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Review Article

The impact of COVID-19 on residential rehabilitation programs for individuals with substance use disorder

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ABSTRACT

According to UNODC and WHO global estimates, only one in six individuals with substance use disorder (SUD) has access to residential rehabilitation programmes. This proportion further declined as a result of COVID-19 pandemic, which caused devastating problems to the individuals with SUD. The provision of residential treatment for individuals with SUD was interrupted due to COVID-19, in the aspects of the rehabilitation program, recruitment and service provision for rehabilitees or clients, staff and the infrastructural facilities. Further, individuals with SUD are known to have a greater risk of being infected with COVID-19 virus and developing post COVID complications due to their unstable psychological state, weakened immunity, malnutrition and other health related complications which have arisen with the prolonged use of substances. There is a timely need to provide a substantial emphasis on individuals with SUD during COVID-19 pandemic and to undertake the necessary steps to deliver the needed treatment. Critical appraisal of the available empirical evidence is instrumental prior to the laying-out and providing residential rehabilitation amidst the COVID-19 pandemic. Hence, the current review intended to explore the impact of the COVID-19 pandemic on residential rehabilitation for individuals with SUD by scrutinizing the latest empirical evidence in order to battle against the future pandemic situations.

Keywords: SUD, COVID-19, Rehabilitation

INTRODUCTION

There are several existing and emerging problematic addictions, either associated with the use of drugs/substances (alcohol, tobacco, cannabis, heroin, methamphetamines, cocaine, opioids) or with particular behaviours (gambling, gaming).[1,2] Among these addictions, drug/ substance addiction has become a major public health challenge in the contemporary world.[3,4] Continuous substance use may lead to SUD. According to the diagnostic and statistical manual of mental disorders (DSM V), SUD is defined as a condition characterized by impaired control over substance use, social impairments, risky use and physical dependency.[5] The severity of the SUD varies from mild to severe, depending on the number of symptoms a person may incur.[6] According to the World drug report 2021, around 270 million active substance users were reported across the globe with over 36 million individuals suffering from SUD.[7] The initiation of substance use is found to be driven by

various factors such as peer pressure, curiosity, stress, easy access to the substance, lack of parental supervision, and gangsterism among youth.[8-11] SUD involves the continued and uncontrollable use of substances from either legal or illegal origin.[1] In spite of the significant deterioration of physical and social aspects of the quality of life, substance use alters the brain areas involved in reward, motivation, learning, memory and particular behaviours which affect the psychological aspect of the individuals with SUD.[12]

The treatment services for SUD are aimed at helping the affected individuals in cessation of their uncontrollable urge of substance use to achieve a better quality of life while continuing to be drug free without any relapses.[13] Treatment programs for SUD vary across different countries in the world and enrolling into a treatment program depends on the availability, accessibility, needs of the client and mainly the severity of SUD.[14] Administration of SUD treatment is carried out in different treatment settings such as community-based outreach settings, specialized outpatient treatment, specialized short-term inpatient treatment, and specialized long-term residential treatment.[15] Community based outreach programs are functioning outside the structured treatment facilities which are not specialized for the treatment of individuals with SUDs. Some outreach programmes are located in general health care settings which provide screening facilities and referrals for identification, prevention, and pharmacological treatment of individuals with less severe SUD. Specialized outpatient treatment services provide specialized and individualized treatment for individuals with SUD. Specialized short-term inpatient treatment services provide 24-hour care in diagnosing and managing clinical conditions which result from substance use. Specialized long-term residential treatment and rehabilitation offers a community-based environment for individuals with SUD to reside and receive specialized treatment while maintaining abstinence from substances.[15]

According to UNODC and WHO global estimates, only one in six individuals with SUD has access to treatment programmes. This proportion further declined in Latin America and Africa, where only one in 11 and one in 18 individuals with SUD have access to treatment programmes, respectively.[7] COVID-19 has worsened the situation by increasing the barriers in accessing the treatment programs.[16] In some countries even though a variety of treatment services are available, due to the stigma associated with COVID-19, individuals with SUD are reluctant to access the treatment services.[17] There is a timely need of mitigating these barriers while undertaking necessary steps to improve the accessibility and acceptability of the required treatment services, especially residential rehabilitation. Critically appraising the available empirical evidence is instrumental prior to lay outing and providing residential rehabilitation amidst the COVID-19 or future pandemic situations. Hence, the current review intended to explore the impact of COVID-19 pandemic on residential rehabilitation for individuals with SUD by critically appraising the empirical evidence.

IMPACT OF COVID-19 ON INDIVIDUALS WITH SUD

After the declaration of Coronavirus disease 2019 (COVID-19) as a pandemic by the world health organization on 11th March 2020, a rapid transmission of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and its variants could be observed causing dramatic changes and adverse effects to various aspects of human lives across the globe as a result of high mortality rates and infection control measures.[18]

Among these adverse effects, heightened levels of psychological problems such as stress, anxiety and depression due to COVID-19 among different populations around the world were evident.[19,18] Along with other psychological problems, significant levels of stress has been linked to the instigation of substance use and relapses of SUD.[20,21]Also, individuals with SUD are at an increased risk of getting COVID-19 and post COVID complications due to their unstable psychological state and substance seeking behaviour, weakened immunity, malnutrition and health complications which have arisen with the prolonged use of substances affecting their respiratory and cardiovascular health.[22-27]

The primary prevention strategies utilized for COVID-19 such as social distancing and self-isolation, lockdowns, travel restrictions, and restrictions for social gatherings, also limited the activities which directly affect the socioeconomic status of the world.[28] According to the October 2021 world economic outlook prepared by the international monetary fund (IMF), global economic growth fell to an annualized rate of around -3.2% in 2020, with an expected recovery of 4.9% for 2022.[29] Such an economic situation imposes a higher impact on individuals with SUD than the rest of the population, due to the bidirectional relationship between socioeconomic status and substance use where lower socioeconomic status can cause increased substance use which further degrades the socioeconomic status.[25,30]

In this post COVID era there is also a higher susceptibility for new strains of COVID-19.[31] Since there is an increased risk of SUD and associated consequences,[21] treatment services for SUD should be considered an essential service but, the treatment provision for SUD and the accessibility of the available treatment services were limited due to the impact of COVID, leaving the individuals with SUD vulnerable to the complications of SUD and COVID-19 infection.[32,33]

RESIDENTIAL TREATMENT FOR INDIVIDUALS WITH SUD

The multifaceted impact of SUD requires, the treatments to address a range of issues from physiological,

psychological, behavioural and social aspects of an individual.[34]

Residential treatment is a shared 24-hour live-in facility for individuals with SUD which offers support, care and supervision under professionals in the field within a safe and structured environment.[35] Treatment modalities for residential treatment for SUD include overdose identification and management, pharmacological interventions, bio-psychosocial interventions, therapeutic communities, and treatment for co-occurring psychiatric and physical health conditions.[15] Residential treatment can be differentiated based on the provided services (therapeutic communities, short term residential treatment and recovery housing) [34] and enrolment of rehabilitees (adolescents, pregnant mothers and criminal justice populations).[36]

IMPACT OF COVID-19 ON RESIDENTIAL TREATMENT FOR SUD

High demand for treatment and residential rehabilitation for SUD was seen either as a result of using more substances during the COVID-19 or suffering from withdrawal symptoms due to limitations in accessing substances with the lockdown, economical downfall and increased cost of substances.[37-39] In contrast, the provision of residential rehabilitation was complicated due to the burden created by COVID-19. Further it has been very challenging for treatment services to take measures to prevent the transmission of COVID-19 infection and cater to the high demand in a fruitful manner.[33] Therefore, after a severity assessment, individuals with less severe SUD were incorporated into the outpatient treatment modalities and outpatient consultations which were conducted via telephone while individuals with severe SUD and related complications were enrolled in the residential rehabilitation programs.[40] The service providers of residential treatment facilities had to be vigilant in preventing the infection among rehabilitees and staff as they are at a higher risk of COVID-19 infection due to the shared living conditions,[41] especially in public residential treatment facilities where the individuals with SUD have to share the rooms with several other rehabilitees. [33]As a result of COVID-19, the provision of residential treatment was interrupted in the aspects of the rehabilitation programs, recruitment and service provision for rehabilitees and their service maintenance , staff and the infrastructure.[33]

IMPACT OF COVID-19 ON RESIDENTIAL TREATMENT PROGRAMME

Impact of COVID-19 on enrolment of clients

Residential treatment programs enrolled half or less than full capacity, with the inability to cater for demand and some programs also ceased enrolment due to transmission of COVID-19 within the facility.[40] The enrolment process of individuals with SUD for the residential treatment programmes was affected as they had to remain at their residence during the lockdown period or had to produce reports, certified as negative for COVID-19 or undergo a period of quarantine before enrolling to residential treatment.[33]

Impact of COVID-19 on program conduct

The programs implemented a variety of infection control measures in order to function amidst the COVID-19 pandemic. The infection control and safety measures included wearing masks, washing hands, sanitization of surfaces, refraining from touching face, not sharing utensils, limiting the movements of the residents, regular monitoring of the body temperature, maintaining distance between clients and staff, using physical barriers for separating beds.[41] Further, the programs were impacted due to the inability in conducting physical meetings (in person and group counselling), minimized testing and monitoring for substance use (drug urine tests to monitor progress, confirm any recent use of substance or identify any diseases caused by substance use) and postponing of drug detoxification services.[33.36,38] Group discussions and peer therapies were affected negatively with the reduction of individuals in each group due to the formation of new smaller groups for the purpose of maintaining social isolation.[33] As a result, the staff had to introduce several therapy programs to achieve the same benefits.[42] Ultimately, such measures reduced the effectiveness of therapy programs due to the disruption of group dynamics as recommended number of individuals were not participating.[42] Immediate quarantine measures after encountering an employee diagnosed with COVID-19 caused staff shortages which affected the continuation of the treatment program. Conducting counselling sessions and other medical consultations with professionals residing outside the treatment facilities were done through telehealth.[33] The benefits of online consulting and therapy sessions are limited, especially when clients are not used to it. Older clients and individuals without much experience with novel technology had a hard time operating the devices. Therefore, some people had not participated in telehealth appointments properly, which affected the success of the program.[33-43] Some residential treatment programs incorporated therapeutic leaves from residential treatment settings as a chance to allow the rehabilitees in carrying out what they learnt from the program which was hindered due to the travel restrictions amidst the pandemic.[42]

Impact of COVID-19 on clients/rehabilitees

The individuals with SUD who seek residential treatment services and rehabilitees who were already receiving the treatments within service facilities, both were affected by the complication created by COVID-19 alike. Some individuals with SUD did not prefer to get admitted to a treatment facility in fear of getting infected with COVID-19. Others faced various limitations in enrolling to a facility due to the reduced number of clients allowed

within a facility, the need to be tested negative for COVID-19 or to be quarantined for one to two weeks after entering the facility and the request for a letter signed by a medical practitioner confirming that they are free from COVID-19 after testing.[33] These requirements vary across different treatment facilities and it was also found that some individuals, even faced problems in accessing the test for COVID-19 which prevented them from receiving residential treatments.[38] Quarantine was made compulsory for the clients who were in contact with infected individuals. And the rehabilitees who have maintained their stability were quarantined outside the facility while keeping in contact with social workers through telephone.[25] The rehabilitees who were unstable were quarantined at the facility by extending their stay until the quarantine period was over.

Individuals with SUD who already receive treatment were not allowed to leave the facilities except for important medical appointments. The limitations placed on participating in group therapies, discussions among peers and family visits lead to stress, anxiety, and depression among the rehabilitees.[18,19] The worsening of such conditions among the individuals with SUD deprives the success rates of the recovery treatments during COVID-19 period. Rehabilitees who worked elsewhere while being in the residential facility had to stop their jobs as a measure to reduce infection risk which makes them vulnerable for relapsing when they reintegrated to the society.[33]

Being in quarantine also hinders the rehabilitees from participating in-person counselling sessions if conducted amidst the situation. Telephone consultation made the rehabilitees feel less supported. Inability to participate in telehealth appointments due to infrastructural issues and focusing more on the problems related to COVID-19 can also affect their progress in recovery and treatment success.[33]

Early release of rehabilitees who were about to complete the program was implemented to gain more space to maintain the social distancing during COVID-19 but, there is a higher possibility of relapse into the substance using behaviour after releasing amidst a pandemic situation.[33] The psychological instability of individuals with SUD and their weakened immunity, chronic lung damage due to long term smoking, and malnutrition may increase the vulnerability of getting infected from COVID-19 and transmitting to others through unprotective behaviours.[24,26,44,45]

Impact of COVID-19 on staff

Due to the travel restrictions and lockdown situations, some residential programs granted leave of absence to the staff members which leads to staff shortage and raises concerns about the proper conduct of rehabilitation and counselling. Further some staff members of the residential treatment programs hesitated to come to work in the middle of a pandemic. The ones who came were overwork with increased demand and new methods of working by adapting to changes quickly which led to physical and mental exhaustion. They had concerns about getting COVID-19 and accidentally spreading it to others.[38]

Impact of COVID-19 on infrastructure

In the face of COVID-19, the facilities were not sufficient to meet the requirements for conducting the residential rehabilitation programme while ensuring the safety and control of the spread of COVID-19. Earlier one room was shared by several rehabilitees which is not possible with the COVID-19 restrictions. The meetings had to be conducted online through teleconferencing applications which raised the problem of not having enough devices and trained people with novel technology to carry out the programs. Further technical problems and internet connection bandwidth problems affected in carrying out the programs.[33]

Insufficient funding to keep up with the demands could be observed in most of the residential treatment facilities and sometimes even though funds were provided, the continuation of treatment was challenging due to the factors such as limited staff capacity, insufficient space, lack of knowledge.[33] The benefits of continuing the treatment using telehealth were also doubted as the individuals do not have much experience with novel technologies.[46]

Despite the stated negative impacts of COVID-19, much literature viewed the pandemic situation as an opportunity to make the treatment facilities for SUD more resourceful and accessible to those in need.[42] Alternative measures should be excavated to mitigate the problems created by the COVID-19 pandemic and cater for the high demand for residential rehabilitation. Empirical evidence from low- and middle-income countries was sparse and sufficient studies need to be carried out to unearth the impact of COVID-19 pandemic on residential rehabilitation for individuals with SUD.[38]

CONCLUSION

Individuals with SUD are a vulnerable population who are at an increased risk of being infected and facing complications created by COVID-19. As a result of COVID-19, the provision of residential treatment for individuals with SUD had been interrupted in the aspects of program, rehabilitees, staff and infrastructural facilities. Innovative programs for SUD with sufficient empirical evidence need to be introduced which are effective even amidst a pandemic. More research with empirical evidence is needed regarding the impact of the COVID-19 pandemic on residential treatment facilities in low- and middle-income countries for future reference in facing the pandemics.

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REFERENCES

1. McLellan AT. Substance misuse and substance use disorders: Why do they matter in healthcare? Trans Am Clin Climatol Assoc. 2017;128:112-30.
2. Rosenberg KP, Feder LC. An Introduction to Behavioral Addictions. Behav Addict Criteria Evidence Treat. 2014;36(5):1-17.
3. Paulus FW, Ohmann S, Von Gontard A, Popow C. Internet gaming disorder in children and adolescents: a systematic review. Dev Med Child Neurol. 2018;60(7):645-59.
4. Lo TW, Yeung JWK, Tam CHL. Substance abuse and public health: A multilevel perspective and multiple responses. Int J Environ Res Publ Heal. 2020;17(7).
5. American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders. 5th ed. 2013.
6. Pedersen T. What Are the Signs and Symptoms of Substance Use Disorder? PsychCentral. 2021. Available at: https://psychcentral.com/addictions/substance-use-disorder-symptoms#types-of-sud. Accessed on 15 January, 2023.
7. UNODC. World Drug Report. 2018.
8. Keyzers A, Lee SK, Dworkin J. Peer Pressure and Substance Use in Emerging Adulthood: A Latent Profile Analysis. Subst Use Misuse. 2020;55(10):1716-23.
9. Jayamaha AR, Ranadeva NDK, Dharmarathna HNND, Herath HMNDM, Nawarathne LC, Buddhini DGH et al. What drives the Sri Lankan youth to instigate substance abuse; a preliminary study. GARI Multidiscip Symp. 2020.
10. Lijffijt M, Hu K, Swann AC. Stress Modulates Illness-Course of Substance Use Disorders: A Translational Review. Front Psychiatr. 2014;5(7):1-20.
11. Ikoh MU, Smah SO, Okwanya I, Clement UA, Aposhi ZA. Factors Affecting Entry Into Drug Abuse Among Youths in Lafia Metropolis: Implications on Security. SAGE Open. 2019;9(1).
12. NIDA. People With SUDs Have Increased Risk for COVID-19 and Worse Outcomes. Published online 2021.
13. American Psychiatric Association. Practice guideline for the treatment of patients with substance use disorders: alcohol, cocaine, opioids. Am J Psychiatry. 1995;1.
14. SAMHSA. Detoxification and Substance Abuse Treatment:(Treatment Improvement Protocol (TIP) Series, No. 45.) 2 Settings, Levels of Care, and Patient Placement. 2006.
15. UNODC. International Standards for the Treatment for Drug Use Disoders. 2020.
16. Samuels EA, Clark SA, Wunsch C. Innovation During COVID-19: Improving Addiction Treatment Access. J Addict Med. 2020;14(4):8-9.
17. National Academies of Sciences Engineering and Medicine. Ending Discrimination against People with Mental and Substance Use Disorders: The Evidence for Stigma Change. 2016.
18. Kowal M, Coll-Martín T, Ikizer G. Who is the Most Stressed During the COVID-19 Pandemic? Data From 26 Countries and Areas. Appl Psychol Heal Well-Being. 2020;12(4):946-66.
19. Liu S, Yang L, Zhang C. Online mental health services in China during the COVID-19 outbreak. The Lancet Psychiatry. 2020;7(4):e17-8.
20. Sinha R. How does stress increase risk of drug abuse and relapse? Psychopharmacology (Berl). 2001;158(4):343-59.
21. Du J, Fan N, Zhao M. Expert consensus on the prevention and treatment of substance use and addictive behaviour-related disorders during the COVID-19 pandemic. Gen Psychiatr. 2020;33(4):1-6.
22. Wang QQ, Kaelber DC, Xu R, Volkow ND. COVID-19 risk and outcomes in patients with substance use disorders: analyses from electronic health records in the United States. Mol Psychiatry. 2021;26(1):30-39.
23. Ornell F, Moura HF, Scherer JN, Pechansky F, Kessler FHP, von Diemen L. The COVID-19 pandemic and its impact on substance use: Implications for prevention and treatment. Psychiatry Res. 2020;289(5):113096.
24. Friedman H, Newton C, Klein TW. Microbial Infections, Immunomodulation and Drugs of Abuse. 2003;16(2):209-19.
25. Radfar SR, De Jong CAJ, Farhoudian A. Reorganization of Substance Use Treatment and Harm Reduction Services During the COVID-19 Pandemic: A Global Survey. Front Psychiatr. 2021;12(4).
26. Vardavas CI, Nikitara K. COVID-19 and smoking: A systematic review of the evidence. Tob Induc Dis. 2020;18(3):1-4.
27. Havakuk O, Rezkalla SH, Kloner RA. The Cardiovascular Effects of Cocaine. J Am Coll Cardiol. 2017;70(1):101-13.
28. Mou J. Research on the Impact of COVID19 on Global Economy. IOP Conf Ser Earth Environ Sci. 2020;546(3).
29. Congressional Research Service. Global Economic effects of COVID-19 R46270. 2021:1-110.
30. Spooner C, Hetherington K. Social determinants of

drug use. Natl Drug Alcohol Res Cent Sydney. 2004;(228):xv:291.
31. Wafaa ME, Vasan A, Ayman E. Facing the New COVID-19 Reality. N Engl J Med. 2023:385-7.
32. Barocas JA, Blackstone E, Bouton TC. Prevalence of COVID-19 Infection and Subsequent Cohorting in a Residential Substance Use Treatment Program in Boston, MA. J Addict Med. 2020;14(5):e261-3.
33. Pagano A, Hosakote S, Kapiteni K, Straus ER, Wong J, Guydish JR. Impacts of COVID-19 on residential treatment programs for substance use disorder. J Subst Abuse Treat. 2021;123(12):108255.
34. NIDA. Principles of Drug Addiction Treatment: A Research-Based Guide (Third Edition). Natl Inst Drug Abus. 2018;(1):1-75.
35. SAMHSA. Facing Addiction in America: The Surgeon General's Report on Alcohol, Drugs, and Health. US Dep Heal Hum Serv. 2016.
36. Sullivan E, Fleming M. A Guide to Substance Abuse Services for Primary Care Clinicians:Treatment Improvement Protocol (TIP) Series. 1997;24.
37. Czeisler MÉ, MA RIL, Petrosky E. Mental Health, Substance Use, and Suicidal Ideation During the COVID-19. Addict Behav. 2020;29(32):1049-57.
38. Rosca P, Shapira B, Neumark Y. Isolating the isolated: Implications of COVID-19 quarantine measures on in-patient detoxification treatment for substance use disorders. Int J Drug Policy. 2020;83.
39. Pandit PM, Bhatia G, Sarkar S. Treatment experience for opioid use disorder during COVID-19 in India: Learning from patients. J Subst Abuse Treat. 2020;119(7):108128.
40. Attonito J, Villalba K, Fontal S. Priorities for alcohol use disorder treatment and prevention during COVID- 19's second wave. Am J Public Health. 2021;111(3):359-62.
41. Polcin DL, Mahoney E, Wittman F, Sheridan D, Mericle AA. Understanding challenges for recovery homes during COVID-19. Int J Drug Policy. 2021;93:102986.
42. Columb D, Hussain R, O'Gara C. Addiction psychiatry and COVID-19: Impact on patients and service provision. Ir J Psychol Med. 2020;37(3):164-8.
43. Kedia SK, Schmidt M, Dillon PJ, Arshad H, Yu X. Substance use treatment in Appalachian Tennessee amid COVID-19: Challenges and preparing for the future. J Subst Abuse Treat. 2021;124(11):108270.
44. Mahboub N, Rizk R, Karavetian M, De Vries N. Nutritional status and eating habits of people who use drugs and/or are undergoing treatment for recovery: A narrative review. Nutr Rev. 2021;79(6):627-635.
45. Dunlop A, Lokuge B, Masters D. Challenges in maintaining treatment services for people who use drugs during the COVID-19 pandemic. Harm Reduct J. 2020;17(1):1-7.
46. Mubaraki AA, Alrabie AD, Sibyani AK, Aljuaid RS, Bajaber AS, Mubaraki MA. Advantages and disadvantages of telemedicine during the COVID-19 pandemic era among physicians in Taif, Saudi Arabia. Saudi Med J. 2021;42(1):110-15.

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