stress disorder if they don't receive the necessary mental health support within two months after the sorrowful event ^[4]. Consequently, there is a critical need to significantly increase communities that have the ability to develop effective plans of mental health preparedness plans and protect the people's psychological needs during and after a catastrophic event ^{[5][6][7]}.

Mental health specialists should understand the structure of disaster intervention. This includes the response teams and their different responsibilities, which affect how they collaborate with local agencies of mental health services ^[8]. This kind

of information should be regularly communicated due to the rapidly changing environment of disasters. To ensure these efforts aren't being duplicated and the entire areas of need are being covered, these collaborations should practice procedures and coordinate their efforts regularly [9][10][11]. In order to successfully address and respond to the mental health impact after disasters, emergency plans should first understand the unique and distinctive needs of the targeted community [12]. Second, they should handle the possible shortage of responders who has the appropriate expertise in mental health to help disaster survivors [13]. And most importantly, they should involve people of the local communities in decision making before, during, and after disasters [14][15][16].

The exposure to a traumatic event doesn't always mean a decline in mental health. Even though there are several factors that could increase the risk of having a mental ill-health (such as genetic, psychosocial, personality, and psychological components), these risk factors are not deterministic, and they ameliorate by multiple protective factors at community and individual levels [1][4]. The right stress response enhances signaling in the brain and allows quick thinking and supports heightened memory [17]. This biological short-term advantage is very valuable on individual and community levels following a disaster; when quick problem-solving skills are needed for the rapidly changing needs [5]. On the contrary, chronic stress can be damaging to the brain, and if it is coupled with negative life events, it reduces the individuals' coping capacity, and can cause a serious allostatic overload, which in return negatively affects the mental and physical health [1]. These biological short-term changes demonstrate our brains' plasticity, by which positive changes to our mental health can as well be made [18].

At the same time, disaster events provide opportunities to change the societal status quo. For example, a few weeks after the COVID-19 outbreak in the US, the Government made serious medical care provisions with cooperation from most insurance companies. This allowed treatment, testing, and vaccinations even for everyone, including uninsured individuals [19]. This was a very necessary measure, especially for people who lost access to health care due to unemployment during the outbreak [20][21]. Nevertheless, given the far-reaching and serious effects of stress on mental and physical health, researchers call for reflection on a universal access to healthcare, a concept that two-thirds of the American society supports [19][21].

2. Discussion and recommendations

Due to the unexpected nature of disasters, prospective data is usually unavailable for research. Nevertheless, a team of researchers published a US longitudinal study which compared reported psychological distress in 2019 to the ones reported in 2020 after the outbreak [22]. They found that psychological distress increased across all demographics, and those who were most affected had suffered from previous psychiatric conditions. In contrast to health statistics on depressive disorders worldwide, they reported that seniors in the US experienced lower psychological distress compared to younger adults. This could be due to the increased economic stress that younger adults face in the US. However, the researchers couldn't point out the factors of variability in psychological distress levels among the different groups due to the difficulty of condition assessment with the different layers of sample heterogeneity [22].

Establishing a daily routine, spending time with family and friends, and communicating emotional distress are common protective factors that overlap with other physical benefits such as regular exercise, mindfulness, adequate water, adequate food, and avoiding alcohol and tobacco [23]. At the same time, lack of vitamin D and lack of sleep reduces immunity and increases inflammation which negatively impacts the physical and mental health [24][25]. Consequently, it is necessary for post-disaster responses and planning preventative to employ a holistic and multi-dimensional view of individuals' needs within vulnerable communities. While medical needs have to be met at a societal level, communicating protective actions and overcoming barriers of implementation requires a great amount of care that only the community can effectively provide. The psychological needs need to be addressed and included through horizontal, community-led, and collaborative planning [26][27]. Researchers highlight the need for maintaining social contacts, self-efficacy, and knowing where and how to access medical care during and after a disaster [28][29].

Whereas institutional support can be provided in a disaster relief, these services often run out of funding or are deprioritized. Available research shows that in order to effectively develop a mental health plan before and during disasters, collaborations need to be formed on community demographic bases. It should consist of different stakeholders that promote decision-making and mental health advocacy, including nonprofit organizations, medical care providers, government health department staff, and most importantly, neighborhood leaders because they understand the specific needs of the neighborhood residents. For example, some individuals may have specific language and cultural needs, and communication barriers have been proven to greatly increase stress at catastrophic times [1]. And so, this approach could ensure that culturally and linguistically diverse populations aren't overlooked or misunderstood, and receive the appropriate support they need [2][30][31].

Additionally, is there a predominance of frail and elderly residents, nursing homes and assisted living within the community? How can these groups be helped when disasters occur? [32]. These collaborations can establish a step-by-step action roadmap to implement effective psychological interventions, taking into consideration the population demographics and history of disasters, such as pandemics, tornados, and hurricanes. Similarly, these collaborations could determine how these plans are communicated to city/town residents and their acceptance and input attained [33][34][35]. Every stage of the plan development for mental health preparedness needs to be communicated effectively to the public through social media, open meetings, and other communication channels. On the other hand, the community members need to respond to the plan's goals and objectives [36][37].

When the roadmap of the intervention is completed, it must be available through multiple community-based and online platforms for final acceptance. This plan must continually be updated; the plan should be reviewed after a disaster occurs, and the public should be contacted for feedback and critiques [34][35]. Researchers strongly recommended that these community collaborations be prepared for disasters in the near and far future. Accomplishing proactive future catastrophe planning necessitates the community collaboration to respond to the needs of the present mental health while planning for those in the future, keeping in mind that the most critical factor is maximizing resiliency by defining which groups are at risk, what treatment they may need and how could they receive it [1].

3. Conclusion

In order to build disaster resiliency and to develop an effective psychological intervention plan immediately after a disaster, communities should form a collaborative of nonprofit organizations, individuals, and city agencies to assess the unique needs of the vulnerable populations in a disaster context, and to include the goals reflecting these needs, and then plan the steps that should be taken for mental health required intervention, and establish ways to enhance resiliency and disaster preparedness before any disaster occurs.

References

- ^{a, b, c, d, e, f} Schmidt, R. & Cohen, S. (2020). *Disaster Mental Health Community Planning: A Manual for Trauma-Informed Collaboration*. New York: Routledge.
- ^{a, b} Blownkamp, C. (2012). *Community Collaboration in disaster: The role of voluntary agencies*. *Prehosp Disaster Med*, 15(4):207-208, Retrieved from <https://www.cambridge.org/core/journals/prehospital-and-disaster-medicine/article/abs/community-collaboration-in-disaster-the-role-of-voluntary-agencies/03D75C8392F5F224A8C1D814A968C043>
- [^] Abukhalaf, A. H. I., von Meding, J., Dooling, J., & Abusal, D. (2022). *Assessing international students' vulnerability to hurricanes: University of Florida case study*. *International Journal of Disaster Risk Reduction*, 55, 102812. <https://doi.org/10.1016/j.ijdr.2022.102812>.
- ^{a, b} Alfonso, C. (2018). *PTSD and suicide after natural disasters (article summary)*. *Psychiatr Times* 35(4). Article retrieved from <https://www.psychiatristimes.com/view/ptsd-and-suicide-after-natural-disasters>
- ^{a, b} Varghese, A., George, G., Kondaguli, S. V., Naser, A. Y., Khakha, D. C., & Chatterji, R. (2021). *Decline in the mental health of nurses across the globe during COVID-19: A systematic review and meta-analysis*. *Journal of Global Health*, 11, 05009. doi:10.7189/jogh.11.05009
- [^] Naser, A. Y., Dahmash, E. Z., Al-Rousan, R., Alwafi, H., Alrawashdeh, H. M., Ghouli, I., et al. (2020). *Mental health status of the general population, healthcare professionals, and university students during 2019 coronavirus disease outbreak in Jordan: A cross-sectional study*. *Brain and Behavior*, 10(8), e01730-n/a. doi:10.1002/brb3.1730
- [^] Volk, S., Koehler, T., & Pudelko, M. (2013). *Brain drain: The cognitive neuroscience of foreign language processing in multilingual organizations*. *Academy of Management Proceedings*, 2013(1), 10494. doi:10.5465/AMBPP.2013.10494abstract
- [^] Cohen, S., von Meding, D., Abukhalaf, A.H.I. (2021). *Successful Pandemic and Disaster Mental Health Preparedness Requires Widespread Community Collaboration*. *Academia Letters*, Article 3987. <https://doi.org/10.20935/AL3987>.
- [^] Gard, B. & Emory, G. (2006). *Community Mental Health Response to Crisis*. *J Clin Psychol*: 62: 1029–1041. Retrieved from <http://cretscmhd.psych.ucla.edu/nola/volunteer/EmpiricalStudies/Community%20Mental%20Health%20Response%20to%20Crisis.pdf>
- [^] Naser, A. Y., Dahmash, E. Z., Alsairafi, Z. K., Alwafi, H., Alyami, H., Jalal, Z., et al. (2021). *Knowledge and practices*

- during the COVID-19 outbreak in the middle east: A cross-sectional study. *International Journal of Environmental Research and Public Health*, 18(9), 4699. doi:10.3390/ijerph18094699
11. [^]St. Cyr, J. F. (2005). *At risk: Natural hazards, people's vulnerability, and disasters*. *Journal of Homeland Security and Emergency Management*, 2(2), 4. doi:10.2202/1547-7355.1131
 12. [^]Cohen, S., Abukhalaf, A.H.I. (2021). *COVID-19's Negative Mental Health Impact Goes Well Beyond Standard At-Risk Populations: Action Needs To Be Taken to Combat Long-term Nationwide Emotional Disruption*. *Academia Letters*, Article 3621. <https://doi.org/10.20935/AL3621>.
 13. [^]McCabe, Lee, Semon, N., Lating, J., Everly, G., Perry C. et al. (2014). *An academic-government-faith partnership to build disaster mental health preparedness and community resilience*. *Pub Health Rep* 129(4): 96-106. Retrieved from https://www.google.com/search?q=public+health+reports+abbreviation&rlz=1C1GCEA_enUS927US927&oq=public+health+reports+abb&aqs=chrome.0.0i512j69i57j0i390.4138j0j15&sourceid=chrome&ie=UTF-8
 14. [^]Schmueli, D., Ozawa, C., & Kaufman, S. (2021). *Collaborative planning principles for disaster preparedness*. *Int J Disast Risk* 52. Retrieved from <https://www.sciencedirect.com/science/article/pii/S2212420920314837>
 15. [^]Abukhalaf, A. H. I., Naser, A. Y., Cohen, S. L., Von Meding, J., & Abusal, D. M. (2023). *Evaluating the mental health of international students in the U.S. during the COVID-19 outbreak: The case of University of Florida*. *Journal of American College Health*, 1–10. <https://doi.org/10.1080/07448481.2023.2168547>
 16. [^]Uekusa, S., & Matthewman, S. (2017). *Vulnerable and resilient? Immigrants and refugees in the 2010–2011 canterbury and tohoku disasters*. *International Journal of Disaster Risk Reduction*, 22, 355-361. doi:10.1016/j.ijdr.2017.02.006
 17. [^]Popoli, M., Yan, Z., McEwen, B. S., & Sanacora, G. (2011). *The stressed synapse: the impact of stress and glucocorticoids on glutamate transmission*. *Nature Reviews Neuroscience*, 13(1), 22.
 18. [^]Guidi, J., Lucente, M., Sonino, N., & Fava, G. A. (2021). *Allostatic load and its impact on health: a systematic review*. *Psychotherapy and psychosomatics*, 90(1), 11-27.
 19. ^{a, b}Centres for Disease Control and Prevention. (2021). *Claims Reimbursement to Health Care Providers and Facilities for Testing, Treatment, and Vaccine Administration of the Uninsured*. <https://data.cdc.gov/Administrative/Claims-Reimbursement-to-Health-Care-Providers-and-/rksx-33p3>
 20. [^]Jones, B. (2020). *Increasing share of Americans favor a single government program to provide health care coverage*. *Pew Research Center*, 29.
 21. ^{a, b}King, J. S. (2020). *Covid-19 and the need for health care reform*. *New England Journal of Medicine*, 382(26), e104.
 22. ^{a, b}Breslau, J., Finucane, M. L., Locker, A. R., Baird, M. D., Roth, E. A., & Collins, R. L. (2021). *A longitudinal study of psychological distress in the United States before and during the COVID-19 pandemic*. *Preventive medicine*, 143, 106362.
 23. [^]Pan American Health Organization. (2020). *Stronger Together*. <https://www.paho.org/en/stronger-together-2020>
 24. [^]Berk, M., Williams, L. J., Jacka, F. N., O'Neil, A., Pasco, J. A., Moylan, S.,... & Maes, M. (2013). *So depression is an inflammatory disease, but where does the inflammation come from?*. *BMC medicine*, 11(1), 1-16.
 25. [^]Naser, A. Y., Hameed, A. N., Mustafa, N., Alwafi, H., Dahmash, E. Z., Alyami, H. S., et al. (2021). *Depression and*

anxiety in patients with cancer: A cross-sectional study. *Frontiers in Psychology*, 12, 585534.

doi:10.3389/fpsyg.2021.585534

26. [^]Spade, D. (2020). *Mutual aid: Building solidarity during this crisis (and the next)*. Verso Books.
27. [^]Thorup-Binger, C. (2018). *Vulnerability and capacities of international students in the face of disasters in Auckland, New Zealand: A qualitative descriptive study*. Retrieved from <http://hdl.handle.net/10292/11803>
28. [^]Bendau, A., Plag, J., Kunas, S., Wyka, S., Ströhle, A., & Petzold, M. B. (2021). Longitudinal changes in anxiety and psychological distress, and associated risk and protective factors during the first three months of the COVID-19 pandemic in Germany. *Brain and behavior*, 11(2), e01964.
29. [^]Méndez, M., Flores-Haro, G., & Zucker, L. (2020). The (in) visible victims of disaster: Understanding the vulnerability of undocumented Latino/a and indigenous immigrants. *Geoforum*, 116, 50-62. doi:10.1016/j.geoforum.2020.07.007
30. [^]U.S. Department of Health and Human Services (2021). *Cultural and linguistic competency in disaster preparedness and response fact sheet*. Retrieved from <https://www.phe.gov/Preparedness/planning/abc/Pages/linguistic-facts.aspx>
31. [^]Parker, G., Lie, D., Siskind, D., Martin-Khan, M., Crompton, D. et al (2016). Mental health implications for older adults after natural disasters. *Int Psychogeriatr* 28(1). Retrieved from <https://pubmed.ncbi.nlm.nih.gov/26212132/>
32. [^]Riddell, G, van Delden, H, Maier, H, & Zecchin, A. (2020). Tomorrow's disasters—Embedding foresight principles into disaster risk assessment and treatment. *Int. J. Disaster Risk Reduct* 45: 101437. Retrieved from <https://www.sciencedirect.com/science/article/pii/S2212420920314837>
33. [^]Uekusa, S. (2020). The paradox of social capital: A case of immigrants, refugees and linguistic minorities in the canterbury and tohoku disasters. *International Journal of Disaster Risk Reduction*, 48, 101625. doi:10.1016/j.ijdr.2020.101625
34. ^{a, b}Christal N. Davis, Marcela C. Weber, Stefan E. Schulenberg, & John J. Green. (2019). *University students' disaster preparedness: A focus group study*
35. ^{a, b}Franco, M., Hsiao, Y., Gnilka, P. B., & Ashby, J. S. (2018). Acculturative stress, social support, and career outcome expectations among international students. *International Journal for Educational and Vocational Guidance*, 19(2), 275-291. doi:10.1007/s10775-018-9380-7
36. [^]SAMHSA (2016). *Stronger together: An in-depth look at selected community-level approaches to disaster behavioral health*. Retrieved from https://www.samhsa.gov/sites/default/files/programs_campaigns/dtac/srb-community-approaches.pdf
37. [^]Bodenreider, C., Wright, L., Barr, O., Xu, K., & Wilson, S. (2019). Assessment of social, economic, and geographic vulnerability pre- and post-hurricane Harvey in Houston, Texas. *Environmental Justice*, 12(4), 182-193. doi:10.1089/env.2019.0001