

Digital Peer Support-Enabled Mental Health: A TechQuity Lens

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Digital Peer Support-Enabled Mental Health: A TechQuity Lens

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Abstract

Background: Stress, loneliness, and social isolation are growing public health concerns, yet traditional therapy remains costly, inaccessible, and stigmatized. Digital Peer Support (DPS) offers an alternative that is scalable, anonymous, and affordable. This paper explores DPS through the lens of the 5 A's of TechQuity: Availability, Accessibility, Accommodation, Affordability, and Acceptability.

Objective: This paper examines DPS as an equitable emotional health solution, using Supportiv, an anonymous peer support platform, as a case study. The goal is to assess how DPS addresses barriers to care and expands access to emotional support.

Methods: This article takes a qualitative approach, drawing on existing literature, case studies, and expert perspectives to explore the role of Digital Peer Support in addressing emotional health needs. The case study of Supportiv is examined through the lens of the 5 A's of TechQuity to highlight how DPS addresses barriers to care and enhances access.

Results: Findings show that DPS reduces logistical and financial hurdles, providing immediate, culturally responsive support without requiring insurance or diagnosis. It enhances accessibility and engagement, particularly for underserved populations.

Conclusions: While DPS cannot replace therapy, it fills critical gaps. Further integration into healthcare systems and policy development is needed to maximize its impact.

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Original Manuscript

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Introduction

According to the APA's 2023 Stress in America survey, 32% of adults report that their stress levels have increased over the past year, with younger adults (ages 18–34) and those with lower household incomes feeling the highest levels of stress. [1] Individuals with household incomes below \$50,000 were more likely to report physical health impacts, with nearly 50% stating that stress had led to physical distress such as sleep disturbances and high blood pressure. [1] This may be related to the rising rates of loneliness, isolation, and lack of social support. [2] According to the Center for Disease Control's (CDC) 2022 Behavioral Risk Factor Surveillance Survey, social isolation or loneliness and a lack of social and emotional support are the most adverse non-medical determinants of health. [3,4]. Social isolation and loneliness have been associated with increased emergency room visits and medical costs, [5] and social isolation has been linked to an increase in Medicare spending, primarily on costs associated with inpatient care and skilled nursing facility care. [6]. In a 20-year longitudinal study, participants who experienced more loneliness were more likely to develop type 2 diabetes compared to those who were not experiencing loneliness.[7] The impact of emotional distress is vast and profound, cutting across multiple psychological and physical health domains, requiring appropriate prevention and intervention.

In this viewpoint paper, the limits of traditional emotional support in meeting demand are explored and strategies for equitable emotional care access via digital peer support (DPS) are presented using the 5 A's of TechQuity framework. Additionally, the role of DPS services, such as Supportiv, which delivers real-time 24/7 digital peer-to-peer support that helps with problem-solving, coping resources, and processing of emotional struggles via live, synchronous, human-moderated, and small groups chats.

Limited Capacity of Traditional Emotional Support

While the need to address emotional health concerns is known, treatment is not always accessible or affordable. For example, 18% of U.S. adults reported a substance use disorder in 2024 but 77% of these adults did not receive treatment. [8] Therapy may conceptually repel care-seekers as 47% of people think it is a sign of weakness to seek therapy. [9] Financial barriers may also negate efforts. [8] In 2024, 1 in 4 adults could not see a doctor due to cost, which is a 2% increase from 2023; and 10% of adults and 8.5% of youth still have private insurance that does not cover mental health treatment. [10] Around 14% of working-age individuals with a mental health disorder spend more than 20% of their family income each year on out-of-pocket expenses. [11] And, 38% of people who reported an unmet need said that they could not afford the cost of treatment. [12]. Access to appropriate, specialized, or culturally-matched emotional healthcare may also limit engagement. [13] The U.S. government has determined that approximately 122 million Americans live in areas where in-person, professional MH services are scarce. [14] And, presently, the ratio of available mental health professionals to individuals seeking treatment is 1:340, which makes receiving support when a person wants it even more difficult.[15] Furthermore, race-related research has revealed that there may be a historical distrust amongst ethnically marginalized communities against healthcare professionals that prevents treatment-seeking behavior and persistent engagement.[13] Racial and ethnic minority groups are at a higher risk for over-diagnosis of schizophrenia, prescribed higher doses of antipsychotic medications, and may be less likely diagnosed for comorbid depression. [16] Thus, to people who have previously been marginalized or are simply aware of these phenomena, seeking a diagnosis can feel counterproductive. Culturally-matched services may also be difficult to find. The number of mental health professionals who can be ethnically matched to clients is

limited as 86% of U.S. psychologists are white, 5% hispanic, 5% asian, and 4% black.[17] Studies have shown that race-matching therapists to clients can yield inconsistent results and a more nuanced approach is necessary. Focusing the matching efforts on levels of acculturation, cultural similarity, and racial identity measures may help to understand why race and cultural similarity matching is significant. [18] When such a nuanced approach is deemed necessary in order to appropriately engage and treat the growing diverse populations in America, traditional mental health approaches may not be sufficient, and novel, equitable, and innovative approaches need to surface.

Digital emotional health

Digital emotional health interventions materialized to meet evolving, and often-unmet, emotional needs at scale. Digital devices are now designed to allow social interaction regardless of physical distance by texting, audio messages, and video chats. Yet, age, race, and income discrepancies in use of digital healthcare tools persist.[19] For example, patient portals have historically been and remain underutilized by communities of color.[19] Marginalized communities were also less likely than others to be *offered* telehealth services.[19] With the onset of the COVID-19 pandemic, the barriers to care were further exacerbated as those who did not have pre-established providers struggled to identify health care providers available to them via the single path-to-care: telehealth.[20]

While both psychiatry and psychology have seen tremendous digital progress since COVID-19, the forecasted benefits were not realized.[20-21] For example, virtual visits were meant to reduce barriers such as transportation and childcare needs, but they still require the presence of a clinician to facilitate synchronous sessions, thus limiting progress based on the availability and number of clinicians.[22] These synchronous visits abandon prevention efforts –

the only way to truly reduce the emotional health demand, because a formal mental health diagnosis is needed for insurance to cover treatment costs. [22-24] The pandemic and the proliferation of novel technologies is forcing a renewed focus on how equitable emotional health care and access can be improved across underserved populations.

Digital Peer Support (DPS)

Therapy is just one existing tech-enabled emotional health solution. There are also sub-clinical options such as chatbots, or bot coaches; however, approximately 79% of the US adults admit not wanting to use an artificial intelligence (AI) chatbot for emotional health support (about which people feel much more strongly than AI in regular healthcare) and 28% say that chatbots should not be *allowed* in emotional health.[25]

Peer support. Peer support enables a welcoming, understanding, and affirming experience not found in traditional professional care relationships. Peer support is defined as the process in which individuals can equitably provide and receive aid based on their shared experience(s).[26] Peers are people on equal footing in terms of the shared experience being discussed. In DPS, the user can engage in a dialogue with others who may assist them to reframe their thoughts about their circumstances or troubling events. [27]. Peer support personnel have been shown to improve users' hope, sense of control, and the capacity to better their situations. [28] Participants who receive peer support were also found to engage in more self-care, experience a higher sense of belonging, improved life-satisfaction, and decreased depression. [29-30] Peer support has also been shown to work for a variety of groups in the American population. For adults, a meta-analysis of 7 RCTs found that peer support lowered depressive symptoms better than typical care in 869 participants. [31] In a comprehensive review of the literature, the majority of the available research indicates that peer support increases happiness,

self-esteem, and effective coping along with decreasing symptoms of anxiety, loneliness, and depression.[32]

There have also been multiple studies showing the efficacy of non-digital peer support in various career fields. A plethora of research has suggested that healthcare workers engaging in non-digital peer support experience improved coping with burnout, stress prevention, stress management, and potential trauma. [33] Similarly, researchers discovered that 20 healthcare workers significantly improved in myriad symptoms including burnout and depression. [34] In a study of student nurses, social support via peer support programs was seen to enhance management of their work-related mental and emotional issues by providing a method to vent their frustrations.[34] In a literature review of peer support in first responders, those who participated in the programs significantly increased their overall well-being.[35] In a study consisting of 300 police officers, approximately 90% claimed that peer support was beneficial in reducing stress and that they would recommend the service to a coworker with approximately 80% saying they would utilize it again in the future.[36] Reductions in post-traumatic stress disorder symptoms have also been found in veterans.[37]

DPS. While sub-clinical, DPS can serve as a more equitable and accessible avenue to emotional care as peers may empower each other to seek out professional services. For instance, more individual counseling services were sought out after online conversations with peers.[38] Additionally, social media has been recognized to be a place for social support and healthcare advice for cancer patients. [39] Further, 81% of people utilizing DPS claimed they would use it for seeking additional evidence-based MH programs.[40] DPS via social media can provide new information about improving emotional and physical well-being while offering social support to engage in those positive behaviors.[40-41] Guided peer-based chats were also shown to provide

solutions to problems and new perspectives while significantly reducing anxiety.[42] Further, it was found that depressed seniors benefited from internet-based peer support services along with it being more cost-effective.[43] Digital communities designated for seniors are also rising as they search for emotional support and mental health assistance.[44]

Teens and young adults have also benefited from digital peer support services. For instance, the internet has provided digital spaces for young people to communicate with people who face similar issues and gather information to decrease their isolation, anxiety, depression, and self-harm .[45] Digital communities have also been shown to decrease loneliness and increase social connection in military personnel.[46] Further, combining peer support programs and clinical approaches was more effective than either on their own. [46] Therefore, utilization of digital peer support to expand emotional care access, beyond therapy, must become a focal point in emotional healthcare.

TechQuity: 5 As of Access

In order to expand emotional care access, barriers present within traditional mental healthcare can be addressed via a techQuity lens on DPS. *TechQuity* refers to “the strategic development and deployment of technology to achieve health equity”.[47] Penchansky and Thomas proposed the Five A’s concept of access to care: availability, accessibility, accommodation, affordability, and acceptability.[48] This was later adapted to a telehealth context when coining TechQuity.[49] Using both frameworks as guides, Table 1 shows definitions of a reconceptualization using DPS as the new context, and provides comparisons between traditional MH support and DPS, using Supportiv’s service model as a template solution. Supportiv offers on-demand, 24/7/365 digital peer-to-peer support through live, synchronous small-group chats. It matches anonymous participants in real-time with others who

share similar lived experiences or present emotional concerns. These chats provide problem-solving, coping resources, and emotional processing, all while being guided and safeguarded by a trained moderator.

Availability in the DPS context is the relationship between existing digital services provided by a system and resources to the participant's need and ability. For example, waitlists, limited hours and days, and limits on the number of sessions or meetings available, can all serve to minimize the participant's needs. Supportiv's solution is available every day, all day, throughout the year, without users needing to be enrolled in an insurance plan. *Accessibility* in the DPS context refers to the relationship between digital skills and literacy of a participant population and the support available to use them. For example, clinical jargon can sometimes create barriers to transparent and open conversations between client and provider; or complicated, lengthy assessments may become a barrier to getting immediate support. Supportiv's subclinical DPS solution forgoes any lengthy assessments and diagnoses, and allows service recipients to enter services in 30 seconds or under. *Accommodation* in the DPS context is the relationship between requirements of digital platforms and the participant's ability to navigate them. For example, if an app download is necessary, this may require additional internet connection or complicated steps, and involves private health information (PHI) capture at the very least through an app store. Supportiv's DPS solution is present via webapp, which requires no complicated downloads and no disclosures of any PHI (a precursor to app downloads on an app store). *Affordability* is the relationship between the costs of internet services and devices and the participant's ability to pay for them. For instance, a single 45 minute to one hour therapy session copay, when insurance covers it, can be financially overwhelming over time but Supportiv does not require a copay, and is 100% covered for unlimited sessions by participating

health plans, and Employee Assistance Programs.

Acceptability is the relationship between the digital health tools and workflows and the participant's attitude toward and comfort with tools and workflows. Traditional MH therapy may require participants to accept the mental health stigma associated with seeking services before accessing them. Supportiv's DPS solution allows participants to be anonymous without sharing any personal information throughout the entire service.

Table 1: The Five A's of Access for TechQuity in a DPS Context

Dimension	Definition	Traditional MH Services	Supportiv's DPS Model
Availability	The relationship between existing digital services provided by a system and resources to the participant's need and ability	<ul style="list-style-type: none"> -Long waitlists -Typically available 9am-5pm, M-F, workdays -Clients must have insurance (high sliding scale fees), or be part of an employee assistance program (EAP), or pay the full cost out-of-pocket -Limited # of sessions allotted -Length of sessions is limited (range from 30mins to 60mins) 	<ul style="list-style-type: none"> -Available 24/7/365 -No insurance required -Talk to a peer within 60 seconds -Unlimited chats
Accessibility	The relationship between digital skills and literacy	<ul style="list-style-type: none"> -Knowledge of where and how to find a therapist -Get a diagnosis and learn the 	<ul style="list-style-type: none"> -No diagnoses required, focus on immediate peer

	of a participant population and the support available to use them	<p>treatment plan for the diagnosis</p> <ul style="list-style-type: none"> -Complicated mental health assessments and forms that need to be completed before receiving services -Rejection from high-tier crisis services if an emotional struggle is low-acuity 	<p>support to cope with and problem-solve an emotional struggle</p> <ul style="list-style-type: none"> -No complicated assessments, just one question, “What’s your struggle?” -A space for building connections while developing and practicing social literacy (e.g., for those experiencing social isolation or navigating social and communication differences).
Accommodation	The relationship between requirements of digital platforms and the participant’s	<ul style="list-style-type: none"> -No app downloads or tech barriers -Instant access, no intake hurdles -Private and flexible -Must be completed in a private 	<ul style="list-style-type: none"> -Supportiv runs in a web browser with a simple, user-friendly interface. -Get support in under a minute, no scheduling

	ability to navigate them	setting, which may act as a barrier for those from lower socio-economic backgrounds and those with others in their space (e.g., children, coworkers, roommates, partners, toxic relationship dynamics)	or insurance required. -Text-based support allows discreet use anywhere, no need for a quiet space.
Affordability	The relationship between the costs of internet services and devices and the participant's ability to pay for them	-Must have high-speed internet access to receive video or audio support -Therapy costs may range from \$5 copays to \$150/session.	-Text-based support increases chances of low-speed internet to still connect to helpful support -Supportiv does not require a copay, 100% covered for unlimited sessions by participating health plans, and Employee Assistance Programs.
Acceptability	The relationship between the healthcare	-Mental health stigma may keep the clients from accessing and accepting therapy-type	-Anonymous support allows for any type of user to share any type

	organizations digital health tools and workflows and the participant's attitude toward and comfort with tools and workflows	services -Low quality services: Digital mental health solutions may not vet their mental health providers -Mismatch between demographics of client and therapist (e.g., 86% of U.S. based therapists are Cisgender White females)	of emotional struggle, which also reduces the stigma users may otherwise experience -Chat moderation in real-time ensures psychological safety and respect for service participants
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Systemic Influence of the 5A's of TechQuity

The Five A's of TechQuity framework focuses on meeting the systemic population demands while simultaneously addressing the individual needs of the service recipient. For equitable digital emotional health access, the COVID-19 pandemic illuminated that despite making telehealth widely available with the hopes of removing barriers such as transportation and childcare, access to digital support (*digital divide*), provider shortages, and financial barriers persisted.[12-17] In Table 1, efforts to overcome such barriers from the perspective of the Five A's TechQuity lens and applied to a novel and innovative DPS service model, called Supportiv, is shared. Next, a breakdown of how these five A's systematically influence all ecosystems is presented.

First, *availability* influences access at the community level. In the DPS model, peer support services may examine how well offered services meet the needs of the individuals

served. Labeling patterns of peak service usage and gaps may help identify areas of improvement. Specific examples to consider may be if the DPS services start or stop at certain times of the day and if these service hours meet the demands of the population they serve. For instance, Supportiv's model remains open 24 hours a day, 7 days a week, 365 days a year in recognition of the fact that most emotional support needs occur after business hours, during evenings, late nights, and weekends. This evaluation should occur jointly with the *accessibility* of DPS services at the individual level of influence. *Accessibility* requires that individuals have access to digital literacy required to utilize their toolkit. For instance, if DPS is only available via a complicated or data heavy tech download, that requires time and resource use, this may become a deterrent to the service user and limit accessibility. It is imperative then to generate DPS tools that are readily available, easily comprehensible, and accessible.

Second, the *accommodation* dimension should be assessed at the interpersonal level. A common barrier to seeking support is the lengthy assessment process prior to receiving support. DPS services are encouraged to consider limiting paperwork that may be there as busy work as no formal diagnoses needs to be accessed in order to receive peer support. Sub-clinical interventions, such as DPS, have the potential to serve greater numbers of those with emotional struggles due to this inherent bypassing of diagnosis and formalized treatment. Supportiv's DPS model allows participants to access support in 60 seconds or less by answering one question, "What's your struggle?" From there, participants can receive accommodations of accessing one-to-one support (service recipient + chat moderator) or group support (service recipient + 2-3 peers + chat moderator), although group support yields significantly faster positive sentiment change. [50]

Third, the *affordability* of DPS service can be understood at the public policy level.

While the Biden administration pushed for peer support services to be included in the expansion of the MH workforce, payment for DPS services remains a private matter.[51] Access to the internet and devices may remain a barrier as long as protected health information is shared but if DPS services can allow for anonymous conversation, like Supportiv does, then this barrier may also be eliminated. Digital equity advocacy organizations, such as the National Digital Inclusion Alliance, provide resources to assist with device and internet access.[51] Such resources and adjustments in service delivery may make access to affordable services and work toward reducing the digital divide.

Finally, the *acceptability* dimension is at the individual level of influence. A study completed indicated that while mental health stigma remains intact with newer generations, including Millennials (born between 1981 to 1996) and Generation Z (born between 1997 and 2012), these generations are still more open to non-traditional support (e.g., self-help books, online communities).[52] In fact, an ecosystem of support that includes therapy, peer support, and other non-traditional support may be necessary to manage emotional health concerns. [53] The study also indicated that while Millennials expressed more openness to peer support, Generation Z may not be as responsive, possibly due to a fear of disclosure of concerns to a peer. [54] Supportiv's anonymity service model aims to address and overcome this barrier by not requiring any personal information exchange when discussing emotional struggles. By remaining anonymous, the service recipient may be able to focus solely on their emotional struggle.

Conclusion

Addressing the burgeoning emotional health crisis necessitates innovative, equitable solutions that go beyond the limitations of traditional emotional health services. DPS, such as the model offered by Supportiv, represents a promising approach to bridging gaps in access. By

leveraging technology to provide 24/7 anonymous and synchronous support, DPS can effectively meet the emotional health needs of underserved populations, empowering individuals to seek help in a stigma-free environment. Furthermore, the integration of peer support fosters a sense of belonging and shared understanding, which can enhance emotional resilience and promote mental well-being. As emotional health challenges continue to rise, adopting and refining DPS within a techQuity framework offers a scalable, inclusive pathway to reducing barriers and achieving meaningful, equitable emotional health care for all.

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