Communication Technology Integration into Social Work Practice

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Abstract: *The uses for communication technology continue to grow in the United States. Communication technology is being incorporated into traditional social work practice for administrative and therapeutic purposes. This article provides an overview on how the use of technology has evolved in social work practice. The Technology Acceptance Model is used to addresses the challenges that communication technology poses for social work practice. This article also examines a theory-based direction for the future creation of technologically driven interventions in social work practice.*

Keywords: *Communication technology, technology acceptance model, social work*

Overview of Communication Technology Integration into Social Work Practice

There has been a rapid increase in the adoption of communication technology in everyday life over the last five years. Both youth and adults rely on communication technologies for entertainment, information, and social connections (Mishna, Bogo, Root, Sawyer, & Khoury-Kassabri, 2012). Communication technologies are tools that support the production of knowledge and the development of skills; thus, there are significant value implications for social work practice (Cwikel & Cnaan, 1991; Kreuger & Stretch, 2000).

Social media sites, including Facebook, Instagram, Pinterest, Twitter, and LinkedIn, are common networking platforms used by approximately 73% of online adults (Duggan & Smith, 2013). Furthermore, 91% of American adults own a cell phone and use it for services other than phone calls, such as text messaging, accessing the Internet, downloading online applications, and participating in video chats (Duggan, 2013). Technology is not only transforming how people collect and share information but also altering how people interact with one another. The speed of technology has created the lure of immediate gratification and the pressure to communicate more quickly and often with larger numbers of individuals (Csiernik, Furze, Dromgole, & Rishchynski, 2006).

Technology has also evolved in social work practice over the past decades, playing a part in giving practitioners easy access to colleagues and to their clients through fax, e-mail, cell phones, chat rooms, and online messaging (Csiernik et al., 2006). In the 1980s, clinical practice involved one-way mirrors with clients to allow for interdisciplinary and team participations in assessment and training (Csiernik et al., 2006). As early as 1982, social work services emerged on the Internet in the form of online self-help support groups (Kanani & Regehr, 2003). By the late 1990s, groups of clinicians offered online counseling services to the public using secure web sites (Grant & Grobman, 1998; Martinez & Clark, 2000; Reamer, 2012; 2013; Schoech, 1999). Today, social work services include a much wider range of digital and electronic options. These options allow social workers to engage

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clients through email exchange and text messaging using their smartphones or through video teleconferencing using tools such as web cameras, Skype, FaceTime, and Second Life (Chester & Glass, 2006; Kanani & Regehr, 2003; Lamendola, 2010; Menon & Miller-Cribbs, 2002). Through these forums, social workers can offer services such as online and video counseling (Csiernik et al., 2006; Reamer, 2014). Access and equity, greater flexibility, and economic or geographic restraint have driven the deployment of these technological tools in social work (Jones, 2010). The move toward a technologically driven practice has been so important that in 2005 the National Association of Social Workers (NASW) and the Association of Social Work Boards (ASWB) collaborated to develop standards for ethically integrating technology into social worker practice (NASW & ASWB, 2005). These standards addressed ethical issues such as technical competence, client privacy and confidentiality, documentation, and research evidence concerning the effectiveness and impact of distance services (Reamer, 2014).

Presently, there is increasing pressure on social service agencies to produce "results," and often agency computer information systems are associated with efforts to do so as practitioners try to provide effective services to clients (Carrilio, 2007). Despite the ever-increasing user-friendliness of the systems' availability to capture program and service data, some social workers have been reluctant to embrace them (Barrett, 1999; Carrilio, 2005; Carrilio, Packard, & Clapp, 2003). Social workers who refuse to acknowledge this technology trend risk falling out of step with the profession (Reardon, 2010).

The role of the social worker is evolving, and social workers need to adjust to the changes in social work practice in the technology age (Social Work and Technology, 2013). The integration of technology into practice presents challenges and opportunities for the field of social work. Although much research effort has been directed to understanding user acceptance of new technologies, it is important to understand some of the factors that go into acceptance and utilization of information systems (Carrilio, 2007). For this reason, this paper will explore a theoretically based direction for the future creation of a technologically supported social work practice through an examination of the Technology Acceptance Model (TAM). Additionally, this article will address both the challenges and opportunities communication technology poses for social work practice, placing emphasis on the social workers' response to the adoption of communication technology.

Description of the Technology Acceptance Model (TAM)

The TAM, developed by Davis (1985), is derived from Fishbein and Ajzen's (1975) theory of reasoned action (TRA). TRA was designed to apply to any specific domain of human-computer interactions (Davis, Bagozzi, & Warshaw, 1989), and the TAM expounds on this theory by providing a theoretical linkage among users' internal beliefs, attitudes, intentions, and usage behavior to determine an individual's acceptance or rejection of a new technology (Davis, 1989). The TAM postulates that technology adoption behavior is an outcome of an individual's emotional response toward a technological innovation.

The TAM examines user acceptance of technology and shows the relationship between perceived usefulness (U), perceived ease of use (EOU), behavioral intentions to use (BI), and the actual system use. The TAM predicts further that user acceptance behaviors of

technology are based on the influences of two key determinants: U and perceived EOU. The first belief, U, is the degree to which an individual believes that a particular system will enhance their job performance within an organizational context (Davis et al., 1989). EOU is the degree to which an individual believes that the use of a particular system will be free of mental effort (Davis et al., 1989). U and EOU are distinct but related concepts: U focuses on the impact of technology use on overall organizational processes and outcomes, whereas EOU is concerned primarily with the level of complexity required in the use of the technology (Teo, 2012). The TAM posits that EOU has a direct impact on U: the easier the system is to use, the more likely the user will accept it (Venkatesh & Davis, 2000).

Additionally, U and EOU are key antecedents that determine one's behavioral intentions (BI) to use technological systems (Kowitlawakul, 2008). BI are the degree to which a person formulates a plan to perform or not perform some specified future behavior (Davis et al., 1989). The TAM proposes further that a user's BI are determined by their perception of the level of difficulty and practicality of the technological system (Venkatesh, 2000). Accordingly, BI are the strongest predictor of actual use (Davis et al., 1989; Taylor & Todd, 1995). Thus, the TAM can predict the intent to use technology, which is derived from the user's attitude, and actual use of technology, which is derived from the user's actions (Willis, 2008).

Accordingly, the TAM provides the framework for exploring the key determinants associated with the communication technology adoption behaviors of social workers (Davis et al., 1989). The origins and basis of technology acceptance and resistance in an organization become complex when examined in the light of how technology has been used in the past, how it may be seen as a tool of oppression, and how these experiences affect employees' emotions and attitudes about the proposed new technology in the workplace (Stam, Stanton, & Guzman, 2004). The following sections will examine both the challenges and benefits of integrating technology into social work practice.

Challenges with Communication Technology Acceptance and Integration into Social Work Practice

Although the concept of adapting communication technologies into social work practice can present some advantages, such as increased productivity and reduced paperwork, it can also present unique complexities and ethical challenges for social work practitioners, as the incorporation of technology into practice can be met with some resistance from social workers. This resistance may manifest through BI, perceived U, and EOU.

Behavioral Intentions (BI)

Oftentimes, social workers consider technology to be complex systems that contribute to diminishing the client-worker relationship (Reardon, 2010). Some practitioners argue that the type of rapport developed through face-to-face interactions cannot be duplicated though online interactions (Hill & Ferguson, 2014). For seasoned practitioners, the practice

of social work is about the interface of people, their families, and their communities. The *NASW Code of Ethics* places human relationships at the center of ethical social work practice (NASW, 2008). Social workers in the profession are viewed as agents of social control who also promote social welfare and social change to empower the individual, the group, and the community (Csiernik et al., 2006). For these reasons, some social work practitioners question whether real, long-term relationships can be created when people do not meet face-to-face (Costello, Brecher, & Smith, 2009; Csiernik et al., 2006). Because of this, many seasoned social workers may perceive the adoptions of new technologies as cumbersome, making them feel more like bureaucrats than helpers (Reardon, 2010).

Ease of Use (EOU)

A challenge exists in the profession's generation gap between new practitioners, who are most likely to have experience with technology and feel comfortable using it, and more experienced social workers who used typewriters, not computers, during their education (Csiernik et al., 2006). Early research noted that the lack of technological literacy on behalf of the social worker was exacerbated by characteristics such as worker sex, age, and prior experience with information systems (Monnickendam & Eaglestein, 1993). For example, recent statistics report that between 2008 and 2010, approximately 66% of social workers in the United States workforce were 35 and older (U.S. Department of Health and Human Services, 2013). Csiernik et al. (2006) explained that beginning practitioners are considered digital natives because they grew up immersed in digital technology. According to Palfrey and Gasser (2008), digital natives are individuals who were born after 1980 and possess the skills to use digital technology. Established practitioners are considered digital immigrants because they were born before the introduction of digital technology. In some regard, digital natives may have an advantage over digital immigrants because they use technology from an early age (Gillingham, 2014). Saleem et al. (2009) discovered that many seasoned workers (digital immigrants) still chose to rely on paper to complete certain tasks rather than embracing new technological tools; these seasoned workers turned to paper for various reasons, including the perception that it was efficient in certain cases, easier to use, and more useful in helping them remember important information. In a study of 245 community social workers, Carrilio (2007) reported that social workers' skill and experience with computers and perceptions about the user-friendliness of the systems and usefulness of data affected utilization of technology and software applications. However, research has reported very compelling reasons for social workers to document relevant client information electronically as, in principle, properly encrypted electronic records are more secure than traditional paper records (Reamer, 2013).

Poor implementation and lack of training of technological tools has also been cited as an explanation for social workers' resistance to technology (Baker, Warburton, Hodgkin & Pascal, 2014). Drumm, McCoy, and Lemon (2003) point out that although the use of technology in social service is increasing, social workers still lack technological skills. Social workers have a duty to meet minimum standards of competence when providing services to clients, particularly with the use of novel and emerging interventions (Reamer, 2013). According to the *NASW Code of Ethics* (2008):

> Social workers should provide services in substantive areas or use intervention techniques or approaches that are new to them only after engaging in appropriate study, training, consultation, and supervision from people who are competent in those interventions or techniques. (p. 8, standard, 1.04[b])

> Social workers should therefore exercise careful judgment and take responsible steps (including appropriate education, research, training, consultation, and supervision) to ensure that competence of their work. (p. 9, standard 1.04[c])

The NASW and ASWB (2005) standards for practitioners' use of technology state, "[s]ocial workers shall be responsible for becoming proficient in the technological skills and tools required for competent and ethical practice and for seeking appropriate training and consultation to stay current with emerging technologies" (p. 7).

Perceived Usefulness (U)

Reardon (2010) stated that although many industries embrace communication technology, a switch to advanced technology may not be easy in social work. Previous research has indicated that social workers resist using technology that is primarily focused on collecting data because they perceive this technology as neither enhancing quality of life for clients nor producing more effective and efficient services (Watling & Rogers, 2012).

The challenges with embracing new communication technology may involve the traditional tensions between management and frontline workers (Reardon, 2010). In their research, Stillman and McGrath (2008) highlighted some challenges in integrating technological advances, including client management and reporting systems, into contemporary practice. For example, managers are often in charge of technology initiatives and therefore gravitate toward systems that reflect their needs. This is evidenced in a study by Stam et al. (2004), who reported that agency management mandated that employees take portable laptop computers into the field for collecting data during client visits. In this study, the agency decided that laptops were the direction in which to move to reduce duplication and increase efficiency. Stam et al. (2004) further reported that the agency's management had not discussed the planned changes with the caseworkers. Because of this lack of control and input, it is perhaps understandable that many social workers view information and communications technology (ICT) as dehumanizing and taking them away from their core practice tasks (Hill & Shaw, 2011; Rafferty, 1997). Schoech stated, "It should be no surprise that frontline workers often find these systems to be of limited value" (as cited in Reardon, 2010, p. 1). This helps to explain why social workers tend to view ICTs as a management tool rather than a practice one (Hill & Shaw, 2011; Parrott & Madoc-Jones, 2008). Moreover, social workers, in a study by Burton and van den Broek (2009), perceived that the administration did not appreciate the amount of time it took to produce reports using the new communication technology.

Communication technology also gives rise to potential ethical issues related to professional boundaries. Mishna et al. (2012) examined how online communication, such as email, text messages, and social networking sites, are being integrated into face-to-face

social work practice and found that when communication technologies were used for administrative purposes, such as scheduling appointments or sharing supplemental resources, professional boundaries were not challenged. However, when communication technologies were used for non-administrative purposes, social workers believed that professional boundaries could potentially become blurred because no clear standards related to communication technology had been established (Mishna et al., 2012). With the growth in the use of social networks such as Facebook, social workers have an ethical obligation to address boundary issues in relation to their clients' online lives (Baker et al., 2014). For example, because of the perceived usefulness of new technologies, many social workers may receive requests from current or former clients asking to be social networking "friends" or contacts. Clients who have access to social workers' networking sites may learn a great deal of personal information about their social worker that may introduce complex transference and countertransference issues in the professional-client relationship (Reamer, 2014).

Moreover, one of the greatest challenges toward integrating communication technology into social work practice is the emergence of e-counseling and e-therapy (Csiernik et al., 2006). Extensive concerns about both ethical and legal components have been raised regarding conducting counseling via the Internet, e-mail, or through chat rooms. Examples of areas of concern include practitioner competence as well as privacy and confidentiality issues. The NASW (2008) states that, "social workers should take precautions to ensure and maintain the confidentiality of information transmitted to other parties through the use of computers, electronic mail, facsimile machines, telephones and telephone answering machines, and other electronic or computer technology" (p. 12, standard 1.07[m]). Additional noted concerns included: the level of expertise and skill in the medium as compared to traditional social work skills; the ability to establish an electronic therapeutic relationship; increasing time spent documenting contact with clients; using streamlined interviews with clients rather than spending time with them face-to-face; and the privacy and confidentiality, anonymity, and security of the electronic relationship and conflicts of interest (Ames, 1999; Gelman, Pollack, & Weiner, 1999; Kamani & Regehr, 2003; Rock & Congress, 1999). For instance, social workers who deliver services using email, avatars, live chat, and video counseling must be sure to use sophisticated encryption technology to prevent confidentiality breaches (hacking) by unauthorized parties and must comply with relevant privacy laws and regulations (Morgan & Polowy, 2011). This may be a major challenge for seasoned (digital immigrant) social workers.

Opportunities Created by Information Technology Acceptance and Integration into Social Work Practice

Integrating communication technology can revolutionize social work practice (Csiernik et al., 2006; Hill & Ferguson, 2014; Mishna, Bogo, Root, & Fantus, 2014). The integration of technology into practice creates the capacity for social workers to become more efficient through reduction of paperwork and expansion of time with clients (Reardon, 2010). Moore, a chief information officer at Araohohoe Douglas Mental Health Network in Colorado, stated:

Electronic systems allow workers to be more mobile in the services they provide because they can access client records using an Internet connection rather than carrying around paper files. This means workers can spend less time searching for records and more time working with clients. (as cited in Reardon, 2010, p. 1)

Work in the field has examined the potential uses of communication technologies to enhance the implementation of evidence-based practice in social service programs (Schoech, Basham, & Fluke, 2006). Because rural areas frequently experience a scarcity of specialized professionals, resources, and clinical services, researchers have acknowledged that e-mail, instant messaging, and video conferencing can create opportunities for people in remote areas and for populations with limited mobility due to a disability to receive assessment and counseling services (Csiernik et al., 2006; Ginsberg, 2011; Kowalenko, Bartik, Whitefield, & Wignall, 2003).

Brownlee, Graham, Doucette, Hotson, and Halverson (2009) reported that access to communication technology has a positive impact on social work practice in rural areas. For example, through teleconferencing, rural social work practitioners are able to address problems such as professional isolation, lack of ongoing training, limited availability of supervision, and reduced access to professional development. Furthermore, social workers identified the Internet as a useful tool for researching additional client resources, communicating with service providers, generating online recording, and assessing online client databases. Researchers have suggested that the extended access to services for people with disabilities and individuals living in rural areas can be effective in establishing strong client-worker relationships and successful client outcomes that are similar to face-to-face practice (Mishna et al., 2014).

Communication technology also offers benefits to social workers in macro practice as these new and innovative technological tools can make it easier for practitioners to establish connections with stakeholders and seek support for their organizations (Hill & Ferguson, 2014). This includes creating a pathway to engage in collaborative endeavors such as coordinating on service delivery, soliciting external funding opportunities, and developing strategic plans. All these efforts can be accomplished as stakeholders connect, communicate, and coordinate from remote locations, thus making planning more efficient and timely.

Social workers are beginning to engage in electronic advocacy, which is the use of technology to influence policy decision making (Dunlop & Fawcett, 2008). Hill and Ferguson (2014) outlined the key functions of electronic advocacy: conducting policy research and information gathering, creating public awareness and education, building cyber communities and activism, organizing communities online and offline, raising funds, and placing pressure and influence on policy makers. Electronic advocacy is conducted through avenues such as blog sites, e-mail, electronic mailing lists, online news groups, photojournalism, and social networking sites. Through the utilization of such electronic advocacy, social work practitioners can assist nonprofit agencies in promoting social justice and equality for marginalized populations (Dunlop & Fawcett, 2008). Advocacy can also be conducted at the micro level in which practitioners advocate for improved ICT access for their clients (Baker et al., 2014). Agencies could facilitate free wireless access

for clients in waiting areas. In circumstances where social workers visit clients in their homes, they could be provided with smartphones that allow those nearby to share the phones' data. These strategies have the potential to help empower clients and build independence via access to online support (Baker et al., 2014). Additionally, this usage of technology is both effective and efficient because communication technology requires minimal resources and has the capability of reaching a global audience (Hill & Ferguson, 2014).

Implications for Social Work Practice

The digital divide is becoming ever increasing in social work populations, as increased advocacy for digital literacy, technology inclusion, and access is an immediate need (Belluomini, 2013). For these reasons, technology communication acceptance in the workplace may involve a complex mix of how easy the system is to use, the organization's readiness for infusion, and enhancing staff skills, attitudes, and experience with data (Carrilio, 2007). To accomplish this, user characteristics (skill and experience), system attributes (EOU), and the importance of the data (U) are important elements that must be present in system utilization (Carrilio, 2007).

Further, Reardon (2010) reported that the tensions between social work and technology might ease as younger and more computer-savvy practitioners enter the profession. As stated by Fitch, assistant professor at the University of Missouri's School of Social Work, "We need a cadre of talented students and young researchers interested in designing information systems that reflect the values of social work" (as cited in Reardon, 2010, p. 3). Until social work education is updated with current technological training, social workers with technological literacy should educate others on the integrations of technology into practice (Belluomini, 2013).

There is limited research addressing technology and social work practice. Therefore, further research is needed to fully understand the impact of technology as a tool in social work practice (Hill & Ferguson, 2014). Although studies have identified that newer social workers who are classified as digital natives may have the ability to incorporate technology into practice with greater ease than digital immigrants, few research studies identify the specific population of social workers that shows the greatest resistance to technology (Gillingham, 2014). Additional studies that not only analyze the effectiveness of technology-related interventions but also examine the key characteristics of social workers who are less likely to use technology could help to reduce practitioners' resistance to technology. As more outcome-based data that present cost-effective models of technology in social work practice are made available, technology-enhanced service delivery will be expanded, and practitioners will be more apt to use evidence-based technological tools (Smith, 2009).

In planning for the future integration of ICTs into practice, there must be considerations for infusing practice-led approaches to ICT usage as well. This begins with organizational leaders assessing current skills and arranging for social workers to attend training with the new communication technology. Harrison and Rainer (1992) reported that user training

had an important effect on communication technology usage. It also involves "starting with social work practice, not with ICTs themselves" (Hill & Shaw, 2011, p. 11). Firstly, the practice-led approach involves social workers playing a key role, along with ICT specialists and other stakeholders, in developing ICTs' infrastructure (Hill & Shaw, 2011). This involves the active involvement of frontline workers in the design of data management systems. This is paramount if human services organizations want systems that workers will actually use and benefit from (Reardon, 2010). Additionally, in a practice-led environment, ICT hardware and software should be easy to use and "not get in the way of face-to-face work" (Hill & Shaw, 2011, p. 17). Further, ICT software should allow social workers to effectively tell the story of their work with clients (Hill & Shaw, 2011). Finally, practice-led approaches to ICT use should enable social workers to play an active role in advocating for improved access to the global information network for their clients (Baker et al., 2014).

While the perceived benefits to integrating TAM into practice have been highlighted, integration also comes with noted limitations. One limitation of TAM is the assumption that the usage of a given technology is voluntary; however, many employees are required to use a technology system to perform their jobs (Adomavicius & Gupta, 2009). A second known limitation of TAM is that even if a user is not compelled to use a technology by their employers, they may be forced to use a technology they find difficult because there is no other viable choice. Moreover, a third limitation of TAM is that an individual's performance may not necessarily be positively impacted even if the user finds technological tools useful and incorporates technology into their work with ease. Additionally, a system that does not work well but is still highly used by an organization may actually harm the organization that uses it (Adomavicius & Gupta, 2009).

Conclusion

The origins of technology acceptance and resistance by social workers have been viewed as complex, particularly in light of how technology has been used in the past, how it may have been seen as a tool of oppression, and how these experiences have affected employees' emotions and attitudes about proposed technology in the workplace (Stam et al., 2004). In social work practice, embracing new and innovative communication technologies can create opportunities for enhancing human service delivery. With that said, social workers must capitalize on technological change and overcome their resistance to learning new information technology skills, change from traditional to electronic advocacy practice, and integrate these new changes into practice (Dunlop & Fawcett, 2008).

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