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APPALACHIANS' INTENTIONS TO USE ONLINE AND IN-PERSON COUNSELING

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APPALACHIANS' INTENTIONS TO USE ONLINE AND IN-PERSON COUNSELING

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DISSERTATION

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A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor

of Philosophy in the College of Education at the University of Kentucky

By

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2022

ABSTRACT OF DISSERTATION

APPALACHIANS' INTENTIONS TO USE ONLINE AND IN-PERSON COUNSELING

Appalachians face higher rates of mental health concerns, yet they are less likely to have access to quality treatment. Online counseling, counseling using videoconferencing technology, may provide a viable solution to narrow this gap. However, little is known about Appalachians' intention to use in-person or online counseling. This study examined Appalachians' ($N = 490$) intentions to use online and in-person counseling using the theoretical framework of Theory of Planned Behavior (TPB; Ajzen, 1991). Results from structural equation modeling supported the indirect model for online and in-person counseling, where the associations between distal help-seeking factors (i.e., self-stigma, perceived stigma of close others, distrust of providers, self-reliance, income, and Internet speed) and intention to seek counseling were mediated by the core TPB factors (i.e., attitudes, subjective norms, perceived behavioral control). Additionally, the majority of participants reported preferring in-person counseling, yet over 40% of individuals preferred some type of online treatment (videoconferencing counseling, therapist guided Internet-based treatment, or unguided Internet-based self-help treatment). Thus, online treatments may have the potential to reach individuals who otherwise would not seek traditional in-person treatment.

Keywords: Telemental health, help-seeking, online counseling, Appalachia

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Chapter 1. Introduction

There is a dire need to close the mental health care access gap in Appalachia. Compared to the rest of the nation, residents experience higher rates of mental health concerns such as depression, suicide, and addiction (Marshall et al., 2017), while simultaneously having limited access to mental health care due to a shortage of providers, lack of access to transportation, and financial instability (Pollard & Jacobsen, 2019). Previous research also suggests that a mix of historical exploitation and cultural characteristics (i.e., kinship, distrust of providers, and self-reliance) may impact attitudes towards seeking professional help (Elder & Robinson, 2018; Snell-Rood et al., 2017).

Telemental health (TMH) treatment, specifically online counseling through the use of videoconferencing software, is often recommended to bridge gaps for underserved areas due to increased potential for accessibility, reduced costs, flexibility in treatment (Backhaus et al., 2012; Hilty et al., 2017; Hubley et al., 2016) and reduced stigma (Barney et al., 2009; Klein & Cook, 2010; Wallin et al., 2018) compared to in-person treatment. However, previous studies on TMH and online counseling help-seeking are limited, and even fewer studies include a theoretical foundation or use validated measures to assess help-seeking constructs. The Theory of Planned Behavior (TPB) is the most widely used and studied theory in the help-seeking literature (Vogel & Heath, 2015) and has been used to explain adults' mental health help-seeking intentions (Schomerus et al., 2009). According to this theory, intentions are the best predictor of behavior, and intentions are influenced by attitudes, subjective norms, and perceived behavioral control (Ajzen, 1991).

Guided by the TPB, this study examined Appalachians' intentions to use both online and in-person counseling. Two separate model analyses for online and in-person counseling

were conducted to understand the association between intentions and the following constructs: TPB core moderators (attitudes, subjective norms, and perceived behavioral control), self-stigma, perceived stigma of close others, cultural factors (self-reliance and distrust of providers), and demographic factors (income and Internet speed). This study also examined Appalachians' preferences toward mental health treatment options and the impact of the Coronavirus Disease 2019 (COVID-19) on their survey responses. Examining the influential factors on intentions to seek in-person and online counseling, as well as preferences for mental health services and the impact of COVID-19, sheds light on the underserved and understudied population of Appalachia. Results from this study provide insight that is critical for future mental health implementation efforts, clinical practice, and the help-seeking literature.

Chapter 2. Literature Review

Appalachia and Mental Health Care

Mental health care access disparities are prominent in Appalachia, a region consisting of 13 states, with almost half (42%) of the region classified as rural (Pollard & Jacobsen, 2019). The Appalachian region has a shortage of mental health providers, with 35% fewer providers than the national average (Marshall et al., 2017). In addition to Appalachia having fewer mental health providers, this region also has higher rates of mental health concerns. For instance, compared to non-Appalachian United States residents, individuals from Appalachia are 8.4% more likely to have depression, and 17% and 37% more likely to die by suicide or by overdose, respectively (Marshall et al., 2017).

Not only does the Appalachian region have higher mental health needs with less access to services, but this region also faces other barriers to mental health care access. These

barriers include lack of access to transportation and lower incomes. Appalachia residents are less likely than the rest of the country to have access to public transportation, with 1.2% of Appalachian residents compared to 5.1% of United States residents traveling to work by means of public transportation (Pollard & Jacobsen, 2019). Additionally, Appalachia has a lower household mean income ($64,880), compared to the overall United States mean income ($81,283; Pollard & Jacobsen, 2019). Lack of public transportation in a low-income region is a significant barrier to accessing in-person mental health treatment. Additionally, individuals with low-income are especially impacted by the accessibility of affordable mental healthcare, as high costs of mental health services, low insurance reimbursement rates, and limited providers in rural areas leaves individuals with limited options for affordable mental health care (Cohen Veterans Network & National Council for Behavioral Health, 2018).

Other barriers that are particularly relevant for online counseling research are access to the Internet and technology. The success of online counseling implementation depends on the access and quality of the Internet and the access to technology. Less than 1% in the United States and Appalachia have dial-up Internet (Pollard & Jacobsen, 2019), and the majority have broadband (high-speed) Internet in the United States (78.1%) and Appalachia (72.3%). Further, the majority of United States residents (87.2%) and Appalachia (82.2%) have access to a technology device in their household. Access to technological devices in descending order are computer (United States, 78.2%; Appalachia, 72.2%;), smartphone (United States, 71.1%; Appalachia, 63.8%), tablet (United States, 53.7%; Appalachia, 48.3%), and other devices (United States, 4.8%; Appalachia, 3.6%; Pollard & Jacobsen, 2019). Since Appalachia appears to have less access to technology devices and high-speed Internet, it is essential to consider this when determining the viability of online counseling.

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Another potential barrier to mental health treatment is the unique culture and history of Appalachia. To understand Central Appalachia's culture, it is first necessary to briefly describe the region's history. Central Appalachia has a history of being exploited and stigmatized by the rest of America, from large corporations (e.g., coal and Purdue Pharma) to celebrities and the media. Coal corporations, the heart of Central Appalachia's economy, were arguably the most egregious abuser to this region. Starting in the 1800's coal corporations created what was known as "coal mining towns," where the company owned the miners' home and sometimes even the town (Lewis, 1978). Additionally, the company built its own school, grocery, medical facilities, and church, which was required to be utilized by the miners and their family. All of these "amenities" were deducted out of the miners' paycheck, often leaving little to no money to spare. This created a dependence on these corporations. Furthermore, coal corporations were often owned by outsiders, which meant that profits and taxes were benefiting people and regions outside of Central Appalachia. Therefore, while companies were profiting billions of dollars off the people and land of this region, little (if any) resources were being placed back into this region (Anglin, 2016). Therefore, Appalachians were risking their lives and were reliant on a corporation that was keeping them in poverty.

To make matters worse, coal mines also created a danger to the workers and the community's physical health. Coal dust found its way to the lungs of the residents, and coal sludge polluted the land and water (Lewis, 1978). This had a direct impact on community members, which is demonstrated in the higher rates of cancer and asthma in Central Appalachia (Robinson, 2015; Marshall et al., 2017). The health impact was especially evident for coal miners, as many developed "Black Lung" (i.e., a disease caused by long-

term exposure to coal dust) and chronic pain from the physically demanding work conditions (Robinson, 2015). Coal mines also impacted the mental health of workers and community members. One study found that Central Appalachians reported that coal mines generated emotional distress (e.g., anger and powerlessness) and chronic stress (Cordial, 2012). Although miners working conditions improved after the successful, and infamously bloody, unionization fights, the region's economy was still dependent on coal (Robinson, 2015). Today, the economy of Central Appalachia continues to struggle due to the decline of coal's enterprise (Anglin, 2016).

Other corporations have also mistreated this region, including John Hopkins and Purdue Pharma. The Black Lung unit at John Hopkins closed after a class action was filed in 2013 due to the hospital grossly underdiagnosing Black Lung in order to help the coal companies avoid paying benefits (Burris, 2014). Additionally, Purdue Pharma targeted OxyContin sales in areas like Appalachia, due to the increased rates of pain from manual labor (Anglin, 2016). Although Purdue Pharma was sued for over 600 million dollars for not adequately communicating the addictive nature of Oxycontin to prescribers, doctors and pain clinic still run rampant in this region (Burris, 2014).

There is also a history of the people coming into Appalachia with the appearance of "helping," but instead misrepresenting Appalachia for their personal gain. For instance, past presidents (e.g., Lyndon Johnson), and celebrities (e.g., Diane Sawyers), have come into Appalachia, obtaining photographs and videos of Appalachia to push their agenda. For instance, President Lyndon Johnson came to Central Appalachia to demonstrate that the War on Poverty would also be targeted towards White people (Robinson, 2015). There have also been films of this region that have been characterized as "desolation porn" (Kubas-Meyer,

2013). Diane Sawyers' film "A Hidden America: Children of the Mountains," and the film "Oxyana," show videos of extreme conditions of Appalachians. These skewed media portrayals have contributed to negative stereotypes and have fed the continued dehumanization and mistreatment of this region.

All of these companies and people have something in common; they are people who are not from the area, who have disguised their agenda as a charitable cause. Appalachia has been viewed as a place to be saved, a missionary project. Although the history of Appalachia, and its statistically demonstrated impoverishment, may be disheartening, there is much beauty, community, and cultural richness in this area. A quote from the Appalachian Community Fund (n.d.) demonstrates this brilliantly,

> In spite of the lack of opportunities and economic growth, many people choose to stay because it is home, because we're rooted, because of family, or because our education and training haven't equipped us with the skills or the hope of a better future if we relocate. Even though there may not be any jobs in our community, even though our mountains are being blown away for coal and dug away for vacation condos, even though our water is polluted with acid run-off, and even though poverty levels in some areas are over 20% and unemployment at 45% and even though services and financial resources which are inadequate continue to dwindle and disappear, we still find strength in the beauty and embrace of the mountains, in the joy of the music and stories. We have pride in the people who settled this land including that the Underground Railroad made stops throughout the mountains leaving historically strong African-Americans communities; the Italians and Hungarians who came to work in the coal mines; the Scotch, Irish, and Eastern European farmers and workers;

and our newest residents from other counties including Spanish-speaking residents. Thus, while some of Appalachia's history is entrenched in pain and suffering, it also demonstrates the resiliency of the region. Additionally, the history of this region, including the geographical isolation and a long history of outsiders mistreating, exploiting, and stigmatizing individuals in this area, have contributed to a distinct culture (see Anglin, 2016; Burris, 2014; Lewis, 1978; Robinson, 2015).

Cultural characteristics include a distrust of outsiders, and the values of kinship, self-reliance, and pride (Robinson, 2015). These characteristics may influence counseling help-seeking attitudes and intentions. For instance, having a distrust of outsiders may lead to decreased intentions to seek services, which are likely to be provided by clinicians who are not from Appalachia. Also, previous research has found that the cultural values of self-reliance and pride hindered the likelihood of seeking professional mental health help for Appalachian Kentuckians (Leukefeld et al., 2005). However, empirical data is needed to draw conclusions about how these cultural factors may impact *online* counseling help-seeking intentions among this population.

Online Counseling

TMH treatment is often cited as a recommendation to bridge the treatment gap for underserved areas. TMH, also known as Telemedicine, Telepsychology, Telepsychiatry, and e-mental health, is the use of technology to provide mental health services (American Psychological Association, 2014). TMH captures a wide variety of services, including self-help/unguided services (e.g., mobile phone applications), treatment guided by a trained professional (e.g., guided Internet modules), and technology-based therapy (e.g., online counseling).

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Online counseling is a type of TMH treatment, and for the purposes of this study, online counseling refers to psychotherapy conducted through secure videoconferencing software. Online counseling has the most empirical support of any technology-based service delivery format and is currently the most widely reimbursable service (in most cases, the only TMH format service reimbursable) by insurance companies (CCHP, 2020). Several systematic reviews and meta-analyses have demonstrated that online counseling is as effective as in-person therapy with diagnostically diverse client populations (Bashshur et al., 2016; Berryhill et al., 2019; Gentry et al., 2018; Wootton, 2016; Varker et al., 2018). For example, a meta-analysis of CBT conducted via telephone and video, for clients with obsessive-compulsive symptoms, found that online therapy formats were just as effective as in-person therapy (Wootton, 2016). Similarly, in a systematic review of thirty-three studies on online counseling and depression, Berryhill and coauthors (2019) found that the effect sizes following online counseling ranged from medium to very large.

Online counseling is also associated with several other encouraging treatment and client outcomes. For instance, a systematic review of 134 studies on online counseling (Hubley et al., 2016) found that clients and providers were generally satisfied with online counseling, and studies that used more advanced methods (e.g., return on investment) found that online counseling was more cost-effective than in-person treatment. Other positive effects have also been noted in systematic reviews, such as increased access (Ralston et al., 2019) and decreased cancellation and no-show rates (Hubley et al., 2016). A common concern about using online counseling is the impact it may have on the therapeutic alliance, yet a systematic review of 23 studies found that online counseling clients rated the therapeutic alliance at least as strong as in-person psychotherapy clients, across

diagnostically diverse clients (Simpson & Reid, 2014).

Although online counseling has been demonstrated to be effective in diagnostically diverse populations, the research across demographically diverse groups is sparse. Unfortunately, despite various authors noting the potential for online counseling to bridge the access gap for underserved regions (Bashshur et al., 2016; Hilty et al., 2017; Hubley et al., 2016), research in underserved and diverse populations has not been prioritized in the TMH field (Ralston et al., 2019). Recently, studies have demonstrated the feasibility of online counseling in rural (Hollan et al., 2021), Asian (Ye et al., 2012), Latino/a/x (Chong & Moreno, 2012), and Indigenous/Native American (Weiner, Rossetti, & Harrah, 2011) populations. However, prior to this study, no study has examined online counseling in Appalachia.

In summary, online counseling services have been shown to be effective and improve access to quality mental health care, including specialized care (Bashshur et al., 2016; Hilty et al., 2017; Hubley et al., 2016). Furthermore, online counseling services are typically more cost-effective, decrease (or eliminate) the need for travel, reduce stigma, and decrease wait time for treatment services to begin, compared to in-person treatment (Barney et al., 2009; Bashshur et al., 2016; Hilty et al., 2017; Hubley et al., 2016). Online counseling may be a particularly viable option for Appalachia due to these advantages. This study aimed to contribute to the TMH help-seeking literature by examining intentions to utilize online counseling, alongside in-person counseling, in the underserved region of Appalachia.

Mental Health Help-Seeking

Although online counseling is a viable option for underserved populations, such as Appalachia, a question of utilization remains. To explore potential utilization in

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Appalachia, a theoretical framework is needed. This study was guided by the Theory of Planned Behavior (TPB; Ajzen, 1991).

Theory of Planned Behavior

The TPB is an extension of the theory of reasoned action and has been used to predict and understand mental health help-seeking (Goh et al., 2018). In a review of eight theoretical models for help-seeking, Goh and coauthors (2018) found that TPB was the best theoretical model to explain help-seeking for mental health counseling. They explained that TPB was chosen as the best model due to its integration of multiple influential factors (attitudes, behavioral beliefs, and normative beliefs), including its focus on the factor intention.

TPB has also shown utility in predicting and understanding behaviors across cultures and sociodemographic variables (Mesidor & Sly, 2014; Mo & Mak, 2009; Nigg et al., 2008), including rural populations (Andrykowski & Burris, 2010; Britt et al., 2017; Vallance et al., 2012), and even Appalachian populations (Deskins et al., 2006; Hardin-Fanning & Ricks, 2017). Therefore, TBP is an excellent match for conceptualizing counseling help-seeking behaviors and intentions in Appalachia.

Recently, two studies have used TPB to structurally examine TMH help-seeking (Bird,Chow, & Yang, 2020; Erdem et al., 2018). Both studies examined TPB moderators in college students. Bird and colleagues (2020) ran models for online and in-person therapy and examined the impact of self-stigma and perceived stigma of close others on online and in-person counseling attitudes and intentions. They found that self-stigma was positively associated with perceived stigma of close others and negatively associated with counseling attitudes for online and in-person counseling. Erdem and colleagues (2018) exclusively

examined online counseling and found that Internet anxiety had the largest impact on intentions. Both studies found TPB based models to have acceptable goodness of fit indices (Erdem et al., 2018). Thus, TPB demonstrated an acceptable model for online and in-person counseling. However, TPB has yet to be examined in Appalachians for online or in-person counseling.

TPB theorizes that individuals' behavioral intentions (i.e., planned effort) are the direct antecedent and best predictor of actual behavior (Ajzen, 1991). Additionally, intentions are theorized to be directed by attitudes (i.e., an individual's judgment of the behavior), subjective norms (i.e., how others may perceive the behavior), and perceived behavioral control (i.e., perception of an individual's capability to perform the behavior). Further, TPB also posits that distal factors (e.g., stigma, cultural factors, and demographic factors) impact intentions, but only to the extent to which they influence attitudes, subjective norms, and perceived behavioral control. A core feature of help-seeking research is to examine how distal factors impact intentions directly or indirectly (through the core TPB mediators). The following sections will outline the hypothesized effect of intentions via these mediators – TPB core variables (attitudes, subjective norms, and perceived behavioral control), self-stigma, perceived stigma of close others, cultural factors (distrust of providers and self-reliance), and demographic factors (income and Internet speed), and their ability to predict intentions.

Intention. Intention is an individuals' planned effort to seek help in the future. According to the TPB, individuals who have intentions to seek help are predicted to do so when given the opportunity (Ajzen, 1991). Moreover, attitudes, subjective norms, and perceived behavioral control are viewed as leading to intention. For example, individuals who

have positive attitudes and subjective norms, and high perceived behavioral control, will likely have high intentions to use online and in-person counseling services, and as a result, will seek online and in-person counseling help when needed.

Attitudes. TPB theorizes that attitudes towards the behavior are the consequence of an individual's belief about a behavior (behavioral beliefs; Ajzen, 1991). Attitudes are on a spectrum of positive to negative. According to the TPB, more positive attitudes increase intentions to seek help, while more negative attitudes decrease intentions to seek help. Thus, individuals with more positive attitudes towards in-person and online counseling services would theoretically be more likely to intend to use these services.

Subjective norms. Normative beliefs, or beliefs about how important others will perceive one's behavior of seeking help, and their motivation to comply with these beliefs, dictate one's subjective norms (Ajzen, 1991). In other words, subjective norms are the individual's perceived social pressure to perform, or not perform, the behavior in question. Subjective norms influence help-seeking intentions. For instance, if individuals believe that others would encourage the use of in-person or online counseling services, and they know people who use these services, they will likely have high intentions to use these services.

Perceived behavioral control. Perceived behavioral control is the result of an individual's control beliefs about how difficult or easy help-seeking will be, due to perceived barriers or facilitators. This is the factor that differentiates the theory of reasoned action (TRA; Fishbein & Ajzen, 1975) from the TPB. Perceived behavioral control was added to the TRA to account for variables not under an individual's control. Self-efficacy and controllability have been shown to explain a large variance in perceived behavioral control (Ajzen, 2006). Ajzen also argues that what an individual has actual control over (i.e., actual

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behavioral control) can impact perceived behavioral control.

Perceived behavioral control can be an especially influential factor when studying online counseling help-seeking since online counseling has the potential to override many of the barriers accompanied by in-person therapy (i.e., access, travel, and cost). However, some people may still have low perceived behavioral control for seeking online counseling services. For instance, if an individual believes they cannot use the necessary technologies, or that it will be challenging to learn, they will be less likely to intend to use online counseling services.

Self-Stigma of Seeking Help. Self-stigma is the negative view an individual holds towards themselves for seeking mental health treatment (Vogel et al., 2006). For in-person counseling, self-stigma is correlated with decreased help-seeking attitudes (Vogel et al., 2017) and intentions (Brenner, Cornish, et al., 2020; Pattyn et al., 2014). Self- stigma has also been found to be associated with decreased perceived behavioral control in women seeking couple's counseling (Spiker et al., 2020) and decreased subjective norms in men seeking couple's counseling (Spiker et al., 2019). Therefore, for in-person counseling, we anticipated that self-stigma would have a negative association with attitudes, subjective norms, and perceived behavioral control.

For online counseling, the findings are mixed regarding the impact of self-stigma on attitudes, subjective norms, and perceived behavioral control. One study found that positive attitudes towards online counseling are associated with higher stigmatized beliefs (Klein & Cook, 2010). Thus, individuals who viewed getting mental health treatment as stigmatizing, were more likely to view online counseling more positively. Further, the potential for reduced stigma in comparison to face-to-face therapy has also been cited by authors (Barney

et al., 2009; Klein & Cook, 2010; Wallin et al., 2018). However, Bird and coauthors (2020) found that self-stigma was significantly higher for online counseling compared to in-person counseling. Due to the conflicting findings, this path from online self-stigma → attitudes → intention, self-stigma → subjective norms → intention, and self-stigma → perceived behavioral control → intention was exploratory, and no hypotheses were made.

Perceived Stigma of Close Others. Perceived stigma of close others is an individual's perception of how others within their close social network (e.g., family members and close friends) would negatively view help-seeking (Vogel et al., 2009). Due to the values of kinship in Appalachia (Coyne et al., 2006; Denham, 2016; Robinson, 2015), perceived stigma may be especially influential in this population. While no previous empirical research exists on perceived stigma in Appalachians, there is evidence that individuals from rural areas have higher perceived stigma of close others, which has a detrimental effect on self-stigma and normative beliefs (i.e., subjective norms) on seeking in-person counseling (Crumb et al., 2019; Stewart et al., 2015). For instance, one study found that individuals from rural areas, compared to urban residents, reported higher levels of perceived stigma of close others and more negative attitudes towards in-person counseling (Stewart et al., 2015). Thus, for in-person counseling, we predicted perceived stigma of close others to have a negative indirect association with intention through the serial mediation paths of self-stigma → attitudes, self-stigma → perceived behavioral control, self-stigma → subjective norms, and a negative association with subjective norms (perceived stigma of close others → subjective norms → intentions).

For online counseling, high perceived stigma of close others has been found to be a predictor of perceived appropriateness for treatment (Wang et al., 2020). In a study on

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student athletes, Bird and colleagues (2020) found that perceived stigma of others is positively related to self-stigma and counseling discomfort for online and in-person counseling, and they found no statistical differences between public stigma in online versus in-person counseling. Thus, the more public stigma someone possesses, the more self-stigma they are likely to possess. Equivalently to in-person counseling, we hypothesized that for online counseling, perceived stigma of close others would show a negative indirect association on intention through the serial mediations of self-stigma → attitudes, self-stigma → perceived behavioral control, self-stigma → subjective norms, and a negative association with subjective norms (perceived stigma of close others → subjective norms → intentions).

Trust of Mental Health Providers. A factor that may impact Appalachians' help-seeking intentions is the distrust of outsiders, which has resulted from a long history of exploitation (Robinson, 2015). Instead of accepting help or relying on those from outside the region, Appalachians tend to live by the mentality of "taking care of their own" (Shamblin et al., 2012, p. 5). A qualitative study by Coyne and coauthors (2006) found that the distrust of outsiders may also translate to the medical and mental health community. For instance, participants (n = 61) indicated being hesitant to seek professional physical and mental health treatment due to high turnover of providers and because many of the providers tend to be from outside of the region. They explained that having different cultures and high turnover created a barrier for building trust with their providers. Additionally, participants reported concerns about confidentiality and quality care, and the fear that providers would prescribe addictive medications (Coyne et al., 2006). A fear that is intrenched in the reality that addictive medications, such as opioid prescription rates are 45% higher in Appalachia compared to the rest of the United States (NACo & ARC, 2019).

Although no quantitative studies have examined how distrust impacts intentions in Appalachians, literature in racial and ethnic minorities demonstrate how distrust in providers decreases attitudes and subjective norms (Brooks & Hopkins, 2017; Taylor, 2018; Taylor & Kuo,2019). Thus, for both in-person and online counseling, we hypothesized that trust in mental health providers would have a positive indirect association with intentions through adopting more positive attitudes and subjective norms (trust → attitudes → intentions; trust → subjective norms → intentions).

Self-Reliance. Previous studies have found that the cultural value of self-reliance, a desire to demonstrate capabilities and strength to others, is a value often held by Appalachians (Leukefeld et al., 2005; Robinson, 2015). One study found that self-reliance hindered the likelihood of seeking in-person professional help for Appalachian Kentuckians (Leukefeld et al., 2005). Increased sense of self-reliance has also been found to be associated with increased self-stigma (Spiker et al., 2019) and more negative attitudes toward in-person mental health treatment in women (Untal, 2018; Spiker et al., 2019) and in military populations (Britt et al., 2016).

Previous literature suggests that online counseling may be more appealing to individuals with a high sense of self-reliance (Pretorius et al., 2019). However, no empirical data exists to demonstrate the strength of this relationship. Thus, for in-person and online counseling, we hypothesized that self-reliance would have a negative indirect relationship with intentions via attitudes (self-reliance → attitudes → intention) and a direct relationship with intention (self- reliance → intention). Additionally, we expected to find self-reliance to have a negative indirect association with intention through the following serial mediations: self-stigma → attitudes; self-stigma → perceived behavioral control; self-stigma →

subjective norms.

Income. TPB also posits that background factors impact behaviors via their influence on attitudes, subjective norms, and perceived behavioral control. Background factors include individual and social factors. Background factors such as income and Internet speed may influence help-seeking intentions in Appalachia.

A national survey in 2018 of 5,000 Americans found that the cost of care was the number one barrier for individuals seeking mental health care (SAMHSA, 2019). This is problematic, as Appalachians have a lower mean household income compared to the United States (Pollard & Jacobsen, 2019). Individuals with lower incomes may be less likely to believe they have the financial means (i.e., lower perceived behavioral control) to seek in-person counseling services, which would likely result in lower intentions to seek treatment. In summary, for in-person counseling, we expected that income would have a positive indirect association with intention through perceived behavioral control: income $\rightarrow$ perceived behavioral control $\rightarrow$ intention. TMH services are generally found to be more cost-effective than in-person counseling, especially when accounting for extraneous costs such as transportation costs, childcare, and time away from work, making TMH an appropriate option for individuals from lower incomes (Hilty et al., 2013; Hubley et al., 2016; Ralston et al., 2019). Thus, for the online counseling model, we did not predict income to have a significant indirect association with intention through perceived behavioral control.

Internet Speed. For online counseling, we were interested in the impact of perceived Internet speed on intentions to seek treatment. Appalachians are less likely to have access to high-speed Internet (Pollard & Jacobsen, 2019), and due to lack of adequate infrastructure, many Appalachians are functioning with Internet speeds under 5mpbs (compared to the gold

standard of 100mpbs; ReImagine Appalachia, 2020). To our knowledge, the impact of

perceived Internet speed on intentions to seek online counseling has not been evaluated.

However, we expect to find Internet speed to have a positive indirect association with

intention through the mediator of perceived behavioral control (Internet speed → perceived

behavioral control → intention), with the slower the perceived Internet speed, the less

perceived behavioral control over seeking online counseling. For in-person counseling,

Internet speed was not expected to have an association with perceived behavioral control and

was therefore not included in the in-person model.

Preferences

The accommodation of individuals' treatment preferences is associated with

improved psychotherapy treatment outcomes (Williams et al., 2016). Due to preferences

being a non-ordinal categorical variable, this study aimed to examine Appalachians'

treatment preferences outside of the model of the Theory of Planned Behavior. Numerous

studies have found that the majority of individuals prefer in-person counseling over TMH

services (Gun et al., 2011; Klein & Cook, 2010; March et al., 2018; Renn et al., 2019;

Wallin et al., 2018). Only three studies have examined clients' preferences between the

three different types of TMH services – unguided, guided, and tech-based therapy

(Apolinrio-Hagen et al., 2018; Klein & Cook, 2010; Renn et al., 2019). Two of the studies'

findings suggest that when given the option, individuals prefer therapist-guided Internet

interventions first, with tech-based therapies (e.g., online counseling) as a close second

preference, and individuals were least likely to prefer unguided Internet interventions

(Apolinrio-Hagen et al., 2018; Klein & Cook, 2010).

However, one study found that unguided TMH treatment was preferred over therapist

guided TMH treatment (Renn et al., 2019). In this study, Renn et al. (2019) sampled minority

populations in the United States (including rural-dwelling and racial/ethnic minorities) who

had utilized or considered utilizing psychotherapy for depression. This suggests that minority

and rural populations may have different TMH preferences compared to majority and urban

samples. The preference for self-guided over expert-guided TMH may be attributed to

cultural and societal factors, such as the distrust of health providers often attributed to rural

(Spleen et al., 2014) and racial/ethnic minority populations (Armstrong et al., 2007). Thus,

for the purpose of this study, Appalachians' preferences towards TMH treatment types were

examined to provide insight into the characteristics of the sample. We hypothesized that the

majority of participants would prefer in-person therapy.

COVID-19

This study took place during the worldwide health pandemic caused by COVID-19.

In March of 2020, the United States was in a state of "National Emergency" and as a result,

most communication in personal, work, and health care spaces went virtual. Further, the

Centers for Medicare and Medicaid Services expanded the regulations on telehealth to allow

equal coverage for in-person and telehealth visits (AJMC, 2021). During the pandemic,

increases in the utilization of telehealth in both rural and urban areas were seen (Bosworth et

al., 2020). For instance, in April 2020, 43.5% of primary visits in Medicare patients were

conducted via telehealth, compared to 0.1% of visits prior to the pandemic in February 2020

(Bosworth et al., 2020). Thus, the health pandemic has increased health care providers' and

patients' exposure to telehealth care. Empirical evidence suggests that the more exposure

someone has to telehealth services, the higher their attitudes and intentions to use them

(March et al. (2018). This study assessed whether the pandemic impacted participants'

responses to the survey. We expected to find that the majority of participants would report that their responses were impactedby the pandemic, with participants feeling more positively towards online counseling than previously.

Chapter 3. Method

Study Design

Appalachian adults' intentions to use online and in-person treatment were assessed through a Qualtrics survey. Participants were recruited through Facebook advertisements, which are an effective recruitment strategy for large-scale survey research (Akers & Gordon, 2018). Additionally, Facebook can be particularly useful to reach specific geographical areas (Akers &Gordon, 2018), making it an excellent strategy to reach Appalachians. The ad for this study targeted participants from Kentucky and West Virginia. However, due to the nature of social media advertisements, the ad was shared and reached a larger audience and geographical area. Participants were incentivized to enroll in the study by being entered into a raffle to win 1 of 40, $25.00 Amazon.com gift cards (participants had a 10% chance of winning). Exclusion criteria included individuals below the age of 18 and individuals who were not current residents of Appalachia. Appalachian residence was determined by participants reporting yes or no to the question "Do you currently live in Appalachia," and by participants indicating the state and county that they currently reside. Individuals not currently residing in an Appalachian county were excluded from the study. Facebook ads ran from September 2, 2020 until October 18, 2020, and the Qualtrics survey was live until December 2020. This study was approved by the University of Kentucky's Institutional Review Board, and participation was voluntary and anonymous.

Participants

Participants ($N = 490$) were adults living in Appalachia at the time of the survey, with the majority residing in Central Appalachia ($N = 335$). Participants' age ranged from 18 to 74, and the average age was 41.13 ($SD = 14.11$). The majority of participants were female (79.2%), with the remaining participants identifying as male (16.1%), transgender (0.4%), nonbinary (0.4%), genderqueer (0.2%), gender fluid (0.2%), agender (0.2%), Indigenous/other culturally specific gender minority (0.2%), prefer to self-describe (0.4%), prefer not to answer (0.4%), and the remaining missing data (2.2%). Regarding race, 84.9% of participants identified as White, 5.1% as Black/African American, 1.6% as Biracial/Multiracial, 1.2% as American Indian/Native American/Alaskan Native, 0.6% as Latino/a/x or Hispanic, and 0.4% as Asian, with the remaining preferring not to answer (1.8%), preferring to self-describe (1.6%), and missing data (2.2%). Additionally, 44.7% of participants reported having a full-time job, 90.6% had health insurance, and 84.7% owned their own car. Concerning participants' mental health, 81% of participants reported having a mental health concern at some point in their life and 53.5% shared that they had been diagnosed with a mental illness. A majority of participants (68.8%) reported receiving help from a mental health professional (e.g., psychologist, psychiatrist, clinical social worker, counselor) in their lifetime, and 26.3% had received mental health treatment online or through the telephone.

Measures

The following section describes the measures utilized in the survey. The survey assessed intentions, attitudes, subjective norms, perceived behavioral control, self-stigma, perceived stigma of close others, self-reliance, distrust of providers, and background factors (income and perceived Internet speed). All factors were informed by the Theory of Planned

Behavior (TPB). Additionally, mental health treatment preferences and the impact of COVID-19 were assessed for descriptive purposes.

TPB Core Constructs

TPB core constructs (intentions, attitudes, subjective norms, and perceived behavioral control) were assessed using an adapted version of the Therapy Attitudes and Process questionnaire (TAP; Clough et al., 2017) and an adapted version of the e-Therapy Attitudes and Process questionnaire (eTAP; Clough et al., 2019). Both the TAP and eTAP are based on the TPB. The TAP was developed to understand factors associated with in-person mental health treatment, while the eTAP was developed to be used with individuals currently using online mental health interventions. Both measures have 16 items that assess users' intention (4 items), attitudes (4 items), subjective norms (4 items), and perceived behavioral control (4 items). Items are on a 7-point Likert scale, with a score of 1 indicating low (or negative) levels of the construct, and a score of 7 indicating high (or positive) levels of the construct. In the development study of the TAP, the measure generated excellent internal consistency scores (total scale $\alpha = 0.94$) and acceptable test-retest reliability intraclass correlation of 0.75 (Clough et al., 2017). However, convergent and divergent validity were only partially supported. This study adapted the TAP to assess *potential* users' views towards *in-person counseling* (e.g., "I would intend to use in-person counseling"), and item 11 (an intention item) was eliminated due to incompatibility with the current study. The TAP demonstrated an excellent internal consistency score (total scale $\alpha = 0.949$).

In the development study of the eTAP, it predicted participant engagement with 84% accuracy and dropout with 74% accuracy (Clough et al., 2019). Additionally, the eTAP showed excellent internal consistency scores (total scale $\alpha = 0.92$) and acceptable

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test-retest reliability intraclass correlation of 0.72 (Clough et al., 2019). The eTAP explained approximately 70% of the variance found, demonstrating strong structural validity with the four TPB constructs. Further, the eTAP demonstrated good convergent and divergent validity. This study adapted the eTAP to assess *potential* users' views towards online *counseling* (e.g., "I would intend to use online counseling") and found excellent internal consistency scores (total scale α = 0.949).

Self-stigma

The Self-Stigma of Seeking Help (SSOSH-7), a seven-item measurement developed by Brenner, Colvin, and colleagues (2020) was used to assess the participants' stigma towards themselves for seeking online and in-person counseling. All participants were given two versions of the SSOSH-7, the original SSOSH-7 to assess self-stigma of in-person counseling, and an adapted version of the SSOSH-7 to assess self-stigma of online counseling. Both versions of the SSOSH-7 ask participants to rate how much they agree (1= strongly disagree to 5= strongly agree) with self-stigma statements. For example, an item from the original SSOSH-7 states "It would make me feel inferior to ask a therapist for psychological help," and an item from the online SSOSH-7 states "It would make me feel inferior to ask an online therapist for psychological help." For both measures, two of the statements are reverse scored. The original SSOSH-7 demonstrates good to excellent internal consistency (α = 0.87 to 0.89), and an acceptable test-retest reliability intraclass correlation of 0.97 (Brenner et al., 2020). The SSOSH-7 demonstrated structural, convergent, and criterion-related validity. In this study, the SSOSH-7 exhibited a good internal consistency score for both in-person (α = 0.89) and online (α = 0.88) counseling measures.

Perceived Stigma of Close Others

Perceptions of Stigmatization of Others for Seeking Help (PSOSH), a five-item measurement developed by Vogel et al. (2009), was used to assess the participants' perceived stigmatization by close others for seeking mental health treatment. The PSOSH asks participants to imagine they have an emotional or personal issue and to predict how they believe close others would respond to them on a five-point Likert scale. All participants were asked to answer the PSOSH twice, once while instructed to imagining online counseling and the other by imagining in-person counseling, The PSOSH demonstrates acceptable to good internal consistency ($\alpha = 0.79$ and 0.89), and good test-retest reliability intraclass correlation of .82 (Vogel et al., 2009). Additionally, the PSOSH demonstrates concurrent and predictive validity. In this study, the PSOSH demonstrated excellent internal consistency score for both in-person ($\alpha = 0.93$) and online ($\alpha = 0.93$) counseling measures.

Self-Reliance

Participants' self-reliance was measured using a three-item self-reliance measure with one of the items stating, "I prefer to handle most things on my own rather than getting help from others" (Britt et al., 2016). Although this measurement's psychometric properties have not yet been formally evaluated, the items demonstrated acceptable internal consistency ($\alpha = 0.68$) in the Britt et al. (2016) study. All items were assessed on a Likert scale from 1 (strongly disagree) to 5 (strongly agree). In this study, the self-reliance measure exhibited an acceptable internal consistency score ($\alpha = 0.74$).

Distrust of Providers

Distrust of mental health providers was assessed through the medical profession subscale of the Abbreviated Wake Forest Physician Trust Scale (A-WFPTS; Dugan et al.

2005). The language was adapted to apply to mental health providers. All items were assessed on a Likert scale from 1 (strongly disagree) to 5 (strongly agree). The A-WFPTS has good internal consistency ($\alpha = 0.87$) for trust in a physician and acceptable test-retest reliability with an intraclass correlation of 0.71, and concurrent and construct validity were supported (Dugan et al.2005). The A-WFPTS demonstrated good internal consistency ($\alpha = 0.84$) in this study.

Background Factors

The following background factors were assessed: income and Internet speed. Participantswere asked to provide their annual estimated income – less than $25,000; $25,000 to $34,999; $35,000 to $49,999; $50,000 to $74,999; $75,000 to $99,999; $100,000 to $149,999; $150,000 or more; or prefer not to answer. Item responses were coded from 1 (less than $25,000) to 7 ($150,000 or more). For Internet speed, participants were asked to evaluate the speed of their Internet connection as fast, neither fast nor slow, or slow. Item responses were coded as follows: slow = 1, neither fast nor slow = 2, fast = 3.

Preferences

Participants were also asked to report their preferences for mental health treatment if experiencing mental health concerns. The preferences measure was adapted from a study by Apolinrio-Hagen and colleagues (2018). Participants were given a brief description of the following treatment formats and asked to determine their preference: unguided Internet-based self-help treatment, therapist-guided Internet-based self-help treatment, videoconferencing counseling, and in-person counseling. Participants were also given the option to endorse "I do not have a preference" or "I would not use any therapy at all."

COVID-19

Participants were asked the following question: "Do you believe that COVID-19 influenced your responses to this survey?" by answering "Yes" "No" or "Prefer not to answer." Participants who indicated that COVID-19 impacted their response were asked to respond on a 7-point Likert-type scale from 1 (Negatively) to 7 (Positively) to the following statements: "Overall, COVID-19 has made me view in-person counseling more" and "Overall, COVID-19 has made me view online counseling more __."

Data Preparation

Structural equation modeling (SEM) was used to test the hypotheses. SEM is a widely used multivariate analysis technique in the behavioral sciences (Hox & Beckgar, 1998). SEM allows for the examination of relationships between the various TPB constructs (i.e., attitudes, subjective norms, and perceived behavioral control), and their ability to predict participants' intentions to seek online and in-person services. Accounting for multiple variables simultaneously improves the validity of conclusions drawn. Reliability is also improved in SEM, compared to regression analyses, because it is not biased by measurement error (Hox & Beckgar, 1998). Similar studies have used SEM, including two studies examining the TPB's ability to predict intentions to seek mental health treatment in a college student population, with one exclusively looking at in-person treatment (Bohon et al., 2016) and the other examining both in-person and online counseling (Bird et al., 2020). In the current study, we conducted separate model analyses (3 models per counseling modality) for online counseling and in-person counseling to examine how self-reliance, trust of providers, perceived stigma of close others, income, and Internet speed (for online counseling exclusively), both directly impact intention to seek counseling and indirectly impact intention through the mediators of

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attitudes, subjective norms, perceived behavioral control, and self-stigma.

First, a measurement model was tested using a confirmatory factor analysis (CFA). Starting by finding an acceptable measurement model allows for more accurate structural models (Kline, 2016). Next, a structural model was tested, and bivariate correlation analyses in SPSS version 27 (IBM) were conducted to control for demographic variables (see Table 4 and 5). Two demographic variables, income and Internet speed, were identified as having a significant relationship with the endogenous variables in the structural regression model. For both in-person and online counseling structural models, income was then specified to correlate with perceived behavioral control. For online counseling income and Internet speed were specified to correlate with perceived behavioral control.

The maximum likelihood estimation with robust standard errors (MLR) option on Mplus version 8.5 was utilized to estimate the Chi-square ($\chi2$) for measurement and structural models. This study used the following fit indices and criteria to estimate acceptable model fit: Scaled Chi-square (scaled $\chi2$), Root Mean Square Error of Approximation (RMSEA $\leq$ .06), Comparative Fit Index (CFI $\geq$ .95), Tucker-Lewis Index (TLI $\geq$ 95), and Standardized Root Mean Square Residual (SRMR $\leq$ .08; Hu & Bentler, 1999; McDonald & Ho, 2002). Further, the following fit indices were used to estimate reasonable fit: RMSEA between .05 and .08, CFI and TLI greater than .90, and SRMR less than .10 (Hu & Bentler, 1999; McDonald & Ho, 2002).

To examine the indirect effects on intention, a bootstrapping method in M*plus* was utilized (Shrout & Bolger, 2002), where one-thousand bootstrap samples and bias-corrected bootstrap confidence intervals were generated for indirect effects. We tested 11 indirect effects for in-person counseling and 12 for online counseling (see Table 6 and 7,

respectively). Lastly, additional descriptive analyses were conducted on the preference and

COVID-19 measures to characterize the sample.

Table 1

In-Person Counseling Means, Standard Deviations, and Intercorrelations among measures (N=490)

Variables	M	SD	Min	Max	1	2	3	4	5	6	7	8	9
1. Intention	5.43	1.64	1.00	7.00	-								
2. Attitudes	5.77	1.36	1.00	7.00	0.78**	-							
3. SN	5.68	1.55	1.00	7.00	0.59**	0.58**	-						
4. PBC	5.96	1.23	1.00	7.00	0.62**	0.67**	0.60**	-					
5. Self Stigma	2.71	0.86	1.57	5.43	-0.41**	-0.45**	-0.38**	-0.42**	-				
6. PSOSH	1.82	0.99	1.00	5.00	-0.25**	-0.34**	-0.45**	-0.40**	0.51**	-			
7. Self Reliance	2.51	0.86	1.00	5.00	-0.38**	-0.37**	-0.26**	-0.27**	0.54**	0.32**	-		
8. A-WFPTS	3.23	0.80	1.00	5.00	0.23**	0.29**	0.20**	0.14**	-0.22**	-0.17**	-0.24**	-	
9. Income	3.36	1.93	1.00	7.00	-0.14**	-0.08	0.00	0.00	0.12**	0.00	0.16**	0.18**	-

Note: $* p < .05$, $** p < .01$. SN = Subjective Norms. PBC = Perceived Behavioral Control. PSOSH= Perceptions of Stigmatization of Others for Seeking Help. A-WFPTS = Abbreviated Wake Forest Physician Trust Scale.

Table 2

Online Counseling Means, Standard Deviations, and Intercorrelations among measures (N=490)

Variables	M	SD	Min	Max	1	2	3	4	5	6	7	8	9	10
1. Intention	5.42	1.46	1.25	7.00	-									
2. Attitudes	5.52	1.36	1.00	7.00	0.85**	-								
3. SN	5.61	1.49	1.00	7.00	0.53**	0.50**	-							
4. PBC	6.37	0.93	2.50	7.00	-0.50**	0.51**	0.41**	-						
5. Self Stigma	2.74	0.83	1.57	5.00	-0.45**	-0.44	-0.38**	-0.43**	-					
6. PSOSH	1.77	0.98	1.00	5.00	-0.24**	-0.27**	-0.39**	-0.42**	0.48**	-				
7. Self Reliance	2.51	0.86	1.00	5.00	-0.24**	-0.24**	-0.20**	-0.19**	0.46**	0.30**	-			
8. A-WFPTS	3.23	0.80	1.00	5.00	0.25**	0.28**	0.23**	0.11*	-0.22**	-0.17**	-0.24**	-		
9. Income	3.36	1.93	1.00	7.00	0.03	0.05	0.01	-0.02	0.05	0.00	0.16**	0.18**	-	
10. Internet Speed	2.36	0.73	1.00	3.00	0.11*	0.12*	0.06	0.14*	-0.01	0.01	-0.08	0.12*	0.04	-

Note: * $p < .05$, ** $p < .01$. SN = Subjective Norms. PBC = Perceived Behavioral Control. PSOSH= Perceptions of Stigmatization of Others for Seeking Help. A-WFPTS = Abbreviated Wake Forest Physician Trust Scale.

Table 3

In-Person Counseling Bootstrap Analysis of Magnitude and Statistical Significance of Indirect Effects for the Structural Model

Predictor	Mediator(s)	Outcome	Standardized indirect effect		Bootstrap estimate		95% CI (unstandardized)	
			β _	*SE*	*B*	*SE*	Lower bound	Upper bound
A-WFPTS	**Attitudes**	**Intention**	**.082**	**.031**	**.232**	**.096**	**.072**	**.451**
A-WFPTS	SN	Intention	.007	.006	.019	.016	.000	.070
PSOSH	**Self-stigma→ Attitudes**	**Intention**	**-.103**	**.024**	**-.150**	**.038**	**-.241**	**-.088**
PSOSH	**Self-Stigma→ PBC**	**Intention**	**-.056**	**.021**	**-.082**	**.030**	**-.155**	**-.033**
PSOSH	Self-Stigma→ SN	Intention	-.009	.006	-.013	.009	-.040	.000
PSOSH	Subjective Norms	Intention	-.026	.014	-.038	.021	-.086	-.001
Self-Reliance	**Self-stigma→ Attitudes**	**Intention**	**-.105**	**.026**	**-.206**	**.058**	**-.402**	**-.122**
Self-Reliance	**Self-Stigma→ PBC**	**Intention**	**-.057**	**.022**	**-.112**	**.043**	**-.211**	**-.045**
Self-Reliance	Self-Stigma→ SN	Intention	-.009	.006	-.018	.013	-.053	.000
Self-Reliance	Attitudes	Intention	-.048	.031	-.094	.063	-.243	.018
Income	**PBC**	**Intention**	**.024**	**.010**	**.018**	**.008**	**.006**	**.039**

Note. Indirect path is significant if the 95% confidence interval (CI) does not include 0. Bold paths are significant. A-WFPTS = Abbreviated Wake Forest Physician Trust Scale. PSOSH= Perceptions of Stigmatization of Others for Seeking Help. PBC = Perceived Behavioral Control. SN = Subjective Norms.

Table 4

Online Counseling Bootstrap Analysis of Magnitude and Statistical Significance of Indirect Effects for the Structural Model

Predictor	Mediator(s)	Outcome	Standardized indirect effect		Bootstrap estimate		95% CI (unstandardized)	
			β _	*SE*	*B*	*SE*	Lower bound	Upper bound
A-WFPTS	**Attitudes**	**Intention**	**.250**	**.052**	**.744**	**.190**	**.442**	**1.211**
A-WFPTS	SN	Intention	.014	.008	.041	.027	.006	.126
PSOSH	**Self-stigma→ Attitudes**	**Intention**	**-.089**	**.023**	**-.159**	**.043**	**-.263**	**-.089**
PSOSH	Self-Stigma→ PBC	Intention	.002	.005	.003	.009	-.012	.024
PSOSH	Self-Stigma→ SN	Intention	.153	.043	-.016	.009	-.045	-.004
PSOSH	**Subjective Norms**	**Intention**	**-.009**	**.005**	**-.072**	**.030**	**-.148**	**-.025**
Self-Reliance	**Self-stigma→ Attitudes**	**Intention**	**-.105**	**.027**	**-.235**	**.062**	**-.381**	**-.133**
Self-Reliance	Self-Stigma→ PBC	Intention	.002	.005	.004	.013	-.017	.033
Self-Reliance	Self-Stigma→ SN	Intention	-.011	.006	-.024	.013	-.065	-.006
Self-Reliance	Attitudes	Intention	-.014	.056	-.031	.126	-.307	.215
Income	PBC	Intention	-.001	.005	-.001	.004	-.013	.004
Internet Speed	PBC	Intention	-.003	.009	-.007	.024	-.067	.031

Note. Indirect path is significant if the 95% confidence interval (CI) does not include 0. Bold paths are significant. A-WFPTS = Abbreviated Wake Forest Physician Trust Scale. PSOSH= Perceptions of Stigmatization of Others for Seeking Help. PBC = Perceived Behavioral Control. SN = Subjective Norms.

Chapter 4. Results

Confirmatory factor analysis was completed first to ensure the data fit both (i.e., online and in-person) measurement models (Weston & Gore, 2006).

Model for In-Person Counseling

The In-Person Counseling measurement model demonstrated reasonable fit, $\chi2$ (595, N = 490) = 10250.11, $p < .001$; RMSEA = .057 [90% CI of .053, .061]; CFI = .912; TLI = .902; SRMR = .057. Reasonable fit was also demonstrated for the structural model for In-Person Counseling, $\chi2$ (10536.80, N = 459) = 741.00, $p < .001$; RMSEA = .053 [90% CI of .050, .057]; CFI = .913; TLI = .902; SRMR = .063. For in-person counseling, the structural model accounted for variance in 81.6% of intention, 32.6% of attitudes, 28.8% of subjective norms, 25.2% of perceived behavioral control, and 52.8% of self-stigma. Path coefficients for all variables were examined and are presented in Figure 1. Most parameter estimates were congruent with the hypotheses with a few exceptions (see Table 1). First, the path from subjective norms to intentions was not significant. Additionally, out of the 11 indirect effects tested for in-person counseling, 6 were significant at a 95% confidence level (see Table 1 and 6). The following indirect paths were not significant, and therefore were not in line with our hypotheses: trust in provider → subjective norms → intention; perceived stigma of close others → self-stigma → subjective norms → intention; perceived stigma of close others → subjective norms → intention; self-reliance → self-stigma → attitudes → intention; self-reliance → attitudes → intention.

Model for Online Counseling

The Online Counseling measurement model demonstrated reasonable fit, $\chi2$ (10018.88, N = 490) = 630.00, $p < .001$; RMSEA = .055 [90% CI of .052, .059]; CFI = .911; TLI = .900;

SRMR = .060. The structural model for Online Counseling demonstrated acceptable to reasonable fit, $\chi2$ (9041.24, $N = 417$) = 858.00, $p < .001$; RMSEA = .045 [90% CI of .042, .049]; CFI = .918; TLI = .910; SRMR = 0.057. For online counseling, the structural model accounted for variance in 84.2% of intention, 25.9% of attitudes, 26.5% of subjective norms, 21.6% of perceived behavioral control, and 32.6% of self-stigma.

Path coefficients for all variables were examined and are presented in Figure 2. Most parameter estimates were congruent with the hypotheses, except for three paths (see Table 2). First, the path from perceived behavioral control to intentions was not significant, and self-reliance did not demonstrate a direct association with intention. Further, the exploratory path from self-stigma to attitudes and self-stigma to perceived behavioral control were both negative and significant.

Out of the 12 indirect effects tested for online counseling four were significant at a 95% confidence level (see Table 2 and 7). The following indirect paths were not significant, and therefore were not in line with our hypotheses: trust in providers → subjective norms → intention; Internet speed → perceived behavioral control → intention; self-reliance → attitudes → intention. Additionally, the following serial mediations between the perceived stigma of close others and intention were not significant: self-stigma → perceived behavioral control; self-stigma → subjective norms; and the serial mediations between self-reliance and intention: self-stigma → attitudes; self-stigma → subjective norms.

Preferences

The highest preferred treatment modality was in-person counseling (41.0%), followed by videoconferencing counseling (22.4%), therapist guided Internet-based treatment

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(14.7%), and unguided Internet-based self-help treatment (5.1%). Further, 12.4% of participants reported not having a preference, 2.0% reported that they would not use any therapy at all, and 2.2% of participants did not respond. This was in line with our hypothesis that most participants would prefer in-person therapy (see Table 3).

Impact of COVID-19

In response to the item asking participants whether they believed COVID-19 influenced their responses to the survey, 67.8% answered "No" and 28.4% answered "Yes." Among participants who indicated that COVID-19 *did* influence their response, responses to in- person counseling trended more neutral with the average being 3.91 ($SD = 1.928$). However, responses to online counseling trended more positively with the average being 5.66 ($SD = 1.628$). This result is somewhat contradictory to our hypothesis (see Table 3). We expected the majority of participants to report that their responses were impacted by the pandemic, yet the majority of this population reported that their responses were *not* impacted. However, the hypothesis that participants who believed their responses *were* impacted by the pandemic, would report more positive views towards online counseling, was supported.

Table 5

In-Person Counseling Hypotheses and Results

Hypotheses	Result
Hypothesis 1: Core constructs	
Hypothesis 1a: Attitudes will have a positive direct association with intentions.	Supported
Hypothesis 1b: Subjective norms will have a positive direct association with intentions.	Not supported
Hypothesis 1c: Perceived behavioral control will have a positive direct association with intentions.	Supported
Hypothesis 2: Self-Stigma of Seeking Help	
Hypothesis 2a: Self-stigma will have a negative direct association with attitudes.	Supported
Hypothesis 2b: Self-stigma will have a negative direct association with subjective norms.	Supported
Hypothesis 2c: Self-stigma will have a negative direct association with perceived behavioral control.	Supported
Hypothesis 3: Perceived Stigma of Close Others	
Hypothesis 3a: Perceived stigma of close others will have a negative indirect association with intention through the serial mediation path of self-stigma → attitudes	Supported
Hypothesis 3b: Perceived stigma of close others will have a negative indirect association with intention through the serial mediation path of self-stigma → perceived behavioral control	Supported
Hypothesis 3c: Perceived stigma of close others will have a negative indirect association with intention through the serial mediation path of self-stigma → subjective norms	Not supported
Hypothesis 3d: Perceived stigma of close others will have a negative indirect association with intention via subjective norms (perceived stigma of close others → subjective norms → intentions).	Not supported
Hypothesis 4: Trust of Mental Health Providers	
Hypothesis 4a: Trust of mental health providers will have a positive indirect association with intentions through attitudes (trust → attitudes → intentions)	Supported
Hypothesis 4b: Trust of mental health providers will have a positive indirect association with intentions through subjective norms (trust → subjective norms → intentions).	Not supported
Hypothesis 5: Self-Reliance	
Hypothesis 5a: Self-reliance will have a direct negative association with intention (self-reliance → intention)	Supported
Hypothesis 5b: Self-reliance will have a negative indirect relationship with intentions via attitudes (self-reliance → attitudes → intention)	Not supported

Hypothesis 5c: Self-reliance will have a negative indirect association with intention through the serial mediation path of self-stigma → attitudes	Not supported
Hypothesis 5d: Self-reliance will have a negative indirect association with intention through the serial mediation path of self-stigma → perceived behavioral control	Supported
Hypothesis 5e: Self-reliance will have a negative indirect association with intention through the serial mediation path of self-stigma → subjective norms	Not supported
Hypothesis 6: Income	
Income will have a positive indirect association with intention through perceived behavioral control: income → perceived behavioral control → intention.	Supported

Table 6

Online Counseling Hypotheses and Results

Hypotheses	Results
Hypothesis 7: Core constructs	
Hypothesis 7a: Attitudes will have a positive direct association with intentions.	Supported
Hypothesis 7b: Subjective norms will have a positive direct association with intentions.	Supported
Hypothesis 7c: Perceived behavioral control will have a positive direct association with intentions.	Not supported
Hypothesis 8: Perceived Stigma of Close Others	
Hypothesis 8a: Perceived stigma of close others will have a negative indirect association with intention through the serial mediation path of self-stigma → attitudes	Supported
Hypothesis 8b: Perceived stigma of close others will have a negative indirect association with intention through the serial mediation path of self-stigma → perceived behavioral control	Not supported
Hypothesis 8c: Perceived stigma of close others will have a negative indirect association with intention through the serial mediation path of self-stigma → subjective norms	Not supported
Hypothesis 8d: Perceived stigma of close others will have a negative association with intentions via subjective norms (perceived stigma of close others → subjective norms → intentions)	Supported
Hypothesis 9: Trust of Mental Health Providers	
Hypothesis 9a: Trust of mental health providers will have a positive indirect association with intentions through attitudes (trust → attitudes → intentions)	Supported
Hypothesis 9b: Trust of mental health providers will have a positive indirect association with intentions through subjective norms (trust → subjective norms → intentions)	Not supported
Hypothesis 10: Self-Reliance	
Hypothesis 10a: Self-reliance will have a direct negative relationship with intention (self-reliance → intention)	Not supported
Hypothesis 10b: Self-reliance will have a negative indirect relationship with intentions via attitudes (self-reliance → attitudes → intention)	Not supported
Hypothesis 10c: Self-reliance will have a negative indirect association with intention through the serial mediation path of self-stigma → attitudes	Supported
Hypothesis 10d: Self-reliance will have a negative indirect association with intention through the serial mediation path of self-stigma → perceived behavioral control	Not supported

|	
Hypothesis 10e: Self-reliance will have a negative indirect association with intention through the serial mediation path of self-stigma → subjective norms	Not supported
Hypothesis 11: Income	
Income will not have a significant indirect association with intention through perceived behavioral control	Supported
Hypothesis 12: Internet Speed	
Internet speed will have a positive indirect association with intention through the mediator of perceived behavioral control (Internet speed → perceived behavioral control → intention)	Not supported

Table 7

Preferences and COVID-19 Hypotheses and Results

| Hypotheses	Results
Hypothesis 13: Preferences	
Majority of participants will prefer in-person therapy.	Supported
Hypothesis 14: COVID-19	
Majority of participants will report that their responses were impacted by the pandemic, with participants feeling more positively towards online counseling than previously.	Partially supported

Figure 1

Final Structural Model for In-Person Counseling
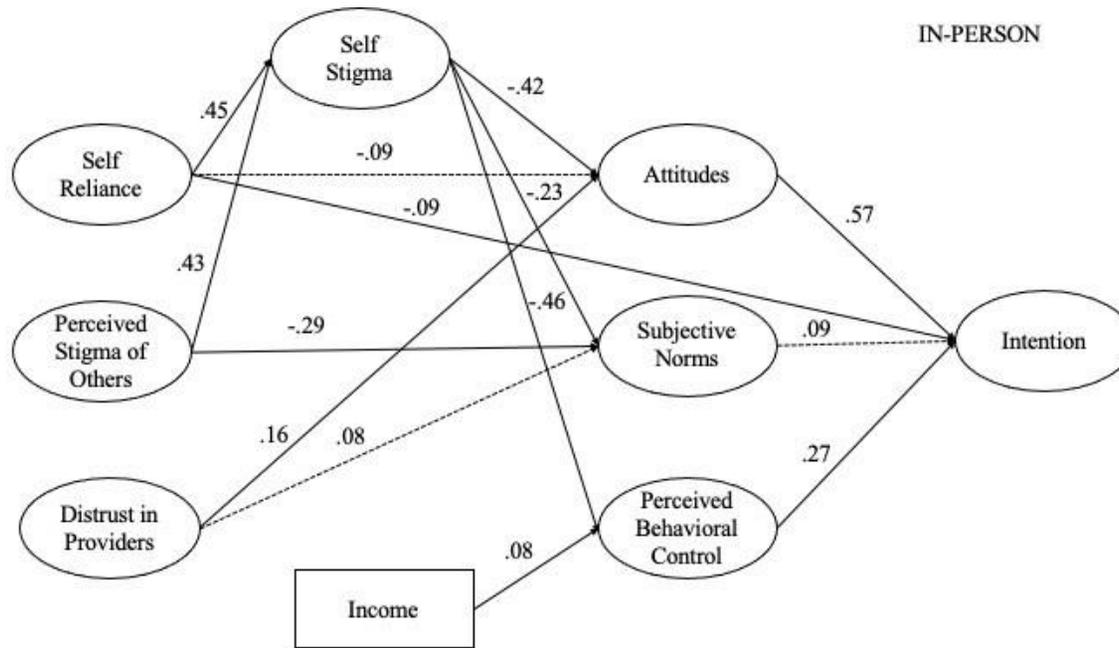
Note. The final structural model for in-person counseling with standardized parameter estimates of regression coefficients. Dashed lines represent nonsignificant direct relations, while full lines represent significant direct relations at p < .05.

Figure 2

Final Structural Model for Online Counseling
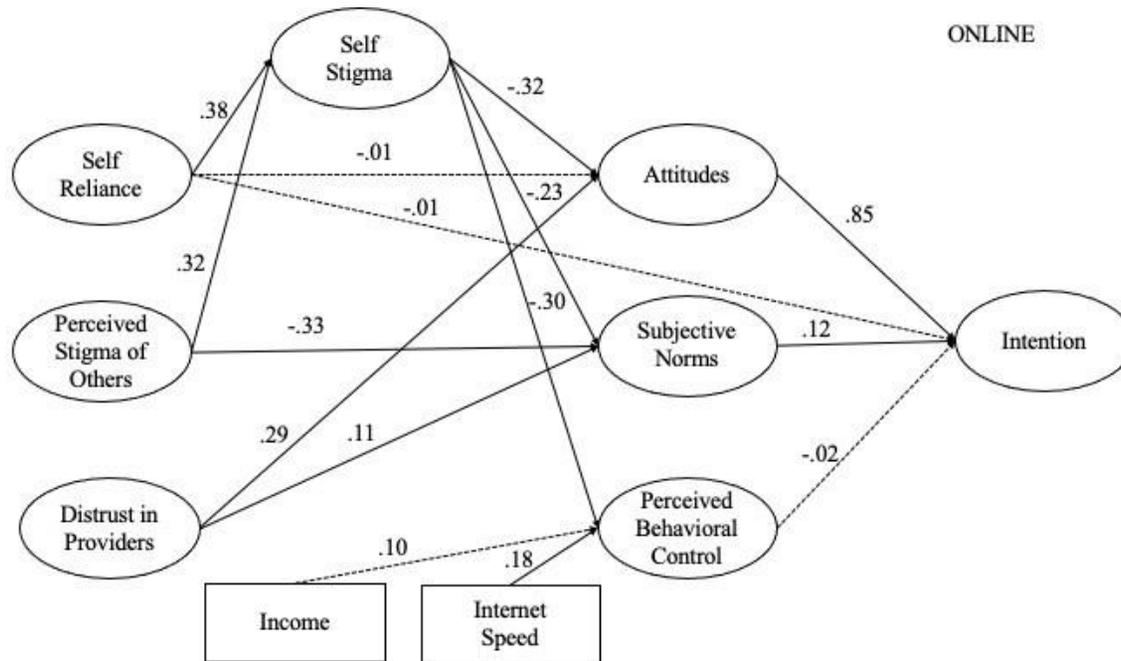
Note. The final structural model for online counseling with standardized parameter estimates of regression coefficients. Dashed lines represent nonsignificant direct relations, while full lines represent significant direct relations at p < .05.

Chapter 5. Discussion

This study is the first to examine the application of TPB to understand TMH help-seeking intentions for in-person and online counseling help-seeking in Appalachia. The findings of this study demonstrate that TPB displays an acceptable model fit and reasonable structural fit for both online and in-person counseling.

In-Person Counseling

As expected, the TPB constructs, with the exception of subjective norms, showed positive direct associations with intentions for in-person counseling. Surprisingly, an association between subjective norms and intentions was not found. Thus, for this population, participants' belief about the pressure they may experience for seeking in-person counseling did not appear to play a significant factor in whether they intended to seek help. This may be attributed to the commonly held value of self-reliance and independence for Appalachians (Coyne et al., 2006; Robinson, 2015).

However, the perception of how others might judge you (i.e., perceived stigma of close others) *was* indirectly associated with less intention to seek in-person and online therapy, through the mediation paths of increased self-stigma and subsequently decreased attitudes and perceived behavioral control. In other words, if one believes that close others will judge them for seeking help, then that impacts how they view themselves, and as a result, impacts whether they intend to seek help. Perceived stigma of close others being indirectly associated with intentions to seek in-person counseling may be attributed to the commonly held value of kinship in Appalachia (Coyne et al., 2006; Denham, 2016; Robinson, 2015). Appalachians typically place a high value in the relationships of close others, so it is reasonable that close others' judgment on an individual's seeking help is influential. Similar

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findings have been demonstrated with rural populations, where compared to urban populations, rural populations have higher perceived stigma of close others, which has a negative effect on self-stigma and subjective norms for intentions to seek in-person counseling (Crumb et al., 2019; Stewart et al., 2015).

Regarding the self-stigma mediation paths, those who believed that close others would judge them harshly for seeking in-person counseling were more likely to have less favorable attitudes and believe that they have less control over their capability to seek in-person counseling. These findings are consistent with previous studies on in-person counseling, which have found that self-stigma is associated with decreased help-seeking attitudes (Vogel et al., 2017), intentions (Brenner, Cornish, et al., 2020; Pattyn et al., 2014), and perceived behavioral control (Spiker et al., 2019).

Another variable that showed competing effects with intention to seek in-person counseling was self-reliance. Self-reliance was associated with a negative direct effect on intentions, and a negative indirect effect on intentions through the serial mediation paths of increased self-stigma and both decreased attitudes and perceived behavioral control. Thus, those who indicated being more self-reliant were more likely to hold negative views towards in-person counseling and themselves for seeking help, as well as hold the belief that they were less able to seek help (Leukefeld et al., 2005; Spiker et al., 2019). However, we also hypothesized that self-reliance would have a negative indirect association with intentions through the mediator attitudes, yet we did not find a significant association. This is contradictory to studies that have found high self-reliance is associated with more negative attitudes toward in-person counseling in women (Untal, 2015) and military populations (Britt et al., 2016). This suggests that, for this population, self-stigma may play a key role in the

relationship between self-reliance and intentions.

Distrust in providers was also shown to demonstrate indirect effects on intention through the mediator attitudes. However, contrary to the hypothesis, Appalachians did not report greater intentions to seek help through the mediation pathway of subjective norms. Thus, for this sample of Appalachians, distrust in providers does not appear to influence their perception of how others may view them seeking in-person counseling, but it does appear to impact their own attitudes towards seeking help.

Online Counseling

For online counseling, the TPB constructs, with the exception of perceived behavioral control, showed positive direct associations with intentions. The lack of a significant association between perceived behavioral control and intentions suggests that, for this population, the perception of their capability of seeking online counseling did not play a significant role in whether they intended to seek help. This may be because online counseling eliminates or decreases many of the barriers typically tied to in-person counseling, such as access, travel, and cost (Hilty et al., 2017; Hubley et al., 2016).

However, several variables did have a significant impact on intentions for online counseling. For perceived stigma of close others, it demonstrated associations with less intention to seek online therapy through the following two mediation paths: (1) increased self-stigma and subsequently decreased attitudes and (2) decreased subjective norms. Regarding the self-stigma mediation path, those with higher self-stigmatized beliefs reported lower intentions to seek online counseling, through the mediation path of less favorable attitudes. This is the first study to examine this pathway in online counseling and in an Appalachian population. Regarding the pathway from perceived stigma of close others to

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intentions through the mediator of subjective norms, our findings are consistent with previous online counseling research (Bird et al., 2020; Wang et al., 2020). Together, these findings suggest that Appalachians' who believe close others would negatively judge them for seeking online counseling are more likely to have negative attitudes towards themselves for seeking help, and subsequently, less favorable attitudes towards and decreased intentions for online counseling.

Distrust in providers was also shown to demonstrate effects on intention for online counseling. Distrust in providers was associated with less intention to seek help through the single mediator of less favorable attitudes. The current study is the first study to examine the influence of distrust in providers for *online* counseling and suggests that distrust in providers deters Appalachians from seeking online counseling services. These findings are consistent with findings from qualitative study conducted in Appalachia, which found that participants were ambivalent about in-person treatment with one reason including distrust in providers (Snell-Rood et al., 2017).

Contrary to our hypotheses, self-reliance was not found to have a direct association with intention, nor an indirect association with intention through the mediator of less favorable attitudes, nor the serial mediations of self-stigma and decreased perceived behavioral control and decreased subjective norms. This may be due to online counseling being viewed as a more autonomous service. Thus, an individual's level of self-reliance and self-stigma may not matter when it comes to how capable individuals believe they are to seek services, or what others may think about them seeking services. However, we did find an indirect negative association between self-reliance and intention through the serial mediation of self-stigma and less favorable attitudes. Yet, despite the potential for online counseling to

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be viewed as more autonomous, more self-reliant people were still more likely to have negative views towards themselves for seeking help, and in turn, had less favorable attitudes towards and intentions of seeking online counseling.

Lastly, Internet speed was assessed only in the online counseling model, and individuals who reported higher Internet speeds also reported believing they had more control over their ability to seek online counseling. However, the indirect association of Internet Speed on intentions through the single mediator of increased perceived behavioral control was not significant. As previously noted, perceived behavioral control is not a key factor in the online help-seeking model for this sample. Our sample was recruited through an online platform, which means that our sample likely had access to acceptable Internet speeds. Individuals without access to acceptable Internet speeds may feel that they are not capable of seeking online counseling (i.e., less behavioral control), and would, therefore, be less likely to intend to seek those services.

Notable Contrasts Across Modalities

In the in-person counseling model, perceived stigma of close others and self-reliance both had negative indirect effects on intention through the serial mediation path of self-stigma to perceived behavioral control. However, for online counseling, these paths were not significant. Thus, it appears that the mediator, perceived behavioral control, is not as influential for online counseling as it is for in-person counseling. This makes sense considering that online counseling is typically more accessible, more cost effective, and decreases the need for travel (Hilty et al., 2017; Hubley et al., 2016). Further, due to the recruitment method of this study, our sample likely had the necessary technology for online counseling, which may also contribute to perceived behavioral control being less salient in

this population.

This study also examined the impact of income. For in-person counseling, higher incomes were found to have a positive indirect effect on intention through the single mediator of increased perceived behavioral control. Conversely, income was not found to impact intention for online counseling, which is in line with the hypothesis. People tend to view online counseling as more affordable compared to in-person counseling (Gibson et al., 2011; Musiat et al., 2014; Travers & Benton, 2014; Wootton et al., 2011), so it is reasonable that income plays a larger role in intentions to seek in-person versus online counseling.

Preferences

The current study also examined Appalachians' preferences for mental health treatment and found that in-person counseling was the most preferred format, followed by counseling conducted via videoconferencing. This finding is consistent with previous research that found that people tend to prefer in-person counseling over online treatment options (Gun et al., 2011; Klein & Cook, 2010; March et al., 2018; Renn et al., 2019; Wallin et al., 2018). However, in the current study, over 40% of individuals preferred some type of online treatment over in-person treatment, and only 2% reported that they would not seek therapy at all. Thus, online treatments may have the potential to reach individuals who otherwise would not seek traditional in-person treatment.

COVID-19

The timing of this study must be taken into consideration. Surveys were disseminated in the Fall of 2020 during the COVID-19 pandemic. Due to the pandemic, many Americans have had increased exposure to videoconferencing technology, and even telehealth and TMH experience. The literature tells us that increased exposure increases positive attitudes towards

TMH (March et al., 2018). Therefore, we assessed whether participants believed their survey answers were impacted by the pandemic. The majority of participants reported that their answers were not impacted. However, in those that did report an impact, it appeared that the pandemic made them view online counseling more favorably. Thus, we may find that over time people's exposure to online treatment modalities increases and therefore attitudes increase as well.

Chapter 6. Limitations and Future Directions

Although this study has promising findings, there are a few limitations that point toward directions for future research. The first limitation is that actual help-seeking behavior was not measured in this study. While the TBP posits that intentions are the direct antecedent and best predictor of actual behavior (Ajzen, 1991), intentions are not a direct measure of behavior. For instance, one study examined attitudes towards TMH and found that out of 93% of participants who reported intentions to utilize services, only 45% did (Reavley et al., 2011). Thus, while the TPB allows for increased insight into future behavior, there are likely other variables in addition to intentions that impact behavior. Future studies should examine actual help-seeking behavior in Appalachians.

Another limitation of this study is the recruitment method. This study recruited participants for the online survey through an online social media platform. Thus, the targeted population had Internet access and a baseline comfort with technology. It is likely that Appalachians who do not have Internet access, or are not as comfortable with technology, would have less perceived behavioral control, and perceived behavioral control might play a more vital role in the online counseling help-seeking model. In addition to less perceived behavioral control, individuals with less access and comfort with technology would likely

hold less favorable attitudes towards online counseling (March et al., 2018). Future research should utilize in-person recruitment methods to recruit individuals who do not have regular Internet or technology access.

Furthermore, the population of this study was predominately White, cis-female, from Central Appalachia, and had previous mental health treatment. Cis-females historically hold more positive attitudes towards and are more open to in-person (Chandra & Minkovitz, 2006; Liddon et al., 2018) and online counseling (Birdet al., 2020) compared to cis-males. Future studies should aim to recruit a more gender-balanced sample to examine if this pattern still holds within an Appalachian sample.

Regarding our predominately White sample, the racial makeup of our sample is comparable to Appalachia as a whole, with 81.4% the Appalachian population being White (Pollard & Jacobsen, 2019) compared to 84.9% in our sample. However, our predominately White sample should still be taken into consideration when generalizing to non-White Appalachians. Research has demonstrated that Asian (SAMHSA, 2015; Shea & Yeh, 2008; Sue et al., 2012), Latino/a/x (Caplan, 2019; SAMHSA, 2015), Indigenous/Native American (Moon et al., 2017), and Black/African American (Kawaii- Bogue et al., 2017; SAMHSA, 2015) populations are less likely to utilize mental health services and are more likely to experience increased barriers to treatment (e.g., stigma and less access to health insurance) compared to their White counterparts. Thus, non-White populations within Appalachia are likely to experience additional barriers in seeking mental health treatment. Future research should aim to recruit more racially and ethnically diverse participants to make between-group comparisons.

Additionally, our sample is comprised mostly of Central Appalachians. Central

Appalachia has increased poverty rates (Pollard & Jacobsen, 2019) and has been arguably more subjected to negative cultural stereotypes (Catte, 2018) compared to the rest of the Appalachian region. Thus, research on non-Central Appalachians may find variables such as income, self-reliance, and distrust in providers, to be less influential compared to their Central Appalachian counterparts.

Lastly, the majority of our participants (68.8%) reported having had mental health treatment at some point during their lifetime. Compared to the United States as a whole, our participants had a higher rate of previous mental health treatment, with 42% of American adults having seen a "counselor or therapist" in their lifetime (Barna, 2018). With there being 35% fewer mental health providers in Appalachia compared to the rest of the nation (Marshall et al., 2017), it was surprising to find that most of our participants had previous mental health treatment. However, our sample is consistent with a study on community adults recruited through Research Match ($N = 857$), where they found that 72% of participants had previously sought help from a mental health professional (Brenner, Colvin, et al., 2020). Furthermore, one explanation for the high rate of previous mental health treatment may be how the study was advertised as a study examining "Appalachians' attitudes towards mental health treatment." This may have contributed to selection bias, where participants who had previous mental health treatment were more likely to find the study interesting or worthwhile and were ultimately more likely to participate. Our sample of experienced participants should be taken into consideration when interpreting the results of this study, as previous online and in-person mental health treatment has been shown to increase attitudes towards and intentions to seek future mental health treatment (March et al., 2018; Schomerus et al., 2009). Future studies should aim to recruit a sample with more

individuals who have not had previous experiences with mental health treatment.

The limitations of this study should be taken into consideration when generalizing findings to a broader population. Despite these limitations, the current models provide a theoretically-based framework to conceptualize help-seeking intentions in Appalachia. The implications of these findings are discussed in the following section.

Chapter 7. Conclusions and Clinical Implications

Overall, the findings point to various opportunities to improve help-seeking intentions for both online and in-person therapy. For online and in-person counseling, interventions that target Appalachians' self-reliance tendencies and beliefs about how close others may perceive them seeking counseling are likely to facilitate increased intent to seek services through decreasing self-stigma and increasing attitudes towards counseling. For instance, Appalachians with high self-reliance are more likely to hold negative views about themselves for seeking help (i.e., increased self-stigma). Likewise, those who believe close others would negatively judge them for seeking in-person counseling, are more likely to negatively judge themselves. Community outreach efforts should aim to normalize help-seeking behaviors and challenge the notion that getting mental health treatment makes one weak or dependent on others.

Efforts to improve health literacy across the region may also improve self-stigma and perceived stigma of others. Mental health literacy is defined as knowledge on the following: (a) mental illness prevention, (b) mental illness symptom recognition, (c) help-seeking options and treatments, (d) self-help strategies for minor concerns, and (e) mental health first aid to support others (Jorm, 2012). Previous research on mental health literacy

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interventions demonstrates that they can improve stigma and help-seeking behaviors (Xu et al., 2018).

Another aspect that mental health literacy may assist with is improving trust in mental health providers. Increasing knowledge about treatment options and the health care process has been linked to increased trust in health care providers (Dawson-Rose et al., 2016). Thus, interventions should focus on providing Appalachians with knowledge about treatment options (e.g., theoretical approaches, online versus in-person counseling) and the mental health care process (e.g., elements of confidentiality). Providers have a responsibility to educate their clients on these subjects, but providers are also encouraged to provide psychoeducation to the public to increase mental health literacy in the region. Another thing providers can do to increase trust is to expand their cultural knowledge on Appalachian clients, while also not assuming a monolithic culture. Providers must engage in ongoing training to provide culturally competent counseling (see Elliott & Ripley, 2021 for an introduction to culturally competent counseling in Appalachia).

In addition to increasing mental health literacy and providers' cultural competency, efforts to increase trust in providers for online counseling should also include future research. Online counseling allows for more options in what providers clients are able to see. Thus, future research may benefit from examining what provider factors impact distrust. For instance, perhaps Appalachians are more willing to trust fellow Appalachian providers. It is also possible that Appalachians may be more willing to trust providers who are *not* from their town, to avoid dual relationships or potential confidentiality concerns (Coyne et al., 2006), which is a unique advantage that online counseling can provide.

Interventions that target perceived behavioral control will also likely be successful for

in-person and online counseling. For in-person counseling, this may include increasing mental health providers and public transportation in Appalachia. Further, efforts to increase the income of the region (e.g., creating more job opportunities) will also likely increase the likelihood that individuals are able to afford in-person counseling, and therefore improve beliefs that they are capable of seeking in-person counseling. For online counseling, efforts to increase Internet speed throughout the region will likely increase individuals' beliefs that they can seek online counseling services. Recently, there has been a push to increase access to high-quality broadband throughout the Appalachian region (ReImagine Applachia, 2020). However, legislative actions and investments in the Appalachian region are essential to bringing high-quality broadband access for all.

Lastly, the results on preferences highlight the potential of online treatments. Over 40% of individuals preferred some type of online treatment (videoconferencing counseling, therapist guided Internet-based treatment, or unguided Internet-based self-help treatment), and only 2% of participants reported that they would not seek therapy at all. This demonstrates that online treatments have the potential to reach Appalachians who otherwise would not seek traditional in-person treatment.

Findings from this study shed light on a critical gap in the help-seeking literature by using the TPB to understand intentions to use online and in-person counseling in Appalachia, an underserved and understudied region. These findings point to various potential avenues for future research, implementation efforts, and clinical practice to improve mental health care in Appalachia.

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https://doi.org/10.1089/tmj.2012.0041

<center>**VITA**</center>

<center>**Jade M. Hollan, MS**</center>

<center>**PROFESSIONAL EXPERIENCE**</center>

July 2020 - Present	**University of Kentucky Internship Consortium Program (UKIC)**; Lexington, KY **Psychology Intern** *(APA Accredited Internship Training)* *Eastern State Hospital (July 2020 – December 2020)* *University of Kentucky Counseling Center (January 2021 – June 2021)* *Women's Health (July 2021 – December 2021)* *Orofacial Pain Clinic (January 2022 – Present)*

<center>**EDUCATION**</center>

2017-Present	**Doctor of Philosophy in Counseling Psychology** (anticipated graduation May 2022) *University of Kentucky*; Lexington, KY; APA-accredited program <u>Dissertation</u>: *Appalachians' Intentions to Use Online and In-Person Counseling* Defense August 2021; Committee Co-chairs: Robert J. Reese, Ph.D. & Joseph H. Hammer, Ph.D.
2015-2017	**Master of Science in Counseling Psychology** *University of Kentucky*; Lexington, KY
2011-2015	**Bachelor of Arts in Psychology with a Minor in Biology** *Transylvania University, Lexington, KY*; Cum Laude

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<center>**PUBLICATIONS**</center>

Hollan, J. M., Bowling, W., Reese, R. J., Redmayne, K., Clements-Hickman, A., Leibowitz, N., & Hull, T. D. (2021). Two-way messaging for rural users: A cohort comparison study. *Journal of Rural Mental Health*, *45*(2), 63–71. https://doi-org.ezproxy.uky.edu/10.1037/rmh0000175

Clements-Hickman, A. L., **Hollan, J.,** Drew, C. M., Hinton, V., & Reese, R. J. (2021). The use of telehealth in behavioral health and educational contexts during COVID-19 and beyond. In H. D. O'Hair and M. J. O'Hair (Eds.), Communicating science in times of crisis: The COVID-19 Pandemic. (pp.189-214). Wiley.

Clements-Hickman, A. L., Spiker, D. A., Murphy, E., & **Hollan, J. M.** (2021). Untangling the role of the advisory alliance in promoting research development. *Scholarship of Teaching*

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and Learning in Psychology. https://doi-org.ezproxy.uky.edu/10.1037/stl0000274

Reese, R. J., Gismero-Gonzalez, E., Clements-Hickman, A. L., **Clemons, J. M.**, Farook, M. W., & Conoley, C. W. (2019). The psychotherapy researcher – practice relationship: Through a clinical supervision lens. In J. D. Paquin (Ed.) *Clinician-Researchers in Psychotherapy: Careers engaged in both practice and research.* New York: Routledge.

Reese R. J., González, E. G., Clements-Hickman A. L., **Clemons, J. M.**, Farook M. W., Conoley C. W. (2017). The psychotherapy researcher – practice relationship: through a clinical supervision lens. *Counseling Psychology Quarterly, 30*(3), 290-307.

Richardson, J. W., Clemons, J., & Sterrett, W. (2020). How superintendents use technology to engage stakeholders. Research in Educational Administration & Leadership, 5(4), 954-988. doi: 10.30828/real/2020.4.1

AWARDS AND HONORS

2018	**Student Poster Award** *APA Division 29: Society for the Advancement of Psychotherapy*
2018	**Conference Funding Award** *UK Department of Educational, School, and Counseling Psychology*
2015	**Cum Laude** *Transylvania University*
2011- 2015	**Dean's List** *Transylvania University*
2011- 2015	**Morison Scholarship** *Transylvania University*
2011- 2015	**Alpha Lambda Delta Honorary Society** *Transylvania University*

RESEARCH FUNDING

2020	**James S. Brown Graduate Student Award for Research on Appalachia** *UK Appalachian Center*
2020	**Graduate Student Research Assistantship** *UK's Center for Equality and Social Justice*
2019	**Conference Funding Award** *UK Department of Educational, School, and Counseling Psychology*

Hollan, J. M., Bowling, W., Murphy, E., Clements-Hickman, A., Redmayne, K., Reese, R. J., Hull, T. D. (August 2019). *The Effectiveness of Talkspace for Rural Users: A SMS text psychotherapy service.* Poster presented at the 2019 American Psychological Association Convention, Chicago, IL.

Hollan., J. M. (August 2019*). Telemental health (TMH) - Reaching Clients Where They Are.* In R. J. Reese (Chair), From Humility to Telepsychology: Contemporary Practices in Therapy through a Multicultural Lens. Symposium presented at the 2019 American Psychological Association Convention, Chicago, IL.

Clements-Hickman, A. L., Spiker, D. A., Murphy, E., **Hollan, J. M.,** & Hughitt, R. (2019, August). *Understanding research productivity: The role of the advisory relationship and research self- efficacy?* Poster presented at the annual meeting of the American Psychological Association Conference, Chicago, IL.

Redmayne, K., Conoley, C. W., Zetzer, H., Clements-Hickman, A. L., **Hollan, J. M.,** Murphy, E., & Reese R. J. (2019, August). *Evaluating outcome trajectories and clinical significance.* Poster presented at the annual meeting of the American Psychological Association Conference, Chicago, IL. (Division 29 Student Poster Award Winner)

Clemons, J. M., Clements-Hickman A. L., Goodwin, R., Lengerich A. J., Farook, M. W., Hong S., Brown, H. M., Reese, R. J. (August 2018). *Effectiveness, satisfaction, and feasibility of a mobile health application for distress.* Poster presented at the 2018 American Psychological Association Convention, San Francisco, CA.

Clements-Hickman A. L., **Clemons, J. M.**, Reese, R. J. (August 2018). *Do clinical supervision process outcomes predict client outcomes?* Poster presented at the 2018 American Psychological Association Convention, San Francisco, CA. (Winner of Division 29 Student Poster Award).

Clements-Hickman, A., **Clemons, J. M.,** Reese, R. J., Gismero-González, E., Farook, M. W., & Conoley, C. W. (2017, August). *The psychotherapy researcher-practice relationship: Through a clinical supervision lens.* Poster presented at the annual meeting of the American Psychological Association Conference, Washington, D.C.

Farook, M. W., Brown, H. M., Hong S., **Clemons, J. M.**, Lengerich A. J., Meiller, C. E., Vasilj, I., Reese, R. J. (August 2016). *Clients' experiences of providing treatment outcome and alliance feedback in therapy.* Poster presented at the 2016 American Psychological Association Convention, Denver, CO.

Meiller, C. E., Brown, H. M., Vasilj, I., Lengerich A. J., Hong S., Farook, M. W., **Clemons, J. M.**, Reese, R. J. (August 2016). The use of outcome measurements by psychologists in clinical practice: an update. Poster presented at the 2016 American Psychological

Association Convention, Denver, CO.

CLINICAL EXPERIENCE

July 2020 - Present	**University of Kentucky Internship Consortium Program (UKIC)**; Lexington, KY **Psychology Intern** *(APA Accredited Internship Training)* *Eastern State Hospital (July 2020 – December 2020)* *University of Kentucky Counseling Center (January 2021 – June 2021)* *Women's Health (July 2021 – December 2021)* *Orofacial Pain Clinic (January 2022 – Present)*
August 2019-	**Strong Minds (Private Practice)**; Louisville, KY Present **Practicum Counselor** *(Supervised Doctoral Training)*
August- December 2019	**UK Counseling Psychology Program**; Lexington, KY **Supervisor of Master's Students** *(Supervised Doctoral Training)*
August 2018- May 2019	**Eastern State Hospital (Inpatient Psychiatric Hospital)**; Lexington, KY **Practicum Counselor** *(Paid, Supervised Doctoral Training)*
August 2017- May 2018	**University of Kentucky Counseling Center**; Lexington, KY **Practicum Student Counselor** *(Supervised Doctoral Training)*
August 2016- May 2017	**Bluegrass.org (Community Mental Health)**; Lexington, KY **Psychology Practicum Student** *(Supervised Master's Training)*

CONSULTATION EXPERIENCE

March 2020- May 2020	**Behavioral Consultant** *Sayre School, Lexington, KY*
January 2020- May 2020	**Research Consultant** *Step-By-Step, Lexington, KY*
Fall 2018- Spring 2019	**Behavioral & Research Consultant** *Fayette County Mental Health Court, Lexington, KY*

OUTREACH EXPERIENCE

April 2021	**Mental Health Awareness and Self-Care Workshop** *University of Kentucky, Lexington, KY*
April 2021	**Working with Individual with Serious Mental Illness** *University of Kentucky, Lexington, KY*

April 2021	**Depression Screening Day** *University of Kentucky, Lexington, KY*
March 2021	**Overview of UK's Counseling Psychology Services** *University of Kentucky, Lexington, KY*
March 2021	**Test Anxiety Workshop** *University of Kentucky, Lexington, KY*
February 2021 & March 2021	**Careers in Counseling Psychology** *University of Kentucky, Lexington, KY* *Viper Elementary School, Viper, KY*
May 2020	**Introduction into Telemental Health** *Lexmark International, Inc.*
April 2020 & May 2020	**Self-Care During COVID-19 Virtual Workshop** *Promoted statewide in Kentucky & South Carolina* *Women 4 Women, New York, NY*
October 2017	**Depression Screening Day** *University of Kentucky, Lexington, KY*

TEACHING EXPERIENCE

Spring 2020	**Instructor, Building SUD Workforce Capacity in the Appalachian Region (didactic, non-catalog graduate course)** *University of Kentucky – Counseling Psychology Program & Department of Social Work*
Spring 2019	**Teaching Assistant, Developmental Psychology** *University of Kentucky*
Spring 2018	**Teaching Assistant, Abnormal Psychology** *University of Kentucky*
Fall 2015- Fall 2018	**Teaching Assistant, Introduction to Psychology** *University of Kentucky*

SOCIAL JUSTICE ACTIVITIES

Spring 2016	**Diversity Workshop Facilitator** *University of Kentucky – College of Education, School, and Counseling Psychology*

2015-Present	**Social Justice Advocacy Group**
	University of Kentucky

OTHER PROFESSIONAL EXPERIENCE

2011-2014	**College for Living Teacher and Director for Arts and Crafts**
	Transylvania University

Spring 2014	**Tutor for an Adolescent with Autism**
	Lexington, KY

Spring 2014	**Tutor for a Child with Down Syndrome**
	Lexington, KY

Spring 2014	**Internship with Child Guidance Specialist**
	Lexington, KY

ADDITIONAL CLINICAL TRAINING AND CERTIFICATIONS

February 2020	**Telehealth Board Certified Telehealth Professional (BCTP) Level I Certificate;** *Telebehavioral Health Institute*

November 2019	**Deep Poverty Workshop;** *University of Kentucky*

February 2019	**Community-Engaged Research Workshop;** *University of Kentucky*

March 2018	**Trauma Treatment Workshop;** *Kentucky Psychological Association*

July 2018	**Nonviolent Crisis Intervention Training;** *Eastern State Hospital*

January 2017	**Dialectical Behavioral Therapy (DBT) Group Skills Training for Mental Health Professionals;** *Eastern Kentucky University*

September 2015	**Diversity Workshop;** *University of Kentucky*

August 2014	**KPA Substance Abuse Conference;** *Louisville, Kentucky*

PROFESSIONAL SERVICE AND AFFILIATIONS

2020-Present	**Appalachian's for Appalachia, Co-founder, Deputy Director, & Communications Director**

2020-Present	**Ampersand, Board Member**
	(Formerly Bluegrass Rape Crisis Center)
	Lexington, KY

2018-Present	**Society for the Advancement of Psychotherapy (Div. 29), Student Affiliate**
	☐ Student Development Committee member
	☐ Annual reviewer for Student Excellence in Teaching and Practice Award
2018-Present	**Graduate Appalachian Research Community, Member**
	University of Kentucky
2018-2021	**Social Justice Advocacy Group (SJAG), Member**
	University of Kentucky
2019-2021	**Co-chair of Transylvania University 2015 Alumni Association**
2017-Present	**Student Mentor**
	University of Kentucky – Counseling Psychology Program
2014-present	**American Psychological Association, Student Affiliate**
2014-present	**Kentucky Psychological Association, Student Affiliate**
2014-2015	**Volunteer, Kentucky Psychological Association**
2014-2015	**Volunteer,** *Down Syndrome Association of Central Kentucky*
2014-2015	**Psi Chi International Honor Society in Psychology, Vice President**
2012-2013	**Treasurer, Alpha Lambda Delta Honorary Society**

RESEARCH TEAM EXPERIENCE

Fall 2019-2021	**Research Assistant, HRSA (T32) Grant; University of Kentucky**
	PI: Kalea Benner, Ph.D., Associate Professor, Director of Graduate Studies
Spring 2018-Fall 2019	**Graduate/Research Assistant; University of Kentucky**
	PI: Jayson Richardson, Ph.D., Associate Professor
Fall 2015-Spring 2020	**Research Team Member; University of Kentucky**
	Supervisor: *Jeff Reese, Ph.D., Professor*
Fall 2015-Fall 2016	**Research Team Member; University of Kentucky**
	Supervisor: *Joseph Hammer, Ph.D., Assistant Professor*
Fall 2014	**Research Assistant; Transylvania University**
	Supervisor: *Margaret Upchurch, Ph.D., Professor of Psychology*