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How Psychological Telehealth Can Alleviate Society’s Mental Health Burden: A Literature Review

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Mental health professionals must establish new means to reach those in need that face obstacles related to geographical location, time limitations, and health. With the high incidence of mental illness, as well as the hypothesized increase in coming years, telehealth modalities propose a novel and far-reaching alternative to traditional therapy. This article outlines the positive aspects and interdisciplinary possibilities when telehealth is incorporated into mental health practice. Novel outlets including mHealth and the utilization of computer tablets as mental health facilitators are outlined. Considerations for practice including training are discussed, as well as potential future directions for the field. Available data supports telehealth as an effective mode for the treatment of clients who are unable to pursue mental health services in their current form. However, careful consideration and training for the mental health professional is needed if telehealth is to be effectively used to alleviate the mental health burden.

KEYWORDS *clinical psychology, mHealth, mental health burden, telehealth, telepsychology*

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Despite the proliferation and advancement of efficacious psychological interventions to treat mental health concerns, some have questioned the mental health profession's inability to reach all those in need of care (Kazdin & Blase, 2011). Treating a wide range of individuals across vast landscapes should be of paramount importance for the field. However, limitations of geographical location, financial support, perceived or genuine barriers such as handicap or lack of transportation, lack of insurance, time constraints, family needs, and illnesses limit the impact that providers can have (Cartreine, Ahern, & Locke, 2010; Emmelkamp, 2005; Kazdin & Blase, 2011; Sturges, 1998). As Kazdin and Blase (2011) outlined, there will always be a place for face-to-face therapy, however, something must change to overcome the limitations facing the field and the notion that mental health care services are often not able to reach all those in need, particularly those in rural or remote areas. With the current prevalence of mental illness, as well as concerns of illness intensifying and growing in the near future (Institute of Medicine, 2004), a major shift and expansion of clinical practice must occur to overcome the mental health burden and facilitate positive change (Kazdin & Blase, 2011). From this, the question becomes, how do we facilitate this shift that will give mental health professionals greater reach and tools to serve the greater population?

This article provides an outline for the positive aspects and means, as well as considerations and areas for future directions, for incorporating telehealth with mental health practice toward the ultimate goal of prevention and treatment. Although many have defined "telehealth" (e.g., Barak, Klein, & Proudfoot, 2009; Herbert, 2001; Jameson, & Blank, 2007; Rochlen, Zack, & Speyer, 2004), it is generally agreed upon that the term comprises the transmission of images, voice, and data between two health units via technology to provide educational, clinical, training, administrative, and consultation services (Dielman et al., 2010; Stamm & Peredina, 2000). For the purposes of this review, telehealth will specifically refer to synchronous webcam-based interventions (i.e., in which a mental health professional is in live communication with the client), unless noted otherwise.

THE NEED FOR MENTAL HEALTH CARE

Throughout the United States, lifetime prevalence rates for mental illness has been estimated at 50% meeting criteria for at least one psychiatric disorder in their lifetime (Kessler & Wang, 2008). However, this statistic does not account for many who may be in need, but fall under the diagnostic symptom classification necessary to be labeled for a disorder. Despite not exhibiting enough symptomatic distress, many of these individuals are still substantially impacted and have difficulties with work, family, and social relationships that make them prime candidates for a mental health intervention. Historically, a large number of these individuals who would benefit from mental health

care go untreated. The explosion of technology over the past several decades has led to new means of reaching those in need. This technological growth has led to a 480% increase between 2000 and 2011 alone of Internet use (Merrell & Doarn, 2012), with more than 77% of the United States population having some form of high speed Internet in their homes as of 2010 (e.g., DSL, Cable, ISDN, T1; International Telecommunication Union, 2012). Additionally, an estimated 80% of the population utilizes the Internet to look up health information online, with the second highest WebMD search in 2010 being “anti-depressants” (Fox, 2011). From these numbers alone, one can see the massive impact that telehealth may provide in real world settings to present a client with a live mental health professional.

The Need for Increased Access

Nowhere is the need for mental health services more prevalent than in rural locations. Research has demonstrated that those living in rural areas are significantly more inclined to search the Internet for mental health issues than were those in urban areas, suggesting a substantial need (Ruggiero, Gros, McCauley, de Arellano, & Danielson, 2011). For these individuals, proper care is often lacking due to limited mental health professionals being available in such areas. This fact holds true for varying ages, including the elderly population who may need services to help defend against the development of common difficulties that stem from age or age-related declines in social interactions (Lang & Carstensen, 1994). Additionally, proper care can help defend against the development of more severe depression, anxiety, substance abuse, or medical difficulties that are common in this age bracket (Cole, Bellavance, & Mansour, 1999; Flint, 2006; Patterson & Jeste, 1999). Pediatric mental health services are a similarly lacking component in rural areas, with some parents having to drive more than an hour away from home for their child to receive aid (Lingley-Pottie & McGrath, 2008). Should a parent not have the time, or wish to take their child out of school, the child goes without help and may become substantially worse, or possibly develop further problematic symptomology.

Service acquisition in rural areas is complicated due to many mental health professionals being reluctant to relocate to rural areas, making such care scarce in these regions (Perle, Langsam, & Nierenberg, 2011; Swinton, Robinson, & Bischoff, 2009). To compensate, many primary care physicians take the role of mental health care professional and provide medications to alleviate symptomology. Although beneficial, more care is often necessary to facilitate healing and to improve the quality of life. This is especially true for children, where Arndorfer, Allen, and Aljazireh (1999) reported that behavioral-based problems (e.g., oppositional behavior, school-related problems, and attention-deficit/hyperactivity problems) were, on average, seen more than any other type of difficulty in primary care settings and were the most challenging for

pediatricians to handle. Due to this, telehealth modes of intervention could be used to bridge the gap, while reducing the travel time for mental health professionals and clients, thus reducing cost of travel and office space rental.

Not surprisingly, research has also shown that those in urban areas were as receptive to receiving psychiatric services via telehealth as those in rural settings (Grubaugh, Cain, Elhai, Patrick, & Frueh, 2008), suggesting a similarly large impact that telehealth can have. Despite there being a larger concentration of mental health professionals in urban environments (Health Resources and Services Administration, 2010; Kazdin & Blasé, 2011), similar concerns that plague the rural community including difficulty with transportation (e.g., having to take several buses to get to a mental health professional, thus impeding a work schedule or child care), or even fear of stigma of going to a mental health care provider (Calam, Cox, Glasgow, Jimmleson, & Larsen, 2000; Perle et al., 2011) can often impede even the best of intentions to receive services.

EFFICACY AND ENDORSEMENT OF TELEHEALTH

Although still considered to be developing compared to other modalities (i.e., face-to-face modes of therapy), a plethora of research since 2000 has provided substantial evidence for the efficacious and safe utilization of telehealth. Specifically, telehealth has demonstrated significant statistical and clinical positive impact (e.g., Folen et al., 2010; Grady et al., 2011; Jennett, Hall, Morin, & Watanabe, 1995; Nesbitt, Hilty, Kuenneth, & Siefkin, 2000). Coupled with effect sizes were significant evidence that clients quickly adapt and establish rapport with their teleprovider (Ghosh, McLaren, & Watson, 1997; Simpson, 2001) and are able to provide information via telehealth as they would in person (Jerome & Zaylor, 2000; Urness, Wass, Gordon, Tian, & Bulger, 2006), in some cases being reported to disclose even more due to what has been termed the online disinhibition effect (Suler, 2004). Efficacy held true for various disorders including some of the most commonly treated difficulties such as Social Anxiety Disorder (e.g., Yuen, 2011) Posttraumatic Stress Disorder (PTSD; e.g., Gros, Yoder, Tuerk, Lozano, & Acierno, 2010), and Panic Disorder (e.g., Bouchard et al., 2004). Promisingly, telehealth has shown great satisfaction after utilization amongst both the clinician and client whether from a civilian or military background (e.g., Frueh et al., 2000; Hilty, Marks, Urness, Yellowlees, & Nesbitt, 2004; Monnier, Knapp, & Frueh, 2003; Morland, Frueh, Pierce, & Miyahira, 2003), and even when used with children and families (e.g., Mulgrew, Shaikh, & Nettiksimmons, 2011; Wade, Oberjohn, Conaway, Osinska, & Bangert, 2011). Such findings have garnered continued support including from a recent systematic review by Backhaus, Agha, Maglione, Repp, Ross, Zuest, and Rice-Thorp (2012) who demonstrated a predominant satisfaction with telehealth therapeutic interventions.

PREVENTION

Although excellent telehealth research has emerged in recent years, this work has often targeted the difficulties after they have advanced. As a goal of mental health care has shifted toward preventing the exacerbation of difficulties before they fully form or bring about comorbid problems, so too can telehealth be used as a preventative measure. As many including Kazdin and Blase (2011) have outlined, mental illness creates not only physical and emotional difficulties, but financial as well. For example, those individuals diagnosed with a *Diagnostic and Statistical Manual of Mental Disorders*—Fourth Edition (DSM-IV) disorder earn \$16,000 less than those without a diagnosis resulting in \$193.2 billion in personal earnings loss nationally in one year (Kessler & Wang, 2008). As a specific example, anxiety disorders annually cost the United States approximately \$42 billion alone (Greenberg et al., 1999). When considered from a functional standpoint, depression is associated with several difficulties including lost wages, communication problems, and other functional impairments (Wang, Simon, & Kessler, 2003). This is especially true in the case of the exacerbation of an individual's current problems. For example, the comorbid development of a substance abuse problem for someone with depression (Swendsen & Merikangas, 2000) or anxiety (Merikangas et al., 1998) is high. Although problematic, it becomes increasingly more distressing when it is factored in that one generally leads to the other as a coping mechanism, albeit an ineffective one. For this consideration, providing a telehealth intervention for someone who is seeking help when they have a mild or moderate difficulty (e.g., low level anxiety or depression) may serve to alleviate their concerns before it progresses to a full disorder, or develops into a comorbidity.

Although mental health disorders are a common area of treatment, every day problems of stress, which may lead to more extreme pathology, can also be treated through telehealth. Such common difficulties are often overshadowed in discussion of reaching remote locations due to the high incidence of more severe mental illness. However, telehealth is no less able to help those with common difficulties than it is to treat those suffering from more complex and severe pathology. For example, should a person feel unable to cope due to overwhelming stress from financial concerns or family issues and not wish to take medication, telehealth can provide access to a mental health professional where no other mental health aid exists, potentially allowing that individual to return to normal functioning.

MOBILE TELEHEALTH (MHEALTH) AND TABLETS

Some of the newest innovations to come in the form of telehealth have been the use of mobile devices and tablets (e.g., iPad), often referred to as mHealth.

Although some may consider these little more than entertainment devices, utilization of these tools has led to new opportunities and methods of intervention and assessment. For example, many newer mHealth devices have built in microphones and high definition cameras that allow for telehealth. For some who are unable to attend face-to-face services, and also have difficulties securing a computer capable of a telehealth connection, mHealth may provide a secondary outlet for treatment. Several criticisms arise from such a method including the potential for reduced efficacy of treatment due to a potential lack of ability for the mental health professional to see the person's full range of movements and body language. However, with a proper setup including a tablet or smartphone on a stand, a mental health professional may be able to conduct therapy in an efficacious manner. Furthermore, this method may allow the benefit of the mental health professional being able to observe the client in their "naturalistic" environment, rather than the artificial setting of the clinician's office.

mHealth are believed to be viable outlets due to their prevalence. Surveys from the World Health Organization (2011) have noted that there are more than 5 billion mobile phone subscribers in the world today with more than 85% of American adults having a cell phone (Fox, 2011). Additionally, PEW Research (Fox, 2011) reported that 17% of mobile users use their phone to look up health and medical information, and over 44 million health apps were downloaded in 2011 alone, demonstrating a want and need for such services (Cox, 2011). Even tablets have become more common, with an estimated 19% of adults in the United States owning one, an increase from 5% in November 2010 and 10% in December 2011 (Rainie, 2012).

As previously noted, the use of mHealth may expand beyond telehealth and include the use of apps (i.e., applications). For example, apps can be utilized to identify a client's location when they were given a homework assignment to desensitize themselves to specific stimuli (Boschen, 2009a, 2009b). More complex apps have been created within research settings including iHeal, a mobile health device developed by the University of Massachusetts Medical School that can detect changes in affective state using an integration of artificial intelligence, continuous biophysical monitoring, and wireless connectivity in an effort to predict when the wearer will transition to risky behavior such as substance use (Boyer et al., 2012). Other apps include Northwestern University's Mobilyze, a program created to monitor mood by documenting location, activity, social context, what a person is doing at a given time, and overall mood to determine if the client in question is in a normal or depressed state, where aid would be required. From this research, those identified as having Major Depressive Disorder were both clinically and statistically better by the end of treatment (as cited in Paul, 2012). In addition to those coming from research institutes, several apps are currently available on the Android and Apple market which serve to simply provide assistance for mental health and health needs. For example,

mood tracking apps including MyMoodTracker Lite, Moody Me, Mood Panda, and Optimism, as well as sleep apps including Sleep Stream 2 and Relax and Sleep Well have become some of the top mental health apps within only a short time of being released (Saedi, 2012). Similar apps, both complex and simplistic in design, can utilize the internet and network access to transmit information gathered in order to send live or up-to-date information to providers with a simple click of a button. This technique would bypass difficulties that stem from clients forgetting to write down information or log specific events that are necessary for baseline data or treatment adjustment. In allowing for easy, immediate transfer of information, a client is more likely to complete, and therefore provide professionals with, more accurate tracking of mood, activities, and progress.

Although more mental health-related apps are being created daily, many still require adequate testing to determine overall effect and benefits. To ensure quality of care, the FDA has proposed guidelines that outline mobile apps included under the medical designation to prevent risk for clients (U.S. Food and Drug Administration, 2011). Even with current standards, findings from such studies presented above have been promising. While it is suggested that a direct contact, whether face-to-face or telehealth modality, would be beneficial for people in many predicaments, this is not always possible, which is when such devices may be increasingly helpful.

INTERDISCIPLINARY

Interestingly, there has been a great surge in telehealth utilization throughout the medical professions, such as radiology, dentistry, and dermatology, to treat rural areas and overseas (e.g., Bauer & Brown, 2001; Goldberg, 1996; Wootton et al., 2000). However, the mental health profession as a whole has been hesitant to adopt these methods. With the mental health field's growing interest and implementation, doors are opened for greater collaboration of mental health services with the medical professions. For example, as rural depression has been found to be best managed by both medication and therapy (Geller, 1999; Von Korff et al., 2001), telehealth can facilitate interactions with both professionals. Telehealth can also be used between the professionals directly to discuss their findings and share confidential information securely and immediately, bypassing the need to fax or mail, and improving treatment time. This may also help shorthanded physicians through collaborative efforts, as approximately 25–50% of family practitioners were found to deliver mental health care despite not having vast experience with such difficulties (Hogenbirk, Montgomery, Boydell, Pong, & Cudney, 2006).

The collaboration can also help alleviate the mental health burden by allowing for better detection of emerging and persisting difficulties. Similar to psychological apps, new medical mobile tools now allow physicians to

monitor and identify one's heart disease through pulse meters, hypertension through peak flow meters, and track diabetes care through digital meters (Biermann, Dietrich, & Standl, 2000; Dansky, Palmer, Shea, & Bowles, 2001; Mease et al., 2000; O'Hara, 2012). Although only a small example of the new developments, each is designed to monitor diseases that often create mental health concerns. By working collaboratively, physicians and mental health professionals can utilize new technologies to identify mental health problems, such as depression or anxiety, related to a medical problem (Pecina et al., 2011).

TRAINING

To assume that a trained mental health provider can easily transition into a telehealth treatment with no consideration for challenges would be a mistake. To ensure that the mental health burden is alleviated in a professional manner, prospective telehealth mental health professionals should seek to take continuing education credits or specific training on the topic, such as through the TeleMental Health Institute (<http://telehealth.org>). This will help those interested learn how to safely and effectively incorporate technology into practice (Eonta et al., 2011), as telehealth providers should be trained and held to the same professional standard of care as those who practice face-to-face services (Natoli, 2009; Perle et al., 2011). This training is important to understand numerous factors, including how the biases of the client may influence the course of treatment. Unless explained beforehand, innocuous actions, such as the professional looking away to take notes, could be misconstrued by the client who may believe the professional is ignoring or rejecting them. Also, knowing about the various ethics included and how to uphold them is a necessity. This includes knowing about the available Health Insurance Portability and Accountability ACT (HIPAA) compliant portals for telehealth (Telemental Health Institute, 2012, see <http://telehealth.org/HIPAA-VIDEO> for a list of conferencing software claiming HIPAA compliance) and how each may vary by state. Additional consideration must be given for reimbursement, as some insurers may only reimburse for specific telehealth programs (e.g., Polycom, Adobe Connect, etc).

To help ensure quality of care, more training programs for telehealth should be created starting at the graduate school level. A recommendation that could serve a dual purpose of both providing training while also creating positions for future students is for funding to be provided for universities to create telehealth internship training programs as a rotation, should a student be interested. If a mental health practitioner is to engage in such services, graduate school and internship would be an opportune time for them to gain experience with professional supervision. With the dramatic increase of students applying to internships (Kaslow & Keilin, 2006), coupled with the

current shortage of internship programs that has been more severe than at any point in the history of psychology training (Keilin, Baker, McCutcheon, & Peranson, 2007), creating new programs for telehealth may help train future generations and provide an inclination for a career in utilizing these methods for collaboration and to help those in rural locations.

CONSIDERATIONS AND CONCERNS

Despite the many possibilities that can make telehealth an integral part of alleviating the mental health burden, there are considerations and concerns that professionals must take into account. Recent literature has become abundant in examining the limitations that one must consider before integration (e.g., privacy and confidentiality, development of therapeutic alliance, previous history with technology, and ethical and legal considerations; Bischoff, 2004; Brenes, Ingram, & Danhauer, 2011; Perle et al., 2011; Schopp, Demiris, & Glueckauf, 2006). Although many of the most prominent issues have been addressed, additional considerations still exist that aren't as frequently discussed.

Logistics of Practice

When developing telehealth services, many may find it difficult to determine such factors as protocols for handling technical difficulties, methods of mental health professional to client communication, waiting time before considering a client a "no-show," record keeping, how to provide questionnaires or assessments, how to sign confidentiality and legal forms, how reimbursement will take place, and length of sessions (Glueckauf, Pickett, Ketterson, Loomis, & Rozensky, 2003). For example, length of sessions may include a period of dialing in to the HIPAA compliant portal, and may even include room for trouble shooting. However, others may opt to not include these times, but rather space out appointments to ensure that should issues arise, they can be handled and still conduct their session. Although seeking legal guidance is always recommended, the care provider must still determine on an individual level how they will handle crisis and duty to warn situations, as well as how to phrase disclaimers about potential limitations to telehealth including difficulties of viruses on either end of the interaction.

A key component to telehealth success is the ability to ensure as controlled an environment as possible, such as in traditional face-to-face encounters that serve to maintain structure and therapeutic integrity. For example, the office layout, angle of chairs, and ability to minimize interruptions may be of significant importance (Brenes et al., 2011). However, when therapy is conducted over telehealth, a mental health professional, as well as client,

may be unable to control all aspects of the encounter. If conducted in a home setting, situations such as children running into the room, or individuals being loud in the background may serve to distract or disrupt the process. Eavesdropping may also be a concern, should other members in the environment wish to listen (e.g., a concerned spouse; Haas, Benedict, & Kobos, 1996). For these reasons, it is important for mental health professionals to provide full disclosure of both the benefits and limitations of telehealth before fully surveying the type of environment that the client will be in, as well as distracting factors. To provide maximum information, a mental health professional may wish to create a telehealth contract that outlines all information of the service, including costs, benefits, and risks of the method, as well as crisis plans should the need arise. The mental health professional should have the client sign the form, but also have a verbal discussion to ensure that all questions and concerns are explored in order to improve their ability to work effectively with the client.

Once all aspects are in place, a mental health professional must consider who will receive services, and how their schedule will be. Will telehealth services be provided on specific days, just with specific people, or will it be in addition to a face-to-face practice for those unable to attend face-to-face services? Will services only be provided to those in rural areas, or will the professional consider providing to those in urban areas, should the need arise? Ultimately, it has been determined that multiple staff responsibilities and heavy caseloads create significant challenges to the effective integration of home telehealth (Nesbitt, Cole, Pellegrino, & Keast, 2006). For some, the burden of extra liability and difficulties with coordination may be too much, while others may embrace the unique possibilities, despite their inherent limitations.

Hardware and Software

When one decides to utilize telehealth, they must ensure quality of equipment both at the mental health professionals' location, and at the consumers'. Mental health professionals must be aware of the strengths and limitations of both the hardware and software they are utilizing. For example, plug-and-play high definition webcams may create concerns for some, because drivers and necessary programs may have difficulty installing and running on specific operating systems. Similarly, professionals must also be aware of minimum standards for accepting the type of video and audio quality they desire (e.g., 1080, 720, 480). Beyond requirements, it is necessary to question if the client understands the utilization and installation strategies necessary before implementation (Glueckauf et al., 2003). The use of consultants is a viable option to ensure proper setup, installation, and equipment. Despite this option, much of the burden may ultimately fall on the shoulders of the provider to understand different telehealth components and their integration into the clinical medium.

Cost Effectiveness

For some, the decision to integrate a telehealth practice may come down to financial costs. Currently, there is no consensus on cost effectiveness of telehealth due to the significant variability of the modality. For example, while Butler and Yellowlees (2012) found that synchronous telehealth was the most costly, other studies have reported adequate cost-effectiveness, even when the assessment of success is extended beyond direct costs and include administrative, clinical, and social outcomes (Hailey, Bulger, Stayberg, & Urness, 2003; Hilty, Bourgeois, Nesbitt, & Hales, 2004; Kennedy, 2005). Additional reports from Persaud and colleagues (2005) concluded that telemental health assessments exhibited lower individual client costs when compared to face-to-face consultation for a number of clients seen in both conditions.

Coupled with the aforementioned difficulties, many hidden fees may arise that a mental health professional may not always take into account when working through a telehealth medium. For example, Bischoff (2004) outlined how financial costs are almost invariably greater than just the initial investment in hardware and software, including the need for recurring costs of larger bandwidth to transmit the high definition video. This is important because even with a top-of-the-line machine, stability and performance of a telehealth endeavor may rely on the connection between the units and involve both a specialized provider, and a larger provider (e.g., Comcast, Cox) who supplies the high-speed internet cables and service (Bischoff, 2004). In addition, although technology has become more reliable, technical difficulties are bound to arise leading to the need for technical assistance which may include a fee (Bischoff, 2004; Glueckauf et al., 2003). Such issues cannot be understated, as Nesbitt and colleagues (2006) found that telecommunication issues played a significant role in the underutilization of home telehealth in one rural community assessed.

FUTURE DIRECTIONS

Policy and Legislative Implications

With the U.S. Department of Health's pledge over the next 5 years to work with the industry, social care, and professional organizations to bring those in need of mental health care to telehealth care, the use of technology in service has a promising future (Guardian Government Computing, 2012). Recent reimbursement changes have been taking place including the Telehealth Advancement Act of 2011 (Maheu, 2011) that made home-based telehealth care of many types reimbursable. Following, Maryland became the 13th state to require private sector insurance companies to pay for telehealth services, along with California, Colorado, Georgia, Hawaii, Kentucky,

Louisiana, Maine, New Hampshire, Oklahoma, Oregon, Texas, and Virginia, for services that are considered medically necessary and would otherwise be covered when provided face to face (Maheu, 2012). Increased legislative changes also have been occurring, including the Senate introducing the Fostering Independence Through Technology Act to establish pilot projects under Medicare and provide incentives for home health agencies to utilize home monitoring technologies, and the U.S. Department of Agriculture granting more than \$30 million for telehealth and distance learning incentives in rural areas nationwide. This \$30 million will serve to support 100 projects in 34 states in hospitals, mobile medical carts, and installing remote healthcare telemonitoring systems (Government Health IT, 2011). Developments such as these open the door to increased usage across the United States, and create hope for those in distress.

Clinical and Research Implications

Although significant work of both research and legislative have gone into telehealth-related endeavors, continued work is still necessary. The most prominent need is continued assessment and clinical trials (e.g., randomized controlled trials) of telehealth interventions outside of the controlled research setting. With much of the research taking place in university labs or controlled facilities, it is necessary to add translational research efforts in order to expand the literature of interventions to practical “real world” settings. Such research will aid in continued determination of which interventions can be adequately translated from a face-to-face medium to a telehealth format. This type of research will also see if many of the “real-life” variables that are able to be controlled for in a research-based setting are still able to be accounted for and remedied through telehealth to maintain efficacy. Although all evidence previously collected, as well as anecdotal evidence, indicates that little efficacy is truly lost should a mental health professional practice ethically and effectively through a telehealth modality, continued validation is important towards the goal of long-term sustainability of such services, as well as reimbursement from private sectors.

Coupled with real-world implementation, research must also focus on the long-term outcomes of such work. Research has proposed promising data for the efficacy of telehealth modalities, as compared to face-to-face treatment (e.g., Barak, Hen, Boniel-Nissim, & Shapira, 2008; Yuen, 2011), but little work has been done to test the lasting effects of such treatments. Would working through a telehealth medium reduce the lasting effects of interventions due to a perceived lack of accountability to the mental health professional, or would this comfort level of working in other locations, potentially their own home, create stronger effects that stand the test of time and stressors?

A final primary point for future work is the examination of cost analyses across various aspects of telehealth. Although some analyses exist, conflicting

evidence suggests the need for further evaluation. With increasing availability of high definition hardware and software coupled with decreasing costs, it is likely that telehealth costs will continue to decrease. However, this may not account for additional fees, including maintenance and sustained service. Future research should clarify these variables and analyze specific aspects that may impede a mental health professional from utilizing such services, which can then lead to addressing such concerns.

CONCLUSION

Although various recommendations have been made to help alleviate the mental health burden, telehealth seems like a viable and realistic approach to address the concern. While expanding, continued work and integration is still believed to be necessary. With careful planning, telehealth systems can significantly impact the quality, timeliness, and availability of services in almost any mental health care system (Grady, Myers, & Nelson, 2009). Although some may never fully accept telehealth due to a notion that it is not a substitute for a “real” person, the goal of integrating technology is not to substitute, but rather to help those in need (Kazdin & Blasé, 2011). It may be true that in some cases a consistent face-to-face interaction may be the best care, but this may not always be possible. For these individuals, even a minor change or minimal therapy can help in reducing their symptoms and improve their quality of life, superseding any further developing problems in order for them to return to a typical level of functioning. The embracing of telehealth by mental health professionals may mean the difference of care or no care, especially for those living in the rural parts of the world. Ultimately, the future of mental health services is not coming, but has been here for some time; mental health professionals must embrace the new outlets for aid if the goal of reducing the mental health burden, in all of its forms, is to be reached.

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