



Positive Technology: A New Opportunity for Hong Kong Social Workers

Kitty Yuen-han MO¹, Steve Fu-fai FONG^{1*}, and Josephine Wing-fun FUNG^{1*}

¹ Department of Social Work, Hong Kong Shue Yan University, Hong Kong SAR, China

yhmo@hkysyu.edu, fffong@hkysyu.edu, wffung@hkysyu.edu

Abstract. The COVID-19 pandemic disrupted face-to-face social work services in Hong Kong; however, it created opportunities for social work services to go digital. The current study aimed to explore the relationship between the perceived usefulness of technology, the motivation of using technology and the actual usage of various digital tools. Hong Kong social workers who participated in a technology seminar were invited to join the survey. Regression was used to test the association between the variables, and the results indicate that the perceived usefulness of technology and the motivation to use technology have significant positive association with the actual usage of various digital tools.

Keywords: Positive technology, social worker, technology acceptance.

1 Introduction

Hong Kong social workers have adapted to a new technology-assisted social work practice since the outbreak of the COVID-19 pandemic. As part of this, social workers need to negotiate contracts with funders, explore new technology-assisted intervention methods and rethink the social work position (Ling et al., 2021). The pandemic has certainly jeopardised the mental, physical and social condition of vulnerable people (Zhao et al., 2020). Therefore, online counselling is provided for children, and an online community platform has been created for people living in subdivided flats (Hung et al., 2021; Lau et al., 2021). A project using ultraviolet germicidal irradiation to improve the sanitary conditions and hygiene of sub-divided flat residents (Chui & Ko, 2021). Nevertheless, despite the various types of innovative technology-assisted services such as social media and video conferencing tools (Hung et al., 2021), social workers still face such problems as unclear service boundaries, privacy issues and humanistic considerations (Tsang et al., 2022). These emerging problems have become a new challenge for social workers (Banks et al., 2020).

Since the change to technology-assisted services during the pandemic was largely unplanned, the success of this change depends on the previous digital experiences as well as the personal attitudes of social workers towards the adaptation (Ling et al., 2021). Generally, Hong Kong social workers are initially reluctant or

© The Author(s) 2024

A. C. Chan et al. (eds.), *Proceedings of the Positive Technology International Conference 2023 Positive Technology: Possible Synergies between Emerging Technologies and Positive Psychology (PT 2023)*, Atlantis Highlights in Social Sciences, Education and Humanities 19,
https://doi.org/10.2991/978-94-6463-378-8_16

unwilling to make such changes because they are not well trained in technology utilization (Chan & Au Yeung, 2021; Du & Chan, 2021; Hung & Fung, 2021; Zhu & Andersen, 2021). They are, however, more motivated to use technology if they believe that doing so will be beneficial to their clients, as indicated by the technology acceptance model (TAM) (Deslonde & Becerra, 2018; Gillingham, 2014; Grundy & Grundy, 2013). Thus, further study is needed in Hong Kong to explore the relationship between the perceived usefulness of technology in services and the motivation for usage among social workers.

Consistent with positive technology, the humanistic social work practice focuses on the usefulness of technology in bringing benefits to service targets. Positive technology promotes person-centred technological practice and is consistent with social work humanistic practice. For example, positive technology emphasises that the design of technology should support older adults in achieving self-actualising experiences and social integration and should offer them pleasant user experiences (Grossi et al., 2020). Thus, further study is needed among Hong Kong social workers to understand their perceptions of the use of technology and whether they believe that using technology is beneficial to their clients. Besides, motivation to use technology influences the actual usage of technology in services. The current study was intended to fill this research gap. It aimed to (a) investigate the motivation of Hong Kong social workers to use technology in services; (b) explore the perceived usefulness of technology in services among Hong Kong social workers; and (c) explore the relationship between the perceived usefulness of technology in services, the motivation to use technology and the actual usage of technology among Hong Kong social workers.

2 Literature review and conceptual framework

The technology acceptance model (TAM) was used in the current study, since it explains the perceived usefulness and motivation of use among users (Bullock & Colvin, 2015). The TAM model was developed by Davis (1989), and explains that perceived usefulness involves the expectation of positive results from using technology. For example, will technology bring more benefits to users or will it improve service quality? A perception of technology as a useful tool with positive benefits on the part of social workers will influence their motivation to use technology as well as the frequency of usage in future. Venkatesh and Bala (2008) define perceived usefulness as the degree to which a user perceives using technology as relevant to and beneficial for job content. Furthermore, they highlight the determinants of perceived usefulness within the TAM model, which include a) subjective norms (the degree to which using technology is a shared expectation); b) job relevance (the degree to which using technology is relevant to job duty); c) output quality (the degree to which using technology improves job quality); and d) result demonstrability (the degree to which the results from using technology are

communicable and observable). A strong relationship between perceived usefulness and motivation to use technology has been identified in previous studies (Bullock & Colvin, 2015). The TAM model has been used to study digital competences and use of technology in services among social workers (Deslonde & Becerra, 2018; Gillingham, 2014; Grundy & Grundy, 2013).

Positive technology is another framework used in the current study, since it emphasises the positive role of technology in bringing happiness and quality of life to individuals, organisations and communities (Riva et al., 2020). When social workers employ technology in their services, they expect the technology to bring benefits to their clients or to make services more effective. Positive technology thus stresses the importance of improved quality of life, enhances human connectedness, increases engagement and augments personal resources (Riva et al., 2012). The objectives of positive technology are a) hedonic, i.e., it uses technology to create pleasant and positive user experiences; b) eudaimonic, i.e., it specially supports individuals to have self-actualising experiences; and c) interpersonal or social, i.e., it enhances human connectedness. Thus, the overall goal of positive technology is to generate strength and resilience in individuals, organisations and societies (Botella et al., 2012).

Although the extensive use of technology during the pandemic enabled the continuation of services, this does not necessarily mean that social workers believe technology will bring pleasant and positive user experiences to them and the service users. Thus, the perceived usefulness of technology in services demands further study. Besides, despite the rising interest in using various types of technologies in services (Lee & Davis, 2020; Mishna et al., 2020), limited information is available regarding the relationship between the perceived usefulness of technologies, the motivation to use technology and the actual usage of technologies among social workers. Robbins et al. (2016) emphasise that social workers need to have more discussion and constant reflection regarding the use of technology in services.

Based on the literature review, the TAM model and the positive technology concept were used in the current study as parts of a conceptual framework. As per the conceptual framework, the perceived usefulness of technology can be defined as the degree to which the use of technology in services is perceived to create benefits as well as pleasant and positive experiences for the social workers and the service users. This definition is based on previous studies which considered perceived usefulness as the aggregate of advantages such as the new opportunities to communicate that technology brings to service users (Gillingham, 2014), the positive impact on worker–client relationships (Lopez, 2015) and a greater sense of empowerment (Denby et al., 2016). In addition, the motivation to use technology is defined as the users' intention to use technology, which is a kind of attitude towards technology-assisted social service. Motivation is also understood in terms of greater intent for using digital services for social work practice (Baker et al., 2014). The actual usage of technology can be defined in terms of the frequency of using different technological tools in services. Different tools have been used in social services before or during the pandemic for purposes such as video conferencing (Zoom or Microsoft Teams), social

media engagement (WhatsApp or Facebook) and user assistance (robots or other assistive technologies) (Lee & Davis, 2020; Mishna et al., 2020). Overall, the current study aimed to answer the research question about the relationship between the perceived usefulness of technology, the motivation to use technology and the actual usage of various digital tools. The hypotheses were set as follows:

H1: The perceived usefulness of technology in services has significant positive association with the motivation to use technology among social workers.

H2: The perceived usefulness of technology has significant positive association with the actual usage of various digital tools.

H3: The motivation to use technology has significant positive association with the actual usage of various digital tools.

3 Methods

3.1 Measurement

The questionnaire consisted of four parts, which are described in the following paragraphs.

Part A comprised demographic questions involving age, gender, educational background, job position, service area and service type.

Part B was a self-design questionnaire assessing the perceived usefulness of technology in services. Participants' responses ranging from 1=strongly disagree to 5=strongly agree were scored on a 5-point Likert scale. The sample questions included "Online digital tools or technological tools help me to conduct service effectively." and "It is easy to build a relationship with service users by using online digital tools."

Part C was a self-design questionnaire (containing four items) assessing the motivation to practice digital services among social workers. Participants' responses ranging from 1=strongly disagree to 5=strongly agree were scored on a 5-point Likert scale. The sample questions included "I have tried to conduct online service through online digital tools before COVID19", "I teach service users how to use online digital tools, e.g., Zoom, WhatsApp", "I have tried using technological tools such as VR, app-based programmes, interactive computers, video games and robots in my service" and "I always consider a range of technological tools such as VR, app-based programmes, interactive computers, video games and robots that are suitable for my service".

Part D was a self-design questionnaire (containing 10 items) assessing the actual usage of various types of technologies among social workers. Participants' responses ranging from 1=never to 5=always were scored on a 5-point Likert scale. The sample items included "E-mail - Gmail, Yahoo, Outlook, etc.", "Video conferencing tools - Skype, Zoom, Zoho, Webinar, etc.", "Social media sites - Twitter, Facebook, YouTube etc." and "Messaging apps on smartphones - WhatsApp, WeChat, etc.".

The method of developing the questionnaire involved two steps: a) setting up an expert reference group consisting of social work educators, frontline social work practitioners and supervisors to review the content of the questionnaire; and b) a review of international digital guidelines for competent digital practice. Attention was given to ensuring straightforward language and simple phrasing of the items, which were examined by the research team members prior to use. Furthermore, double-barrelled items or those with unclear meanings were deleted.

3.2 Procedure

The current study comprised two steps. For step 1, an online questionnaire and an invitation message that briefly explained the research objectives were sent to the conference participants. The conference was organised in 2022 by the Department of Social Work that the principal investigator belonged to. The two sampling inclusion criteria were: a) the registered social workers needed to be currently providing social services and b) such social workers needed to have experience in the application of technologies in social services before or during the pandemic.

For step 2, the conference participants filled in an online questionnaire regarding the perceived usefulness of technology and the motivation for participating in an anonymous survey. The study was approved by the Research and Ethics Committee of a university in Hong Kong.

4 Results

4.1 Descriptive statistics

The total number of respondents was 132. The gender breakdown of male and female social workers was 41.7% and 58.3% respectively. The age ranges (and respective percentages) of the participants were 21 (2.2%), 21–30 (24.2%), 31–40 (25.8%), 41–50 (25.8%), 51–60 (14.4%) and 61–70 (7.6%). The job positions included frontline social workers (40.2%), centre-in-charge (12.1%), team or project leader (12.9%), service supervisor (15.9%) and others (18.9%). The service areas of the participants included service for older adults (19.7%), family service (8.3%), children and youth service (26.5%), drug or addictive service (2.3%), community service (4.5%), rehabilitation service (27.3%), medical social work (2.3%), service for children with special educational needs (2.3%) and others (6.8%). The service type covered day service (40.2%), residential service (12.9%), outreach service (9.1%), service project (18.2%) and others (19.7%). In terms of educational background, participants with bachelor's degrees comprised 43.9%; associate degree or higher diploma, 22%; master's, 30.3%; and doctoral degrees, 3.8%.

Regarding perceived usefulness of technology, the items were “Online digital tools support collaboration and communication with colleagues or other service partners” ($M=3.856$, $SD=0.742$), “Online digital tools or technological tools help me to conduct service effectively” ($M=3.8$, $SD=0.745$), “Online digital tools or

technological tools enhance service quality” ($M=3.64$, $SD=0.82$), “Online digital tools or technological tools are easy to learn for my service users” ($M=3.21$, $SD=0.998$) and “My service users can use online digital tools to join online service easily” ($M=3.15$, $SD=0.963$). The results indicated that the function of technology to help communicate and build relationships were more affirmed by social workers. However, respondents on an average chose “neutral” for the items about the ability of service users in handling technology effectively, showing that the responses were largely undecided.

The usage frequencies of various technologies ranged from often to always email (86.4%), internet chatrooms (39.4%), video conferencing tools (80.3%), chat and messaging tools (43.9%), social media sites (85.6%), messaging apps on smartphones (14.4%), virtual reality (26.5%), interactive computers (17.4%), video games (16.7%) and robots (4.5%). The results showed that the top three frequently used digital tools in social service delivery were email, video conferencing tools and social media sites.

4.2 Factor analysis

Table 1 presents the factor analysis of the perceived usefulness of technology, the motivation to use technology and the actual usage of the various technological tools. Principal component analysis using Varimax rotation revealed six components with eigenvalues greater than one, which explained 27.4%, 14.7%, 7.5%, 6.4%, 4.6% and 4.3% of the total variance respectively. Factor 1 was labelled “perceived usefulness one” (eight items with loadings from 0.604 to 0.822); factors 2 and 4 were grouped together and labelled “usage tools” (ten items with loadings from 0.4 to 0.811); factor 3 was labelled “motivation” (four items with loadings from 0.718 to 0.847); and factor 5 was labelled “perceived usefulness two” (three items with loadings from 0.522 to 0.719). Factor 1 had one item with loadings smaller than 0.5, which was deleted; factor 6 had only one item with loadings greater than 0.5, and this was also deleted. The Kaiser-Meyer-Olkin measure of sampling adequacy was 0.820, indicating that there were sufficient numbers of items for each factor. A visual inspection of the scree plot for all the variables revealed that the components could be used. The probability associated with the Bartlett test for all three variables was $p<0.001$, while the diagonals of the anti-image correlation matrix were all over 0.5.

Table 1. Factor Analysis of the Variables

	Factor					
	1	2	3	4	5	6
P4	0.822	0.099	-0.037	-0.010	0.059	0.105
P1	0.771	-0.055	0.008	0.176	0.104	-0.003
P3	0.766	-0.102	0.112	0.242	0.167	-0.003
P5	0.757	-0.064	0.163	0.279	0.123	-0.022
P9	0.719	0.094	0.080	0.125	0.287	-0.017
P2	0.704	0.208	-0.029	-0.055	0.254	0.019
P13	0.655	0.252	0.228	-0.019	-0.040	0.090
P12	0.604	0.044	0.060	0.237	-0.172	0.412
P7	0.473	-0.052	0.367	0.264	0.356	0.219
U8	0.062	0.811	0.100	-0.021	0.030	0.024
U6	0.167	0.779	0.104	0.018	0.025	0.022
U10	-0.043	0.736	0.227	-0.099	0.231	-0.041
U7	0.008	0.722	0.161	0.118	0.064	0.199
U9	0.058	0.679	0.233	-0.037	0.213	-0.089
M3	0.011	0.273	0.847	-0.064	0.074	0.057
M4	-0.016	0.244	0.838	0.028	0.056	0.209
M1	0.083	0.252	0.821	-0.033	0.031	0.081
M2	0.324	0.078	0.718	0.141	0.055	-0.085
U5	0.056	-0.119	-0.109	0.753	-0.073	0.172
U3	0.181	0.004	0.119	0.724	0.147	-0.048
U1	0.298	0.030	-0.052	0.686	-0.045	0.094
U4	0.196	0.391	0.218	0.466	0.027	-0.363
P6	0.370	0.281	0.007	-0.032	0.719	0.117
P10	0.380	0.112	-0.018	-0.040	0.704	-0.103
P8	0.196	0.161	0.308	0.064	0.522	0.370
U2	-0.156	0.297	0.220	0.400	0.469	-0.081

P11	0.136	0.069	0.197	0.099	0.080	0.819
-----	-------	-------	-------	-------	-------	-------

Extraction Method: Principal Component Analysis.
 Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 6 iterations.

4.3 Single linear regression

Single linear regression was used to test the association between the perceived usefulness of technology and the motivation to use technology. The results indicated that the perceived usefulness of technology was a statistically significant predictor of the motivation to use technology [F(1,130) = 6.736, p<0.05], with an R2 of 0.042. Thus, the model explained 4.2% of the variation in job satisfaction, and the result supported H1: *The perceived usefulness of technology in services has significant positive association with the motivation to use technology among social workers.*

4.4 Multiple linear regression

Table 2 presents the results of multiple linear regression analysis to predict the actual usage of various types of technological tools based on the perceived usefulness of technology and the motivation to use technology. The actual usage of tools was the outcome variable, while the perceived usefulness of technology and the motivation to use technology were the predictor variables.

Model 1 consisted of the perceived usefulness of technology, which was a statistically significant predictor of the actual usage of tools [F(1,130) = 14.899, p<0.05], with an R2 of 0.103. Thus, the model explained 9.6% of the variation in job satisfaction.

Model 2 consisted of the perceived usefulness of technology and the motivation to use technology. These were statistically significant predictors of the actual usage of tools [F(2,129) = 21.94, p<0.05], with an R2 of 0.254. Thus, the model explained 25.4% of the variation in the actual usage of tools.

Overall, the results suggested that both the perceived usefulness of technology and the motivation to use technology were significant predictors of the actual usage of technological tools. These results supported both H2 (*The perceived usefulness of technology has significant positive association with the actual usage of various digital tools*) and H3 (*The motivation to use technology has significant positive association with the actual usage of various digital tools*).

Model	R	R2	adjusted R2	F	df1	df2	β	T	Sig
1	.321 ^a	0.103	0.096	14.899	1	130		6.164	0.000
Usefulness							0.321	3.860	0.000

	.504 ^a	0.254	0.242	21.940	2	129	3.549	0.001	
Usefulness							0.232	2.977	0.003
Motivation							0.399	5.109	0.000

a: Predictor (Constant) Usefulness, Motivation

Table 2. Multiple Linear Regression

5 Discussion

The current study reveals the actual usage of various types of technological tools among Hong Kong social workers. The results indicate that email, video conferencing tools and social media sites are the three most commonly used tools for service delivery and daily operation. In particular, an increase in the use of video conferencing tools and social media sites changes how social workers contact and communicate with service users. Thus, the process of synchronised communication needs further exploration in future studies. It also implies that social workers need further training in the use of the various types of video conferencing tools and social media sites. In addition, ethical applications of the tools—for example, how to protect clients' confidentiality, risk management and privacy when using the tools—requires further discussion and constant reflection (Özsungur, 2021; Reamer, 2013, 2018).

Regarding the perceived usefulness of technology, the results indicated that items such as “Online digital tools support collaboration and communication with colleagues or other service partners” and “Online digital tools or technological tools help me to conduct service effectively” got higher scores than items such as “Online digital tools or technological tools are easy to learn for my service users” and “My service users can use online digital tools to join online service easily.” These results reflect the fact that the function of technology in helping to communicate and build relationships is recognised and confirmed by social workers. However, regarding the ability of service users to handle technology—such as whether the service users can learn to use technology to communicate, and whether they feel that technology is easy to use—social workers generally choose neutral answers. This situation needs to be further explored in the future, for example, whether the problem of technological discrimination due to the application of technology is plaguing service users and social workers, as shown by various international studies (Southey & Stoddart, 2021).

From the regression analysis results, technology is perceived as a useful tool in helping communication and in building relationship with service users. Moreover, the perceived usefulness of technology influences the actual usage of tools, as indicated in the current study. This is in line with international studies which show that the perceived usefulness reflects the degree to which a user perceives using technology as relevant to and beneficial for job content (Venkatesh & Bala, 2008). In addition, consistent with findings from international studies, a positive relationship between the perceived usefulness and the motivation to use technology is identified in the current study (Bullock & Colvin, 2015).

Positive technology is another framework that was used in the current study, since it helps to explore the role of technology in bringing positive benefits to the service users. The results show that the use of technology has only modest effects on service quality. For example, for the item “Online digital tools or technological tools enhance service quality,” social workers generally chose neutral answers. This may reflect different reasons such as inappropriate use of technology, ignorance of how to operate technology or inability to properly integrate technology with services (Tsang et al., 2022). In the future, social workers can use the framework of positive technology to rethink the benefits of applying technology in service targets, and they can use some indicators such as human connectedness, increased engagement and utility of personal resources (Riva et al., 2012) to measure how technology is used in services.

In fact, the use of technology enables social workers to address immediate difficulties such as communicating and contacting with clients and maintaining service stability. Moreover, it undoubtedly increased the resilience of social workers during the pandemic. The positive relationship between the perceived usefulness of technology and motivation reflects the fact that social workers are motivated to use technology if they think that technology will help them to solve immediate problems. However, the data show that if social workers only think that technology is useful, the value of predicting whether they actually use it is relatively small. If the motivation to use is combined with the perception that the use of technology is beneficial, it can predict the actual use of technology by social workers to a greater extent.

The interlocking relationship between the perceived usefulness of technology, the motivation to use technology and the actual usage of various digital tools was demonstrated in the current study. In line with findings from international studies, Hong Kong social workers generally accept using technology as a norm in social work services, and they are ready to use technology as an interventional method (Goldkind et al., 2016; López et al., 2017). Therefore, the question that needs to be discussed now and in the future is how to use technology in services more appropriately, rather than whether technology should be used in services. This implies that further training is needed for social workers to learn the different functions of various technologies. Furthermore, organisational managers should consider technology within a broader organisational context as a kind of system, culture and infrastructure. This is because supportive leadership and a contextual environment will definitely foster the development of technology usage in social services (Vanderlinde & van Braak, 2010).

6 Conclusion

The current study investigated the relationship between the perceived usefulness of technology, the motivation of using technology and the actual usage of various digital tools. The results indicate that the perceived usefulness of technology and the motivation to use technology have significant positive association with the actual usage of various digital tools. Therefore, special attention is needed to support social

workers in using technology in future, particularly in the integration of technology in services and how technology can benefit service targets. Additionally, the increased use of synchronised communication tools, as reflected in this study, reveals the fact that the communication pattern between social workers and service users is changing. Thus, future research studies are required to explore the pros and cons of the changing communication and intervention pattern within social services.

The limitations of this study must be acknowledged. First, the current study does not explore the underlying organisational system, policies, infrastructure and leadership that may affect the motivation to use technology as well as the actual usage of technological tools among social workers. Hence, future studies should focus on the context and organisational factors that may influence the motivation and actual usage of technology. Second, the results may be biased towards the social workers who were interested in technology, because they had participated in a technology seminar before participating in this study. Social workers who did not participate in any prior seminar may have indicated that they were not interested in technology, and their opinions were ignored in the current study.

References

- Baker, S., Warburton, J., Hodgkin, S., & Pascal, J. (2014). Reimagining the relationship between social work and information communication technology in the network society. *Australian Social Work*, 67(4), 467-478. <https://doi.org/10.1080/0312407X.2014.928336>
- Banks, S., Cai, T., De Jonge, E., Shears, J., Shum, M., Sobočan, A. M., ... Weinberg, M. (2020). Practising ethically during COVID-19: Social work challenges and responses. *International Social Work*, 63(5), 569-583. <https://doi.org/10.1177/0020872820949614>
- Botella, C., Riva, G., Gaggioli, A., Wiederhold, B. K., Alcaniz, M., & Baños, R. M. (2012). The present and future of positive technologies. *Cyberpsychology, Behavior, and Social Networking*, 15(2), 78-84. <https://doi.org/10.1089/cyber.2011.0140>
- Bullock, A., & Colvin, A. (2015). Communication technology integration into social work practice. *Advances in Social Work*, 16(1), 1-14. <https://doi.org/10.18060/18259>
- Chan, C. T., & Au Yeung, H. Y. (2021). When narrative practice suddenly goes online due to COVID-19.... *Qualitative Social Work*, 20(1-2), 390-398. <https://doi.org/10.1177/1473325020981086>
- Chui, C. H., & Ko, A. (2021). Converging humanitarian technology and social work in a public health crisis: A social innovation response to COVID-19 in Hong Kong. *Asia Pacific Journal of Social Work and Development*, 31(1-2), 59-66. <https://doi.org/10.1080/02185385.2020.1790412>
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS quarterly*, 13(3), 319-340. <https://doi.org/10.2307/249008>
- Deslonde, V., & Becerra, M. (2018). The technology acceptance model (TAM): Exploring school counselors' acceptance and use of Naviance. *The Professional Counselor*, 8(4), 369-382.

- Denby, R. W., Gomez, E., & Alford, K. A. (2016). Promoting well-being through relationship building: The role of smartphone technology in foster care. *Journal of Technology in Human Services*, 34(2), 183-208. <https://doi.org/10.1080/15228835.2016.1168761>
- Du, Y. Z., & Chan, T. M. (2021). Professional identity of Wuhan and Hong Kong social workers: COVID-19 challenges and implications. *Qualitative Social Work*, 20(1-2), 297-304. <https://doi.org/10.1177/1473325020973339>
- Gillingham, P. (2014). Electronic information systems and social work: Who are we designing for? *Practice: Social Work in Action*, 26(5), 313-326. <https://doi.org/10.1080/09503153.2014.958454>
- Goldkind, L., Wolf, L., & Jones, J. (2016). Late adapters? How social workers acquire knowledge and skills about technology tools. *Journal of Technology in Human Services*, 34(4), 338-358. <https://doi.org/10.1080/15228835.2016.1250027>
- Grossi, G., Lanzarotti, R., Napoletano, P., Noceti, N., & Odone, F. (2020). Positive technology for elderly well-being: A review. *Pattern Recognition Letters*, 137, 61-70. <https://doi.org/10.1016/j.patrec.2019.03.016>
- Grundy, J., & Grundy, J. (2013). A survey of Australian human service agency software usage. *Journal of Technology in the Human Services* 31(1), 84-94. <https://doi.org/10.1080/15228835.2012.751297>
- Hung, E. N., Lee, T. T., & Cheung, J. C. (2021). Practising social work groups online: Practitioners' reflection on the COVID-19 outbreak. *International Social Work*, 64(5), 756-760. <https://doi.org/10.1177/0020872821989796>
- Hung, S., & Fung, K. (2021). Venturing into the unknown with the use of ICTs in social work education during COVID-19. *China Journal of Social Work*, 14(2), 172-187. <https://doi.org/10.1080/17525098.2021.1923545>
- Lau, S. M., Chan, Y. C., Fung, K. K., Hung, S. L., & Feng, J. (2021). Hong Kong under COVID-19: Roles of community development service. *International Social Work*, 64(2), 270-274. <https://doi.org/10.1177/0020872820967734>
- Lee, O. E., & Davis, B. (2020). Adapting 'Sunshine,' a socially assistive chat robot for older adults with cognitive impairment: A pilot study. *Journal of Gerontological Social Work*, 63(6-7), 696-698. <https://doi.org/10.1080/01634372.2020.1789256>
- Ling, H. W., Shum, M., Kwan, C. K., & Xu, M. (2021). Social workers' adaptation in times of pandemic crisis: A Hong Kong case. *International Social Work*, 66(1), 181-192. <https://doi.org/10.1177/002087282111064581>
- Lopez, A. (2015). An investigation of the use of internet based resources in support of the therapeutic alliance. *Clinical Social Work Journal*, 43, 189-200. <https://doi.org/10.1007/s10615-014-0509-y>
- López Peláez, A., Pérez García, R., & Aguilar-Tablada Massó, M. V. (2017). E-social work: Building a new field of specialization in social work? *European Journal of Social Work*, 21(6), 804-823. <https://doi.org/10.1080/13691457.2017.1399256>
- Mishna, F., Sanders, J., Fantus, S. (2020). Socialwork: Informal use of information and communication technology in social work. *Clinical Social Work Journal*, 49, 85-99. <https://doi.org/10.1007/s10615-019-00729-9>
- Özsungur, F. (2021). *Handbook of research on policies, protocols, and practices for social work in the digital world*. Information Science Reference.
- Reamer, F. G. (2013). Social work in a digital age: Ethical and risk management challenges. *Social Work*, 58(2), 163-172. <https://doi.org/10.1093/sw/swt003>
- Reamer, F. G. (2018). Ethical standards for social workers' use of technology: Emerging consensus. *Journal of Social Work Values and Ethics*, 15(2), 71-80.
- Riva, G., Baños, R. M., Botella, C., Wiederhold, B. K., & Gaggioli, A. (2012). Positive technology: Using interactive technologies to promote positive functioning. *Cyberpsychology, Behavior, and Social Networking*, 15(2), 69-77. <https://doi.org/10.1089/cyber.2011.0139>

- Riva, G., Mantovani, F., & Wiederhold, B. K. (2020). Positive technology and COVID-19. *Cyberpsychology, Behavior, and Social Networking*, 23(9), 581-587. <https://doi.org/10.1089/cyber.2020.29194>
- Robbins, S. P., Coe Regan, J. A. R., Williams, J. H., Smyth, N. J., & Bogo, M. (2016). From the editor — The future of social work education. *Journal of Social Work Education*, 52(4), 387-397.
- Southey, S. J., & Stoddart, K. P. (2021). Clinical intervention with autistic adolescents and adults during the first two months of the COVID-19 pandemic: Experiences of clinicians and their clients. *International Social Work*, 002087282110124. <https://doi.org/10.1177/00208728211012462>
- Tsang, W. W., Mo, K. Y., Cheung, J. C., & Wong, E. Y. (2022). Social workers' acceptance of information and communication technology (ICT) in practice during COVID-19: Search for embracing ethical considerations in Hong Kong. *Journal of Social Service Research*, 48(5), 633-646.
- Vanderlinde, R., & van Braak, J. (2010). The e-capacity of primary schools: Development of a conceptual model and scale construction from a school improvement perspective. *Computers & Education*, 55(2), 541-553. <https://doi.org/10.1016/j.compedu.2010.02.016>
- Venkatesh, V., & Bala, H. (2008). Technology acceptance model 3 and a research agenda on interventions. *Decision Sciences*, 39(2), 273-315. <https://doi.org/10.1111/j.1540-5915.2008.00192.x>
- Zhao, S. Z., Wong, J. Y., Luk, T. T., Wai, A. K., Lam, T. H., & Wang, M. P. (2020). Mental health crisis under COVID-19 pandemic in Hong Kong, China. *International Journal of Infectious Diseases*, 100, 431-433. <https://doi.org/10.1016/j.ijid.2020.09.030>
- Zhu, H., & Andersen, S. T. (2021). Digital competence in social work practice and education: Experiences from Norway. *Nordic Social Work Research*, 1-16. <https://doi.org/10.1080/2156857X.2021.1899967>

Open Access This chapter is licensed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License (<http://creativecommons.org/licenses/by-nc/4.0/>), which permits any noncommercial use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.

