

Lessons Learned from the Pandemic: The Need for Further Development of Information and Communication Technology Enhanced Mental Health Services in Hong Kong

Hong Wang Fung¹ and Henry Wai-Hang Ling²

¹ The Hong Kong Polytechnic University

Received: 9 September 2021 Accepted: 3 October 2021 Published: 15 October 2021

Abstract

The COVID-19 pandemic not only leads to more mental health problems because of its stressful nature, but it also increases the challenges of providing services for people with mental health needs in the community. This paper discusses the limitations of conventional mental health services and the potential use of information and communication technology (ICT) to increase service accessibility in the context of Hong Kong. We review some of the local studies and services and explain why ICT-enhanced services should play a more important role in the local service system, especially when there is a lack of resources and a need for social (physical) distancing. Some future development directions have been highlighted. We argue that it is necessary to further discuss the use of ICT in mental health services and develop more evidence-based web-based resources that can be incorporated into the local service system.

Index terms— pandemic; COVID-19; mental health; social work; information and communication technology (ICT).

Introduction Mental health problems have been a major public health issue not only in Hong Kong but also globally. Adverse social environments such as community conflicts and pandemics could not only lead to more mental health problems because of their traumatic or stressful nature, but they could also increase the challenges of providing services for people with mental health needs. Just like many places around the world, the community of Hong Kong had been largely affected during the COVID-19 outbreak. Recent studies showed that COVID-19 outbreak is associated with mental health problems (Choi, Hui, & Wan, 2020), and therefore active professional interventions are important (Lau, Chan, & Ng, 2020). However, similar to those situations in other societies (e.g., Li et al., 2020), the pandemic had constituted a serious challenge to mental health services in Hong Kong. For example, because of the need for social (physical) distancing, many face-to-face social services had been suspended, although the policy varied across different organizations. Service providers needed to take the risk of being infected even if the services remained available in the community. In fact, many community service providers had cancelled their groups and program activities, and only provided limited casework services. On the other hand, for many people using psychiatric service of public hospitals (which is one of the major mental health service providers in Hong Kong), they could only postpone their consultation or take the risk of being exposed to the coronavirus when they visited the hospital. The conventional mental health services had been further limited during the COVID-19 outbreak, in addition to the long-existing challenges (e.g., a long waiting time, lack of resources, geographical and time limits). Therefore, information and communication technology (ICT) enhanced mental health services may help overcome some of the challenges in providing conventional services, and therefore should be further considered and developed in any technologically advanced society like Hong Kong.

1 II. The Advantages and Evidence of ICT-Enhanced Mental Health Services

The advantages of ICT-enhanced services have been widely discussed. For example, ICT-enhanced services can ensure a powerful distribution capability, reduce geographical and time limits, enable a disinhibition effect, make asynchronous interactions possible and ensure a sense of privacy and safety (C. Chan & Ngai, 2018; Fung, Chan, & Ross, 2020). In addition, some forms of ICT-enhanced interventions (e.g., web-based psychoeducation, guided self-help) may be even more cost-effective than conventional services (Andersson & Titov, 2014). People who avoid seeking help due to stigma in the community may prefer web-based resources too. There is also strong empirical evidence supporting the use of ICT-supported mental health assessment (e.g., Conker III. Current ICT-Enhanced Services in the Field During the Pandemic ICT-enhanced mental health services are relatively limited in Hong Kong, as compared with conventional face-to-face services. There are, however, some good services and resources for local people with mental health problems. For example, a few hotline services have long been well-established for local people (Keung & Leung, 1996). Some online emotional support services have also been developed in recent years, such as the Teens Online Project and the Cyber Youth Outreach Project; some of them have been empirically investigated (e.g., C. Chan, 2018; C. Chan & Ngai, 2018).

During the pandemic, as we have observed, different agencies delivered their services in different modes. Some agencies built up websites to provide mental well-being information related to COVID-19, while some agencies would welcome service users to contact social workers using messaging applications (e.g., WhatsApp) when their community centres were closed. On the other hand, many service providers actively engaged the public and provided mental health information related to COVID-19 on social media platforms. Some agencies also started using online conferencing platforms to organize events such as health talks and sharing sessions. However, as reported by some frontline social workers, the policy varied across different organizations -some agencies still provided face-to-face outreach and home visit services, even though when the pandemic became worse in July 2020. Many social service agencies still had concerns about the use of ICT in providing mental health services - some examples include: informed consent, personal data, privacy, risks of data leakage on the Internet, verification of identity, legal liabilities of agencies and social workers, and crisis management and so on. More importantly, for people who can only afford psychiatric service of public hospitals, there are little alternatives available for them. This also points to the need for more accessible multidisciplinary mental health services in the local community.

IV. The Need for Further Development of ICT-Enhanced Services

As noted, there are some considerable limitations of conventional face-to-face services, despite their irreplaceable role in some situations (e.g., inpatient treatment, crisis interventions). More importantly, it is reasonable to predict that the pandemic may last long, and future pandemics may come again. If we only rely on face-to-face services, people with mental health problems could hardly access timely resources and support, which may further worsen their well-being during difficult situations.

To our way of thinking, ICT can be used to facilitate different aspects of mental health services, including timely assessment (e.g., initial screening and regular evaluation) and early interventions (e.g., emotional support, mutual aid, psychoeducation, cognitive-behavioral skills training, Internet-based counselling) (Fung, Chan, & Ross, 2020), although these may not be fully applicable to those who have emergency needs.

Given the evidence for the use of ICT-enhanced services as well as the sociocultural context of Hong Kong (e.g., technological infrastructure, stigma), there is a need for further research and development of ICT-enhanced services for people with mental health problems in Hong Kong. Some important directions include: V.

2 Concluding Remarks

Face-to-face services are important and irreplaceable in the field of mental health social work. However, these services are not without limitations, especially during pandemic. We argue that it is necessary to further discuss the use of ICT in mental health services and develop more evidence-based web-based resources that can be incorporated into the existing service system. ¹

¹()

In Moreover, researchers have evaluated a variety of ICT-enhanced interventions, such as telephone-based cognitive-behavioral therapy for postnatal depression (Ngai, Wong, Leung, Chau, & Chung, 2015), Internet-based mindfulness for young people (Mak, Chio, Chan, Lui, & Wu, 2017), Internet-based cognitive therapy for social anxiety disorder (

[Note: , van Straten, Marks, & Cuijpers, 2009; Fung, Chan, Lee, et al., 2020; Vallejo, Jordán, Díaz, Comeche, & Ortega, 2007) and interventions (e.g., Josephine, Josefine, Philipp, David, & Harald, 2017; Sijbrandij, Kunovski, & Cuijpers, 2016).]

Figure 1:

7. Incorporat- evidence web-based
ing based
resources (e.g., psychoeducation, skills training,
self-assessment) as a first-step support in regular
mental health services.

8.

2

Volume

XXI Issue

V Version I

)

(

1. Developing and evaluating more culturally-appropriate ICT-enhanced interventions for people with different kinds of mental health problems in Hong Kong, including conditions related to trauma and stress.
2. Investigating the concerns about ICT-enhanced mental health services from different perspectives (e.g., agencies, supervisors, practitioners, and clients).
3. Reviewing ordinances and laws related to ICT-enhanced interventions.
4. Discussing and developing guidelines for online and telephone counseling and groupwork.
5. Developing evidence-based online self-assessment and self-help resources for people with mental health concerns in the community.
6. Enhancing the interfacing between face-to-face services and ICT-enhanced interventions.

Figure 2:

-
- [Donker et al. ()] 'A brief Web-based screening questionnaire for common mental disorders: Development and validation'. T Donker , A Van Straten , I M Marks , P Cuijpers . *Journal of Medical Internet Research* 2009. 11 (3) p. e19.
- [Fung et al. ()] 'A webbased psychoeducation program for people with pathological dissociation: Development and pilot testing'. H W Fung , C Chan , C A Ross . 10.1080/26408066.2020.1760990. *Journal of Evidence-Based Social Work* 2020.
- [Andersson and Titov ()] 'Advantages and limitations of Internet-based interventions for common mental disorders'. G Andersson , N Titov . *World Psychiatry* 2014. 13 (1) p. .
- [Keung and Leung ()] 'An evaluation of mental health telephone counselling services in Hong Kong'. D W F Keung , A Leung . 10.1080/21650993.1996.9755733. *Asia Pacific Journal of Social Work and Development* 1996. 6 (2) p. .
- [Chan ()] 'Analysing social networks for social work practice: A case study of the Facebook fan page of an online youth outreach project'. C Chan . 10.1016/j.childyouth.2017.12.021. *Children and Youth Services Review* 2018. 85 p. .
- [Choi et al. ()] 'Depression and anxiety in Hong Kong during COVID-19'. E P H Choi , B P H Hui , E Y F Wan . doi:10. 3390/ijerph17103740. *International Journal of Environmental Research and Public Health* 2020. 17 (10) p. 3740.
- [Sijbrandij et al. ()] 'Effectiveness of internet-delivered cognitive behavioral therapy for posttraumatic stress disorder: A systematic review and meta-analysis'. M Sijbrandij , I Kunovski , P Cuijpers . *Depression and Anxiety* 2016. 33 (9) p. .
- [Josephine et al. ()] 'Internet-and mobile-based depression interventions for people with diagnosed depression: A systematic review and meta-analysis'. K Josephine , L Josefine , D Philipp , E David , B Harald . *Journal of Affective Disorders* 2017. 223 p. .
- [Thew et al. ()] 'Internet-based cognitive therapy for social anxiety disorder in Hong Kong: Therapist training and dissemination case series'. G R Thew , C L Powell , A P Kwok , M H L Chan , J Wild , E Warnock-Parkes , . . Clark , DM . 10.2196/13446. *JMIR formative research* 2019. 3 (2) p. e13446.
- [Li et al. ()] 'Progression of mental health services during the COVID-19 outbreak in China'. W Li , Y Yang , Z.-H Liu , Y.-J Zhao , Q Zhang , L Zhang , . . Xiang , Y.-T . 10.7150/ijbs.45120. *International Journal of Biological Sciences* 2020. 16 (10) p. .
- [Vallejo et al. ()] 'Psychological assessment via the internet: a reliability and validity study of online (vs paper-and-pencil) versions of the General Health Questionnaire-28 (GHQ-28) and the Symptoms Check-List-90-Revised (SCL-90-R)'. M A Vallejo , C M Jordán , M I Díaz , M I Comeche , J Ortega . *Journal of Medical Internet Research* 2007. 9 (1) .
- [Fung et al. ()] 'Psychometric properties of the pathological dissociation measures among Chinese research participants -A study using online methods'. H W Fung , T M Choi , C Chan , C A Ross . 10.1080/23761407.2018.1456995. *Journal of Evidence-Informed Social Work* 2018. 15 (4) p. .
- [Lau et al. ()] 'Resilience of Hong Kong people in the COVID-19 pandemic: lessons learned from a survey at the peak of the pandemic in Spring 2020'. B H Lau , C L Chan , S.-M Ng . 10.1080/02185385.2020.1778516. *Asia Pacific Journal of Social Work and Development* 2020. p. .
- [Ngai et al. ()] 'The effect of telephone-based cognitive-behavioral therapy on postnatal depression: A randomized controlled trial'. F.-W Ngai , P W Wong , .-C Leung , K.-Y Chau , P.-H Chung , K.-F . 10.1159/000430449. *Psychotherapy and Psychosomatics* 2015. 84 (5) p. .
- [Mak et al. ()] 'The efficacy of internet-based mindfulness training and cognitive-behavioral training with telephone support in the enhancement of mental health among college students and young working adults: randomized controlled trial'. W W Mak , F H Chio , A T Chan , W W Lui , E K Wu . doi:10. 2196/jmir.6737. *Journal of Medical Internet Research* 2017. 19 (3) p. e84.
- [Fung et al. ()] 'Using the Post-traumatic Stress Disorder (PTSD) Checklist for DSM-5 to screen for PTSD in the Chinese context: A pilot study in a psychiatric sample'. H W Fung , C Chan , C Y Lee , C A Ross . 10.1080/26408066.2019.1676858. *Journal of Evidence-Based Social Work* 2019. 16 (6) p. .
- [Chan and Ngai ()] 'Utilizing social media for social work: Insights from clients in online youth services'. C Chan , S S Ngai , -Y . 10.1080/02650533.2018.1504286. *Journal of Social Work Practice* 2018. 33 (2) p. .
- [Fung et al. ()] 'Validity of a web-based measure of borderline personality disorder: A preliminary study'. H W Fung , C Chan , C Y Lee , C K M Yau , H M Chung , C A Ross . *Journal of Evidence-Based Social Work* 2020. 17 (4) p. .
- [Du et al. ()] 'Validity study of Patient Health Questionnaire-9 items for Internet screening in depression among Chinese university students'. N Du , K Yu , Y Ye , S Chen . 10.1111/appy.12266. *Asia-Pacific Psychiatry* 2017. 9 (3) p. e12266.

2 CONCLUDING REMARKS

145 [Chan et al. ()] ‘Web-based psychoeducation program for caregivers of firstepisode of psychosis: An experience
146 of Chinese population in Hong Kong’. S K Chan , S Tse , H L T Sit , C L Hui , E H Lee , W C Chang , E Y
147 Chen . 10.3389/fpsyg.2016.02006. *Frontiers in Psychology* 2016. 2006. 7.