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

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*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.

*Keywords: pandemic; COVID-19; mental health; social work; information and communication technology (ICT).*

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

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*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.

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## I. 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.

## 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 sigma 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., Donker, 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).

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In the local context, there is a considerable amount of research in this area. For example, the validity of various web-based assessments for screening purposes is supported by studies in the Chinese context (e.g., Du, Yu, Ye, & Chen, 2017; Fung, Chan, Lee, & Ross, 2019; Fung, Choi, Chan, & Ross, 2018). 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 (Thew et al., 2019) and web-based psychoeducation for caregivers of patients with psychosis (S. K. Chan et al., 2016). In fact, considering the technological infrastructure of Hong Kong and the frequent usage of ICT among local people, ICT-enhanced services for people with mental health problems should play a more important role in the local health care system, especially when there is a lack of resources and a need for physical distancing and infection control.

## 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 worse 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:

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.



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7. Incorporating evidence-based web-based resources (e.g., psychoeducation, skills training, self-assessment) as a first-step support in regular mental health services.
8. Developing a practice model for providing blended multidisciplinary mental health services that include both biological and psychosocial interventions.
9. Exploring the possibility of a central one-stop platform that provides resources, referrals and support for people with mental health concerns and their family members.
10. Providing training in ICT literacy and online counseling for social work practitioners.

## V. 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.

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