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Cognitive Behavioral Crisis Intervention Model for Health Care Professionals in Pakistan

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Abstract

The health care professionals (HCPs) in Pakistan are vulnerable to the negative psychological impact of the current COVID-19 pandemic. The shortage of trained HCPs in Pakistan coupled with vulnerable infrastructure and depleted resources make the situation a source of psychological reactions like fear, anger, anxiety, and depression for HCPs during COVID-19 outbreak. These psychological reactions are produced by the preceding thoughts and emotions according to the cognitive behavioral model. Therefore, a cognitive behavioral crisis intervention model (CBCIM) is proposed with aim of helping HCPs deal with these psychological reactions efficiently. The common components of CBCIM include the cognitive restructuring of the negative thoughts, teaching of relaxation and mindfulness exercises, the teaching of ACT-ADD approach and use of coping cards, district wise team-based action plan and the provision of these services to HCPs regularly even after the end of COVID -19 pandemic.

Keywords: Cognitive Behavioral Crisis Intervention, COVID-19, Health Care Professional, Pakistan, Public Mental Health

Introduction

The world is currently facing a new pandemic known as the severe acute respiratory syndrome coronavirus-2 or simply abbreviated as COVID-19 (1). The WHO declared Public Health Emergency of International Concern (PHEIC) on 30th January 2020 (2). This pandemic created psychological unrest and catastrophe throughout the world (3). The health care professionals (HCPs) are no exception to this. This pandemic has a biggest toll on HCPs throughout the world. The HCPs are the front line workers in the war against this pandemic. The role of HCPs begins from the very start, from testing the general population for diagnosis of the pandemic, to the provision of critical care to serious cases and handling deaths due to this deadly pandemic.

This new pandemic of COVID-19 is causing a huge burden on the already vulnerable Pakistani healthcare infrastructure and HCPs. There is shortage of doctors

in Pakistan for the past couple of years. The number of qualified and registered doctors in Pakistan is around 0.2 million (4) for a giant population of more than 200 million (5). This equals to roughly one doctor for a sum of around 900 people. There is ratio of less than 0.6 beds for 1000 people and less than 0.75% of GDP allocated to health whereas at least 6% of GDP should be allocated to health sector as per WHO guidelines (6). This further aggravates the already depleting situation of low beds, ventilators, intensive care facilities, medications and other needed supplies usually required during an epidemic in a country leading to serious implications for both patient care and care of HCPs (7,8).

The health care professionals including physicians, surgeons, nurses, technicians and other related people working in medical facilities are at an increased risk of catching infections and developing mental health problems such as fear, anxiety, distress, hopelessness, depression and post-traumatic stress disorder (PTSD)

(7). A recent study found that stress, anxiety, and depression were highly prevalent in a sample of HCPs posted in COVID-19 wards in hospitals of Karachi (9). The prevalence was found 90%, 86%, and 72% for stress, anxiety, and depression respectively. The same study found that the 89% of the HCPs working in COVID-19 wards of Karachi based hospitals feared spreading virus to their families and 80% feared to contract the virus themselves (9). Similarly, 18-57% of the HCPs experienced severe psychological and emotional problems during and after the SARS outbreak in 2003 (9). In Pakistan, being a junior staff member and frontline HCP were found to be independent risk factor for both depression and anxiety (10). On the other hand, among postgraduate trainees, being frontline HCP, senior HCP, and being female were found to be associated with increased risk of both depression and anxiety (11). These figures can be contrasted with HCPs working in Wuhan, China where the prevalence of distress (71.5%), anxiety (45%), and depression (50%) were lower than Pakistan respectively (11).

Moreover, the risk of catching COVID-19 disease and moving to isolation ward as a patient cause them experience frustration, anger and helplessness (12). As a precautionary measure, most HCPs isolated themselves from their families and friends to avoid the spread of the virus. This further led them to experience lowered social support during the pandemic (12). The fear of stigma and discrimination associated with COVID-19 outbreak made the HCPs reluctant in seeking mental health services (13) and HCPs may experience thoughts to resign from their services as reported by doctors during SARS outbreak in 2003 (14). All these factors took a toll on the mental health of HCPs in Pakistan (15).

Pakistan does not have national emergency action plan for emergencies like COVID-19 (16). Besides, Pakistan is ranked 35.5/100 on global health security index and falls in the category of least prepared countries to combat pandemics (105/195) (17). Thus, there is urgent need of developing a psychological crisis intervention model for providing psychological support services to health care professionals working in Pakistan (18). It is imperative to provide mental health support services to HCPs in order to speed-up the process of prevention and control of the pandemic (19). So far as of 22nd December 2020, the comprehensive mental health support services for the front-line workers is under addressed in Pakistan. The HCPs do not receive

adequate training in the psychological first aid or other mental health support (15). The developed countries have developed detailed psychological crisis intervention models to address the mental health issues in times of an epidemic (19). This opinion based article proposes a psychological crisis intervention model based on cognitive behavior therapy principles and techniques. This will be referred to as Cognitive Behavioral Crisis Intervention Model for Health Care Professionals (CBCIM).

Common Goals of CBCIM

1. Teaching HCPs techniques to overcome their negative automatic thoughts.
2. Reducing the fear and anxiety regarding the COVID-19 outbreak.
3. Improving the overall mood and physical health of HCPs.
4. Limit anger and frustration.
5. Giving HCPs time to adopt and practice healthy lifestyle.
6. Learning evidence-based coping strategies and psychological first aid principles.
7. Teaching HCPs to accept challenges with reasonable expectations.

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1. *Socratic Dialogue*: Socratic Dialogue is the technique of challenging the beliefs of a person by asking him/her for the evidence in a step by step fashion. The fear and uncertainty of HCPs may be reduced by the use of this technique, like asking them about the real dangers of COVID-19. The cognitive errors of HCPs can be identified and corrected. The cognitive restructuring done by the use of Socratic Dialogue can be facilitated by making the HCPs stick to the news sources for a limited amount of time and only from trusted sources like Government of Pakistan COVID-19 website. The news from social media should be avoided to reduce the extent of fear and anxiety (20,21).

2. The psychological state of HCPs can be improved by the behavioral activation. The behavioral activation helps in identifying what is important and pleasurable in one's life. Teaching HCPs to enjoy their duty by helping people in need would arouse positive and prosocial emotions and would ease sense of psychological pain.

3. Teaching the HCPs simple relaxation exercises can be fruitful in helping them coping with heightening stress throughout the day. A simple one minute exercise can be practiced several times a day. Teach them to take a

deep breathe through their nose for 8 seconds, then fill the lungs with the air for 4 seconds, and finally exhale the air from the lungs in 8 seconds. The HCPs can repeat this simple exercise 3 times in a minute. This would make their musculature relax and calm.

4. The feelings of stress and anxiety can be lowered by learning and doing mindfulness. Mindfulness is an evidence based technique used with several cognitive behavior therapies. Mindfulness is the focusing of one's attention in the present moment in a non-judgmental manner. The mindfulness does not help the anxiety and worries to go away rather it teaches to accept the situation in a realistic manner with present focus and kind attitude towards self.

5. Teach HCPs how to tolerate psychological distress. It is not always a good idea to try to end the psychological distress, rather it is more practical to teach the acceptance of distress. It is achieved by following the ACT-ADD approach where A stands for Acknowledging the situation in practical and realistic terms, C stands for correctly appraising the situation in mind regarding the physical and psychological aspects of the situation, T stands for The proper use of available resources; A stands for Action plan based on best available resources, D stands for Disinfect, and D stands for Distance from other people in medical settings.

Another alternative is the use of ICCE approach where I stands for identifying the problematic situation, C stands for contemplate the possible solutions, C stands for choosing the best available solution, and E stands for evaluating the already chosen and implemented solution. Teach the HCPs using cost and benefit analysis regarding the situation.

6. The use of small coping cards is often a beneficial strategy in times of crisis. The medical wards, intensive care units, clinics, and other medical areas should have coping cards pasted on walls with various coping messages printed in brief words. These cards would remind HCPs what they have been taught by the crisis intervention team.

7. The use of a team based action plan is also useful in times of crisis. Each member of the team should have an understanding of his/her assigned task and have competence in doing the assigned work. The crisis intervention team may comprise medical specialists other than mental health professionals to make these teams more effective. The team members should be rotated regularly and should be provided some free time to spend with their family and engage in personal

activities like taking naps and proper sleep, eating, and walking or brief exercise (22). The use of walk or brief exercise is associated with the release of endorphins that boost mood and immunity, thus helps sustain off the negative stress and anxiety. Similarly, the provision of social support has been found effective in the reduction of stress and anxiety in HCPs during COVID-19 (3). These have also been endorsed by the WHO Psychosocial Support Guidelines (23).

8. Mental health crisis intervention teams (MHCTs) should be formed at each district headquarter hospital comprising psychiatrists, clinical psychologists, psychiatric nurses and social workers. Due to the shortage of qualified doctors and specialists in the country, many other allied professionals may be included in a crisis intervention team consisting of psychological counsellors and psychology graduates and teachers to provide training in the implementation of CBCIM. The community care workers may be provided crisis intervention training to cater to the shortage of qualified mental health professionals in the country.

9. The psychological interventions should be tailored to the varying degrees of psychological symptoms experienced by HCPs. The regular screening of HCPs for fear, anxiety, distress, depression and PTSD needs to be conducted by the mental health professionals (24). The psychological support services to HCPs need to be provided well after the end of COVID-19 pandemic to ward off the effects of negative stress (25,26).

In this regard, the Government of Pakistan has established telemedicine web portal and corona mobile app to provide online consultation services free of cost (27). The YDA also offered online support to fellow HCPs through its web portal (28). Different private sector organizations offered free online consultative services for HCPs and general public (29). However, these services mostly were focused on urban population. Additionally, only a small number of population could avail these services as only 20% of the population had access to internet (30).

The proposed CBCIM has been found effective in reducing stress and other negative psychological reactions in Western medical settings (32) and shares components with the WHO's mental health and psychosocial considerations during the COVID-19 (24). The CBCIM is more comprehensive and offers practical tips for reducing stress and anxiety and promoting positive emotions and proactive behavior in times of COVID-19 outbreak. The key areas for the adaptations

of this model is medical settings where COVID-19 services are being offered so that maximum benefit be given to HCPs serving in those medical settings.

Conclusion

The HCPs in Pakistan are experiencing the depletion of resources to fight against the COVID-19 pandemic besides shortage of trained HCPs. As a consequence, the HCPs are vulnerable to experience psychological reactions including fear, anger, anxiety, hopelessness and depression. The CBCIM is proposed to tackle the psychological needs of the HCPs and need to be implemented by mental health crisis intervention teams to be formed at each district headquarter hospital in Pakistan.

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Ethics Committee Approval

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Informed Consent

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Conflict of Interest Statement

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References

1. Li Q, Guan X, Wu P, Wang X, Zhou L, Tong Y, et al. Early Transmission Dynamics in Wuhan, China, of Novel Coronavirus-Infected Pneumonia. *N Engl J Med.* 2020; 382(13):1199-1207. doi: 10.1056/NEJMoa2001316.
2. World Health Organization. Statement on the second meeting of the International Health Regulations (2005). Emergency Committee regarding the outbreak of novel coronavirus (2019-nCoV). Published January 30, 2020. Accessed April 12, 2020. [https://www.who.int/news-room/detail/30-01-2020-statement-on-the-second-meeting-of-the-international-health-regulations-\(2005\)-emergencycommittee-regarding-the-outbreak-of-novel-coronavirus-\(2019-ncov\)](https://www.who.int/news-room/detail/30-01-2020-statement-on-the-second-meeting-of-the-international-health-regulations-(2005)-emergencycommittee-regarding-the-outbreak-of-novel-coronavirus-(2019-ncov))
3. Xiao C. A novel approach of consultation on 2019 novel coronavirus (COVID-19)-Related psychological and mental problems: structured letter therapy. *Psychiatr Invest* 2020; 17(2):175-176. doi: 10.30773/pi.2020.0047
4. Pakistan Medical & Dental Council. Statistics. Published September 2019. Accessed December 13, 2020. <http://www.pmdc.org.pk/Statistics/tabid/103/Default.aspx>.
5. Pakistan Bureau of Statistics. Population Census. Published January 2018. Accessed December 14, 2020. <http://www.pbs.gov.pk/content/population-census>
6. Noreen N, Dil S, Niazi SUK, Naveed I, Khan NU, Khan FK, et al. Coronavirus disease (COVID-19) Pandemic and Pakistan; Limitations and Gaps. *Global Biosecurity* 2020; 1(4). DOI: <http://doi.org/10.31646/gbio.63>
7. Lai J, Ma S, Wang Y, Cai Z, Hu J, Wei N, et al. Factors Associated with Mental Health Outcomes Among Health Care Workers Exposed to Coronavirus Disease 2019. *JAMA Network Open* 2020; 3(3): e203976. doi:10.1001/jamanetworkopen.2020.3976
8. Hick JL, Hanfling D, Wynia MK, Pavia AT. Duty to Plan: Health Care, Crisis Standards of Care, and Novel Coronavirus SARS-CoV-2. *NAM Perspectives.* Discussion paper. National Academy of Medicine. Washington, DC. Accessed December 15, 2020. <https://doi.org/10.31478/202003b>
9. Sandesh R, Shahid W, Dev K, Mandhan N, Shankar P, Shaikh A, et al. Impact of COVID-19 on the Mental Health of Healthcare Professionals in Pakistan. *Cureus* 2020; 12(7): e8974. doi:10.7759/cureus.8974
10. Imran N, Hashmi AM, Haider II, Naqi SA, Asif A, Gondal KM. The Toll it Takes: Mental Health Burden and Associated Factors During COVID-19 Outbreak among Healthcare Workers in Lahore, Pakistan. *Annals KEMU* 2020; 26(2):317-23. <https://www.annalskemu.org/journal/index.php/annals/article/view/3918>
11. Imran N, Masood HMU, Ayub M, Gondal KM. Psychological impact of COVID-19 pandemic on postgraduate trainees: a cross-sectional survey. *Postgrad Med J* 2020; 138364. doi: 10.1136/postgradmedj-2020-138364
12. Huang JZ, Han MF, Luo TD, Ren AK, Zhou XP. Mental health survey of 230 medical staff in a tertiary infectious disease hospital for COVID-19 [article in Chinese]. *Zhonghua Lao Dong Wei Sheng Zhi Ye Bing Za Zhi.* 2020; 38:192-195. DOI. 10.3760/cma.j.cn121094-20200219-00063
13. Zheng W. Mental health and a novel coronavirus (2019-nCoV) in China [Published Ahead of Print March 21, 2020]. *J Aff Disord.* DOI: <https://doi.org/10.1016/j.jad.2020.03.041>
14. Bai Y, Lin CC, Lin CY, Chen JY, Chue CM, Chou P. Survey of stress reactions among health care workers involved with the SARS outbreak. *Psychiatr Serv* 2004; 55 (9): 1055- 1057.

15. Raza A, Matloob S, Abdul Rahim NF, Halim HA, Khattak A, Ahmed NH, et al. Factors Impeding Health-Care Professionals to Effectively Treat Coronavirus Disease 2019 Patients in Pakistan: A Qualitative Investigation. *Front. Psychol* 2020; 11:572450. doi: 10.3389/fpsyg.2020.572450
16. Shehla Zaidi. Withstanding health shocks. *Dawn* 13 April, 2020. Accessed 25 January 2021. <https://www.dawn.com/news/1544319>
17. Global Health Security Index 2019. John Hopkins Bloomberg School of Public Health. Centre of Health Security. Accessed 25 January 2021. <https://www.ghsindex.org/wp-content/uploads/2019/10/2019-Global-Health-Security-Index.pdf>
18. Mukhtar S. Mental health of medical workers in Pakistan during the pandemic COVID-19 outbreak. Letter to Editor [Ahead of Print April 16, 2020]. *Asian J Psychiatr* 51. DOI: <https://doi.org/10.1016/j.ajp.2020.102080>
19. Banerjee A. The Double Burden of the Covid-19 Pandemic. Published 2020. Accessed 25 January 2021. <https://blogs.bmj.com/bmj/2020/08/05/amitava-banerjee-the-doubleburden-of-the-covid-19-pandemic>
20. Roberts AR. Crisis intervention handbook: assessment, treatment, and research. 3rd ed. Oxford: Oxford University Press; 2005.
21. Chan MS, Winneg K, Hawkins L, Farhadloo M, Jamieson KH, Albarracin D. Legacy and social media respectively influence risk perceptions and protective behaviors during emerging health threats: A multi-wave analysis of communications on Zika virus cases. *Soc Sci Med* 2018; 212: 50-59. DOI: 10.1016/j.socscimed.2018.07.007
22. Holman EA, Garfin DR, Silver RC. Media's role in broadcasting acute stress following the Boston Marathon bombings. *PNAS* 2014; 111(1): 93-98. DOI: <https://doi.org/10.1073/pnas.1316265110>
23. Greenberg N, Docherty M, Gnanapragasam S, Wessely S. Managing mental health challenges faced by healthcare workers during covid-19 pandemic. *BMJ* 2020; 368:m1211. doi: 10.1136/bmj.m1211
24. World Health Organization. Mental Health and Psychosocial Considerations during COVID-19 Outbreak. Accessed 25 January 2021. <https://www.who.int/publications/i/item/WHO-2019-nCoV-MentalHealth-2020.1>
25. Chen Q, Liang M, Li Y, Guo J, Fei D, Wang L, et al. Mental health care for medical staff in China during the COVID-19 outbreak. *Lancet Psychiatr* 2020; 7(e15–e16). doi: 10.1016/S2215-0366(20)30078-X
26. Fan F, Long K, Zhou Y, Zheng Y, Liu X. Longitudinal trajectories of post-traumatic stress disorder symptoms among adolescents after the Wenchuan earthquake in China. *Psychol Med* 2015; 45(13): 2885–96. doi: 10.1017/S0033291715000884
27. Cheng SKW, Wong CW, Tsang J, Wong KC. Psychological distress and negative appraisals in survivors of severe acute respiratory syndrome (SARS) *Psychol Med* 2004; 34:1187–95.
28. Daily Times. Pakistan. In a first, governor inaugurates Corona Telemedicine Web Portal. Published 13 April 2020. Accessed 25 January 2021. <https://dailytimes.com.pk/578965/in-a-first-governor-inaugurates-corona-telemedicine-web-portal/>
29. The Express Tribune. Corona telemedicine portal, App introduced. Published 19 March 2020. Accessed 25 January 2021. <https://tribune.com.pk/story/2179012/8-corona-telemedicine-portalapp-introduced/>
30. Telehealth for coronavirus (COVID-19). Liaquat National Hospital. Accessed 25 January 2021. <https://www.lnh.edu.pk/Pages/teleHealth>
31. National Institute of Population Studies (NIPS). Pakistan Demographic and Health Survey 2017-18. Published 2019. Accessed 25 January 2021. https://www.nips.org.pk/album_100.htm
32. Miller AR. CBT for frontline medical professionals: Brief interventions during a time of crisis. Published 4 April 2020. Accessed 15 December 2020. <https://beckinstitute.org/cbt-for-front-line-medical-professionals-brief-interventions-during-a-time-of-crisis-webinar/>