WHERE LITERACY AND STIGMA MEET: BARRIERS TO MENTAL HEALTH HELP-SEEKING FOR APPALACHIAN WOMEN

by

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ABSTRACT

Appalachian women face some of the most pervasive health disparities and poverty rates in the United States. Barriers to help-seeking such as accessibility, affordability, stigma, and low mental health literacy negatively impact Appalachian women's ability and willingness to seek mental healthcare services when distressed. This project tested the degree to which mental health literacy moderates the relationship between perceived stigma of help-seeking and willingness to seek mental health services in a sample of 461 Appalachian women. Logistic regression was used to predict willingness to seek mental health services from predictor variables of stigma, mental health literacy, and the moderation effect. The moderation effect was not significant, indicating that the strength of the relationship between perceived mental health stigma and willingness to seek treatment does not vary as a function of mental health literacy. The main effect of mental health stigma was significant, with lower levels of mental health stigma associated with a greater willingness to seek mental health services. The main effect of mental health literacy was not significant. Overall, the results highlight the importance of continued efforts to reduce stigma and normalize help-seeking for mental health concerns in the region.

Keywords: Appalachia, women, stigma, mental health literacy, mental health help-seeking, rurality

DEDICATION

I would like to dedicate this dissertation to the Appalachian woman. To the women who raised me, who raised my mother, and her mother before that. To my Granny, Nini, and Nani who from infancy told me, “You can do anything you set your mind to.” Without these women in my life, I would have never learned how to be so stubborn yet flexible, kind yet bold, compassionate yet feisty, and most of all how to feel pride in my culture, values, and identity. At every turn of this program, the women in my life were always there to love and support me. When I started to feel like I was falling short, or that this journey wouldn’t be worth it in the end, my mother was always the first to say, “No matter what, we are proud of you.” At no point did I ever doubt my family’s support and genuine belief in my ability to succeed, even when I didn’t believe in myself. The lessons I learned from the women in my life are the only reason why I have persisted thus far; without them I can’t imagine where I would be today.

“If there’s one thing that women in these hills know how to do, it’s get things done.”

(Cassie Chambers, Hill Women: Finding Family and a Way Forward in the Appalachian Mountains, p. 48)

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CHAPTER ONE: STUDY OVERVIEW

Appalachia is broadly defined as a vast sprawling region of the eastern United States primarily demarcated by the Appalachian Mountain range (Gore et al., 2016). The Appalachian region is comprised of portions of 13 different states, 420 counties, and holds a population of approximately 25 million (Hendryx, 2008). The term Appalachia is most often used to refer to the central Appalachian region often referred to as the "cultural center of Appalachia" (Russ, 2010). Central Appalachia is comprised of parts of Eastern Kentucky, Eastern Tennessee, Western Virginia, eastern North Carolina, and all of West Virginia (Russ, 2010). Much of central Appalachia is made up of dense woodlands, farmlands, and small rural communities. Appalachia is a primarily rural region with 42% of the region's population living in rural areas, compared to 20% of the national population (Elder & Robinson, 2018). While not all rural areas are Appalachian, many Appalachian communities are rural and therefore face many of the same issues and concerns that are present in rural communities across the country.

Research regarding the prevalence of clinically significant mental health concerns in rural areas is mixed (Harowski et al., 2006). Some studies indicate that rural residents experience mental health concerns at a level comparable to their metropolitan counterparts (Hastings & Cohn, 2013; Hauenstein & Peddada, 2007) while others indicate that rural residents experience mental health concerns at a higher rate (Hendryx, 2008). While the prevalence of mental health concerns for rural residents may be analogous, the severity of concerns seems to vary widely (Hastings & Cohn, 2013; Helbok et al., 2003). A potential explanation for the increased severity of psychological distress is a rural individual's tendency to delay mental health help-seeking (Thorne & Ebener, 2020). Compared to their urban counterparts, rural Americans are more

likely to delay professional help-seeking until mental health concerns become severe and debilitating (Cheesmond et al., 2019; Thorne & Ebener, 2020).

In addition to delayed mental health help-seeking, the nature of various stressors and risk factors that impact rural residents also contribute to the potential of developing severe mental health concerns (Cheesmond et al., 2019). Compared to more urban areas, rural residents have been found to experience higher levels of extreme poverty, unemployment, and job-related accidents and injuries, which further compound the impact of stressors (Gamm et al., 2010). Accessibility of healthcare services, substance abuse and dependence, and rates of disability and unemployment has been a longstanding issue in rural Appalachian communities (Edwards et al., 2006). In 2018, rates of poverty in Appalachia in central Appalachia were twice that of the national average (Elder & Robinson, 2018). Critical shortages of qualified mental healthcare providers and the perceived lack of access to care negatively impact the help-seeking behaviors of rural individuals (Cheesmond et al., 2019). In Appalachia, the number of mental health professionals per 100,000 residents is 35% lower than the national average, designating Appalachia as a mental health provider shortage area (HPSA; Elder & Robinson, 2018). HPSAs are designations used to identify areas of the United States in which an area falls below a pre-determined population-to-provider ratio (Hendryx, 2008). Critical shortages of qualified mental healthcare providers in addition to the variety of serious risk factors negatively impact the healthcare utilization patterns and help-seeking behaviors of Appalachian people (Cheesmond et al., 2019).

Deep poverty refers to a state in which one's household income falls below 50% of the poverty line (Hall & Rector, 2018). Women living in deep poverty experience higher rates of mental health concerns such as depression and anxiety than men and higher-income women

(Snell-Rood et al., 2017). In addition to the high rates of poverty, a variety of social risk factors such as chronic stress, interpersonal and caregiving responsibilities, and risk of trauma may further predispose Appalachian women to developing clinically significant mental health concerns (Hauenstein & Peddada, 2007). Appalachian women with mental health concerns must also contend with some of the most pervasive health disparities in the United States, such as decreased access to licensed providers and lack of insurance coverage (Hill et al., 2016). The barriers that Appalachian women face make mental healthcare utilization a difficult task. The unique stressors, social and systematic risk factors, and increased risk for serious mental health concerns highlight the need for a more in-depth understanding of the barriers that Appalachian women face in mental healthcare utilization.

Educational and attitudinal barriers to mental health help-seeking have also been identified as significant concerns for Appalachian women (Hill et al., 2016). Mental health literacy (MHL), often defined as one's knowledge about mental health concerns, efficacious treatments for those concerns, and how good mental health is obtained and maintained over time, is a clear concern for Appalachian women living in underserved areas (Kutcher et al., 2016). MHL provides individuals with the information needed to make informed decisions about their care and management of long-term mental health concerns (Kutcher et al., 2016). MHL is a well-established predictor of willingness to seek professional mental healthcare in Appalachian and rural populations (Kutcher et al., 2016; Thorne & Ebner, 2020). Despite the clear importance of MHL, Appalachian individuals hold inaccurate knowledge about mental illness, symptoms, etiology, and treatments, which may be linked to low levels of healthcare utilization (Thorne & Ebener, 2020). Improving mental health literacy among Appalachian women is of key

importance when considering the underutilization of professional mental health services in rural and Appalachian areas (Thorne & Ebener, 2020).

In addition to MHL, the perceived stigma of mental health help-seeking is an identified predictor of the unwillingness to seek help in Appalachian individuals (Hill et al., 2016). In a variety of qualitative studies, Appalachian women identified fear of stigmatization as one of the foremost barriers to help-seeking (Gore et al., 2016; Hill et al., 2016; Snell-Rood, 2017). Appalachian women highlight the fear of being labeled as incompetent, inferior, or crazy as a result of seeking help for a mental health concern and often choose avenues of informal help-seeking, such as talking to a family member or religious leader (Hill et al., 2016; Jesse et al., 2008; Thorne & Ebener, 2020). While both stigma and MHL are strong predictors of mental health help-seeking in broad populations, the effects of MHL on the relationships among perceived stigma and mental health help-seeking behaviors have not been studied within a female Appalachian sample.

The research that has been conducted with Appalachian populations has been primarily through qualitative research methods (Browning et al., 2000; Cheesmond et al., 2019; Hill et al., 2016; Snell-Rood et al., 2017). Qualitative studies conducted with Appalachian women have been instrumental in building the foundational understanding of the region, its people, and their experiences with mental healthcare. With the foundation of research firmly built with qualitative methods, a quantitative study of Appalachian women's mental health help-seeking patterns is warranted (Thorne & Ebner, 2020). Quantitative research methods will allow theory tested by qualitative methods to be generalized to a larger Appalachian population. Little current research exists regarding mental health literacy as a barrier to mental health help-seeking for Appalachian women and its relationship with stigma. This project aims to investigate the relationship between

mental health literacy, perceived stigma, and mental health help-seeking in a sample of Appalachian women. Understanding the relationship between mental health literacy and attitudes about mental health services in Appalachian women will play a vital role in improving their utilization of professional mental health services.

Review of Literature

Rural Appalachia

Rural Appalachians experience a number of risk factors that negatively impact their overall health and well-being. Social determinants of health refer to the "root" causes of health as it relates to health outcomes and behaviors (Hege et al., 2018). Some social determinants of health include poverty rates, educational attainment, housing concerns, economic development, employment rates, geographical location, social and community context, just to name a few (Hege et al., 2018). Rural Appalachian counties are over-represented in the nation's worst quintile for several social determinants of health (Elder & Robinson, 2018). In areas related to median household income, household poverty rates, disability status, and educational attainment rural Appalachian counties rank among some of the worst in the nation (Elder & Robinson, 2018). Poverty has been a persistent issue in rural Appalachia for decades. Poverty rates in central Appalachia are twice that of the national rate, with most central Appalachian counties being identified as "economically distressed" (Elder & Robinson, 2018). In addition to increased poverty rates, 18.2% of rural Appalachians are uninsured compared to 14.7% of Appalachians living in more urban areas and 12% nationally (Elder & Robinson, 2018). High poverty rates and disproportionately high levels of uninsured make those living in Appalachia at higher risk of negative health outcomes (Elder & Robinson, 2018).

Aspects of rural Appalachian culture may feed into a reluctance to seek professional mental healthcare services. Appalachian individuals experiencing mental health concerns often cite the importance of being able to "handle problems on your own without troubling others" (Snell-Rood et al., 2017, p. 235), reflecting the importance of self-reliance (Hendryx, 2008). Appalachian residents may fear the impact of stigmatization in their close interpersonal relationships and may, as a result, choose to hide their mental health symptoms (Cheesmond et al., 2019).

Little empirical research has been conducted regarding the experiences of Appalachian women. Prior research has been primarily qualitative in nature and focuses on specific women's issues such as incidence of substance use, domestic violence, and post-partum mental health concerns (Helton & Keller, 2010; Hill et al., 2016; Jesse et al., 2006; Snell-Rood et al., 2017). Rural Appalachian women face many distinct economic, cultural, and geographic barriers to health and well-being. Nationally, the leading health-related cause of disability for women is depression, and women are more likely than men to struggle with depressive disorders (Jesse et al., 2008). Despite increased incidence of mental health concerns like depression, rural Appalachian women continue to demonstrate low levels of mental healthcare utilization (Snell-Rood et al., 2017). Poverty is a significant barrier for Appalachian women in distress. In rural counties, single-parent, women-led households are more likely to struggle with poverty than any other family structure (Edwards et al., 2006). Poverty impacts multiple aspects of mental healthcare utilization and has been shown to have a detrimental impact on psychological distress, with low-income rural women being more likely to experience depression than low-income rural men and non-rural high-income women (Snell-Rood et al., 2017). In addition to poverty-related stress, poverty also directly impacts one's ability to utilize care systems, with issues related to

affordability and lack of health insurance coverage (Coward et al., 2006). Challenges for rural Appalachian women, including poverty, caregiver responsibilities, unemployment, disability, and chronic stress, both exacerbate psychological distress and act as barriers to care-seeking (Snell-Rood et al., 2017). Research indicates that rural Appalachian women are significantly less likely to seek mental healthcare services than women outside of the region (Gehlert et al., 2006). In place of seeking formal mental healthcare, Appalachian women may choose to rely on important others for support and encouragement during difficult times or may choose to deal with their problems on their own (Snell-Rood et al., 2017).

Appalachian women may face a higher risk for mental health concerns. In addition to the increased incidence of psychological distress, Appalachian women encounter a variety of logistical and attitudinal barriers to seeking help (Hauenstein & Peddada, 2007). Exploring the interplay between internalized stigma and mental health literacy is vital to developing a more holistic understanding of mental healthcare utilization among Appalachian women.

Mental Health Literacy (MHL)

The theory of MHL was born from health literacy research, which primarily focuses on the impact of an individual's literacy skills on health outcomes (Jorm et al., 1997; Spiker & Hammer, 2019). Historically health literacy has been defined as one's ability to obtain, understand, and act on healthcare information to make informed and accurate decisions about one's health and well-being (Jorm et al., 1997).

In their seminal article, Jorm et al. (1997) addressed the shortcomings of the then-current health literacy model and argued the importance of fully addressing issues related to knowledge and skills needed to pursue mental wellness. Over the years, the MHL model has been expanded to include seven concepts: recognition of mental health conditions, knowledge of how to

seek mental health information, knowledge of mental health risk factors, knowledge of the cause of mental health concerns, knowledge of self-treatment, knowledge of professional help available, and attitudes that promote appropriate mental health help-seeking behaviors (Spiker & Hammer, 2018).

Despite the clear importance of MHL in mental health outcomes, the general public seems to hold inaccurate views of mental health concerns, available resources, and treatments (Jorm, 2012; Spiker & Hammer, 2018). In many communities, the key source of information regarding mental health concerns comes from mental health and medical professionals in and around the community (Kutcher et al., 2016). The decreased number of mental health and medical providers among rural Appalachian communities reinforces the hypothesis that some Appalachians may lack the needed information to make informed decisions about their mental health. Some studies suggest that Appalachian residents face specific difficulty in the areas of MHL linked to accessing resources, since resources may be limited (Hill et al., 2016; Keefe, 2005). Additionally, many Appalachian residents may face difficulty in identifying psychological distress that requires professional mental health services (Snell-Rood et al., 2017). Some qualitative research has centered on highlighting Appalachian residents' understanding of mental health concerns; studies indicate that rural Appalachians are more likely to dismiss depressive symptoms until they are severe and debilitating partially due to not knowing that what they are experiencing is a clinically significant mental health concern (Cheesmond et al., 2019; Snell-Rood et al., 2017; Thorne & Ebener, 2020).

In rural Appalachian populations, knowledge of mental health concerns (a key concept of MHL) has been shown to be a significant predictor of willingness to seek help (Hill et

al., 2016; Thorne & Ebener, 2020). Improving MHL is of key importance when considering the underutilization of professional mental health services in rural Appalachian communities.

Internalized Stigma

When discussing stigma as it relates to mental health issues, the concept can be better defined in two separate but interrelated ways: public stigma and self-stigma. Public stigma refers to the negative stereotypes toward mental illness held by the larger community and general public (such as "people seeking mental health services are weak" or "people with mental illness are unpredictable"; Eisenberg et al., 2009). The stereotype of public stigma toward mental illness is closely linked to behaviors of prejudice and discrimination (Corrigan, 2004). The negative impacts of public stigma are clear. Those identified as "mentally ill" often face tangible ramifications in their everyday life such as employment and housing. A multitude of research studies has indicated that publicly held prejudices toward people with mental health concerns have harmful effects on individuals to obtain and maintain gainful employment (Corrigan, 2004; Farina & Felner, 1973; Farina et al., 1973) and get and keep safe and reliable housing (Corrigan et al., 2006a; Wahl, 1999). Public stigma towards mental illness has also been shown to have negative effects on an individual's ability to navigate general healthcare services, further limiting the accessibility of services. Public stigma is a well-established concern for Appalachian individuals, with multiple studies citing fear of stigmatization as a prominent barrier to mental health help-seeking (Hill et al., 2016; McGarvey et al., 2011; Snell-Rood et al., 2017). In rural Appalachian communities, greater perceived stigma is linked to decreased willingness to seek help from a professional for a mental health concern (Williams & Polaha, 2014). Appalachian individuals have often cited fears of negative responses from family, friends, church members, and the larger community as a result of mental health help-seeking, making stigma a significant

challenge for rural Appalachian communities (Cheesmond et al., 2019; Williams & Polaha, 2014).

Self-stigma occurs when an individual self-identifies with a stigmatized group (such as a person with a mental illness or a person seeking mental health services) and then applies known stereotypes to the self, thereby internalizing negative beliefs (Corrigan, 2004; Eisenberg et al., 2009). Diminished feelings of self-esteem and self-efficacy are linked to the internalization of stigma and can lead to the worsening of already-present psychological distress (Corrigan et al., 2010; Eisenberg et al., 2009). Corrigan et al. (2006) posited that the process of the internalization of stigma develops sequentially once an individual perceives public stigma. After an individual becomes aware of public stigma toward a group, they then form personal beliefs and move to determine whether to apply these beliefs toward the self (Eisenberg et al., 2009). While the internalization of stigma is a universal experience, there is evidence to suggest that the cultural context in which rural Appalachians reside may engender greater feelings of stigmatization toward seeking help for a mental health concern (Williams & Polaha, 2014).

Mental Health Help-Seeking

Research concerning the incidence of clinically significant mental health concerns in rural Appalachia is mixed (Harowski et al., 2006). Some research indicates that rural residents experience psychological distress at a rate that is comparable to their metropolitan counterparts (Hastings & Cohn, 2013; Hauenstein & Peddad, 2007), while others indicate that rural Appalachians experience mental health concerns at a higher rate (Hendryx, 2008; Marshall et al., 2017). Research conducted by the Appalachian Regional Commission (ARC) found that Appalachian Medicare recipients reported symptoms of depression at a rate 16.7% higher than those in other U.S. regions (Marshall et al., 2017). Additionally, the ARC also found that

the suicide rate in Appalachia was 17% higher than the national average, with residents living in rural Appalachia being 21% more likely to commit suicide than residents living in metropolitan Appalachian counties (Marshall et al., 2017). The Centers for Disease Control (2014) concluded that rural Appalachians reported experiencing 14% more mentally unhealthy days than an average American (Elder & Robinson, 2018; Marshall et al., 2017).

Healthcare utilization is a key area of concern for rural Appalachian counties. While the incidence of mental health concerns is equal to or slightly greater than for those living in urban areas, rural Appalachian residents are far less likely to seek professional mental health services (Cheesmond et al., 2019). In instances when rural Appalachians do seek help, they are more likely to delay help-seeking for much longer periods even after clinically significant symptoms emerge (Cheesmond et al., 2019). Mental health help-seeking delays in rural areas were more than double delays in other more urban areas, with some people delaying help-seeking for more than 10 years from the initial onset of symptoms (Green et al., 2012). Delaying help-seeking for a mental health concern has clear negative implications for one's overall health and well-being. Like many physical health concerns, longer treatment delays result in greater severity of symptoms, an increase in instances of treatment resistance, and overall poorer prognosis (Helbok et al., 2003). The combination of decreased willingness to seek help increased symptom severity due to delayed treatment-seeking, and decreased access to mental healthcare providers makes treatment-seeking for rural Appalachians a monumental task. This study will address some of the most salient barriers to treatment-seeking for rural Appalachian women by addressing the following hypotheses.

Study Hypotheses

Research Question 1: What is the relationship between stigma, mental health literacy, psychological distress, and help-seeking in Appalachian women?

H_1: Rural Appalachian women will demonstrate high levels of psychological distress.

H_2: Rural Appalachian women will demonstrate low levels of mental health literacy.

H_3: Rural Appalachian women will demonstrate high levels of internalized stigma of help-seeking.

H_4: Rural Appalachian women will demonstrate low levels of mental health help-seeking.

Hypotheses Regarding Main Effects of Self-Stigma and Mental Health Literacy

H_5: There will be a significant main effect of self-stigma on mental health help-seeking, with those experiencing higher levels of self-stigma experiencing lower levels of willingness to seek mental healthcare services.

H_6: There will be a significant main effect of mental health literacy on mental health help-seeking in which individuals with higher levels of mental health literacy will demonstrate higher willingness to seek mental healthcare services.

Hypotheses Regarding the Moderating Effect of Mental Health Literacy

H_7: Mental health literacy will moderate the relationship between the level of stigma toward mental health help-seeking and the level of willingness to seek professional mental health services.

Method

Participants

Participants were recruited from social media sites (Facebook) utilizing targeted geographical advertisement and chain-referral sampling. Overall, 1,022 total participants took

part in the study; after data cleaning, the final sample size was 461. Data from five participants were removed because they did not identify as women. Data from 406 participants were removed after being identified as bot responses due to containing identical responses from identical Internet Protocol (IP) addresses. An additional 32 responses were removed due to their being completed from duplicate IP addresses. Forty-six responses were removed due to completion of less than 80% of the survey. Fifty-seven responses were removed due to answering one of the two validity check items incorrectly. Finally, an additional 15 responses were removed for completing the survey in less than 5 minutes.

Before beginning the study measures, participants completed a five-item eligibility screen that included questions related to the participant's residence in an Appalachian area, age, and gender. A variety of measures were used to test the above-listed hypotheses. Demographic information regarding participant age, race-ethnicity, level of education, annual household income, sexual orientation, relationship status, employment status, current Appalachian state of residence, current zip code, access to transportation, access to health insurance, and estimated distance to professional mental health services was collected. Values for internal consistency were collected for each measure (Cronbach's alpha) to demonstrate how these measures perform with a rural Appalachian sample.

Procedure

Before beginning data collection, approval from the Radford University Institutional Review Board for the Protection of Human Subjects was obtained (IRB # 2021-300). As mentioned previously, participants were recruited via Facebook using geographically targeted advertisements and snowball sampling. Potential participants were provided with a Qualtrics online survey link and directed to the study survey page. Informed consent was obtained from

participants before being directed to an inclusion criteria screener. To proceed to the questionnaire, participants were asked to confirm that they were Appalachian women over the age of 18. Two validity check questions were embedded in the survey to screen for questionable response patterns and uphold the validity of the final data set.

Measures

Psychological Distress

The *Kessler Psychological Distress Scale*, a six-item measure, assessed participants' psychological distress in the last 30 days (K6; Kessler et al., 2002). The K6 includes items addressing behavioral, emotional, cognitive, and psychophysiological manifestations of distress (Kessler et al., 2003). Overall scores ranged from 0 to 24. Higher scores indicate higher levels of psychological distress while lower scores indicate lower levels of psychological distress. A cutoff score of 13 or higher suggests a severe level of psychological distress while a score between 6 and 12 is indicative of moderate psychological distress (Prochaska et al., 2012). The K6 has demonstrated high internal consistency ($\alpha = .89$). The K6 demonstrates high sensitivity to psychological distress, making it an effective means of screening for a variety of populations (Prochaska et al., 2012). For the current study, Cronbach's alpha was $\alpha = .75$.

Internalized Stigma

The *Self-Stigma of Seeking Help* (SSOSH; Vogel et al., 2006) was used to assess participants' level of internalized stigma of seeking mental health services. Participants were asked to respond to the 10-item measure using a 5-point Likert-type scale. The total SSOSH score is created by calculating the mean score across all 10 items, after reverse scoring items 2, 4, 5, 7, and 9. A single SSOSH score was calculated across all nine items. Higher scores on the SSOSH indicate higher levels of self-stigma toward mental health help-seeking (Vogel et al.,

2006). The SSOSH has demonstrated good internal consistency (α = .89) as well as good test-retest reliability over a period of 2 months (α = .72; Vogel et al., 2006). Additionally, the SSOSH has maintained good internal consistency (α = .83) when used with rural Appalachian populations (Thorne & Ebener, 2020). For the current study, Cronbach's alpha was α =.70.

Mental Health Literacy

The *Multicomponent Mental Health Literacy Scale* (MC-MHL; Jung et al., 2018) was used to assess participants' knowledge of and beliefs about mental health concerns and mental health resources. The MC-MHL is a 26-item multicomponent measure made of up three distinct constructs; knowledge of mental health concerns (KO-MHL), mental health beliefs (BO-MHL), and knowledge of mental health resources (RO-MHL; Jung et al., 2016). Participants were asked to respond to the measure using a 5-point Likert-type scale ranging from (1 – *strongly disagree* to 5 – *strongly agree*). According to analysis techniques recommended by Jung et al. (2016), participants who responded in agreement at any level were coded 1 while those were responded neutrally or in disagreement were coded 0. Participants were also given a chance to respond with "*I don't know*" following recommendations determined by Jung et al. (2016). Participants who responded with the "*I don't know"* option were also coded with a 0 to reflect their lack of knowledge and understanding of the topic. Higher scores on the MC-MHL reflected higher levels of mental health knowledge, more accurate mental health beliefs, and more knowledge of mental health resources. BO-MHL items were reverse coded so that higher sum scores would reflect more accurate beliefs about mental health concerns (DeBate et al., 2018). The MC-MHL has demonstrated good internal consistency (KR coefficient = .83; Jung et al., 2016). While the measure was originally assessed using the Kuder-Richardson-20 coefficient regarding internal consistency, the measure has also been assessed using Cronbach's alpha with

each subscale demonstrating good internal consistency (KO-MHL α = .70, BO-MHL α =.72, RO-MHL α = .79). For the current study, Cronbach's alpha was α =.80.

Mental Health Help-Seeking

The *General Help-Seeking Questionnaire* (GHSQ) was utilized to measure participants' help-seeking intentions. The 10-item GHSQ instructed participants to respond to the following prompt: "If you were having a personal or emotional problem, how likely is it that you would seek help from the following people?" The participants were then presented with a list of both informal (significant other, family member, friend) and formal (mental healthcare providers, medical providers) and asked to rate their intentions of seeking help using a 7-point Likert-type scale ranging from (1 - *extremely unlikely* to 7 - *extremely likely*). Higher scores on the GHSQ indicate higher levels of help-seeking intentions. The GHSQ has been widely used as a measurement of general mental health help-seeking intentions (Wiljer et al., 2020; Wilson et al., 2005). The GHSQ consistently demonstrates good validity and reliability. The GHSQ demonstrates good internal consistency (α = .85; Wilson et al., 2005). Convergent and divergent validity for the GHSQ were supported with positive correlations found between intentions to seek professional counseling and quality of past help-seeking experiences as well as a negative correlation between student's help-seeking intentions and self-reported barriers to help-seeking (Wilson et al., 2005).

The *Actual Help-Seeking Questionnaire* (AHSQ) was utilized to measure participants' past mental health help-seeking behaviors. This measure asked the participant to identify previous sources of help-seeking for mental health concerns from a list (i.e., a family member, religious leader, close friend, counselor, or therapist, etc.). The AHSQ demonstrates good

convergent validity through positive correlations found between past help-seeking behaviors and willingness to seek help in the future (Rickwood et al., 2005).

Results

The current study sought to determine if mental health literacy is a significant moderator of the relationship between internalized stigma and mental health help-seeking. A logistic regression analysis was utilized to analyze the relationships among mental health literacy, stigma, and help-seeking. The results of the data cleaning process, moderation analyses, and exploratory analyses are described in detail below.

Preliminary Analyses

Psychometric Properties of the Measures

Cronbach's alpha scores were calculated for the Kessler Psychological Distress Scale (K6), Self-Stigma of Seeking Help (SSOSH), Multicomponent Mental Health Literacy Scale (MC-MHL), and each subscale of the MC-MHL to understand the reliability of the data amongst the current study sample of Appalachian women.

Kessler Psychological Distress Scale (K6). The *Kessler Psychological Distress Scale*, a six-item measure, assessed participants' psychological distress in the last 30 days (K6; Kessler et al., 2002). The Cronbach's alpha for the K6 was .75. This is an acceptable reliability coefficient that indicates the items of the K6 are strongly correlated with one another. Item analysis of the scale indicated that removing an item would not significantly improve the reliability of the scale. A composite score of the K6 was calculated to indicate the level of psychological distress that each participant recorded.

Self-Stigma of Seeking Help (SSOSH). The *Self-Stigma of Seeking Help* scale (SSOSH; Vogel et al., 2006) was used to assess participants' level of internalized stigma of seeking mental

health services. The Cronbach's alpha for the 10-item SSOSH was .70. This is an acceptable reliability coefficient that indicates items on the SSOSH group together. Review of the data indicated that removing an item would not significantly improve the reliability of the scale. A composite score of the SSOSH was calculated to indicate the level of self-stigma for mental health help-seeking reported by each participant.

Multicomponent Mental Health Literacy Scale (MC-MHL). The *Multicomponent Mental Health Literacy Scale* (MC-MHL; Jung et al., 2018) was used to assess participants' level of mental health literacy. The MC-MHL is a 26-item multicomponent measure made of up three distinct subscales: knowledge of mental health concerns (MHL-K), mental health beliefs (MHL-B), and knowledge of mental health resources (MHL-R; Jung et al., 2016).

The Cronbach's alpha for the 26-item MC-MHL was .80. This is an acceptable reliability coefficient that indicates the items of the MC-MHL are strongly correlated with one another. Item analysis of the measure indicated that removing an item would not significantly improve the reliability of the scale.

A composite score of the MC-MHL was calculated to describe each participant's level of mental health literacy. Reliability coefficients for each of the three subscales were also obtained. Cronbach's alpha for the Knowledge subscale (MHL-K) was .75. The Cronbach's alpha for the Beliefs subscale (MHL-B) was .77. The Cronbach's alpha for the Resources subscale (MHL-R) was .72.

Correlations

Pearson correlations were calculated to determine the relationships among the measures. The Kessler Psychological Distress Sale (K6) demonstrated a significant positive correlation with both formal and informal domains of the General Help-Seeking Questionnaire (GHSQ). The GHSQ was utilized to measure participants' self-reported willingness to seek help from both

formal (e.g., therapist/psychologist) and informal (e.g., friend) help-seeking sources. The K6 correlated with both the GHSQ-formal (r = .142, p < .01) and the GHSQ-informal scale (r = .198, p < .01)

The Self-Stigma of Seeking Help (SSOSH) scale demonstrated a significant negative correlation with the Multicomponent Mental Health Literacy Scale (MC-MHL) (r = -.220, p < .01). The SSOSH additionally demonstrated a significant positive correlation with the GHSQ-formal (r = .099, p < .05) and GHSQ-informal scale (r = .217, p < .01). The Actual Help-Seeking Questionnaire (AHSQ) was paired with the GHSQ to measure participants' self-reported experiences of help-seeking from both formal (e.g., therapist/psychologist) and informal (e.g., friend) sources. The SSOSH also demonstrated a significant positive correlation with the AHSQ-formal scale (r = .114, p <.05).

The Multicomponent Mental Health Literacy Scale (MC-MHL) demonstrated a significant positive correlation with the AHSQ-formal (r = .205, p < .01) and the AHSQ-informal (r = .118, p < .05). The MC-MHL Knowledge (MC-MHL-K) subscale demonstrated significant positive correlations with the K6 (r = .126, p < .01), SSOSH (r = .0.98, p < .05), MC-MHL total score (r = .664, p < .01), GHSQ-formal (r = .103, p < .05), GHSQ-informal (r = .227, p < .01), AHSQ-formal (r = .129, p < .05), and AHSQ-informal (r = -.512, p < .01). The MC-MHL-Beliefs (MC-MHL-B) subscale demonstrated significant negative correlations with the SSOSH (r = -.512, p < .01), GHSQ-formal (r = .-168, p < .01), GHSQ-informal (r = -.299, p < .01). The subscale additional demonstrated a significant positive correlated with the MC-MHL total score (r = .490, p < .01). The MC-MHL-Resources (MC-MHL-R) subscale demonstrated a significant negative correlation with the K6 (r = -.185, p < .01). The MC-MHL-Resources subscale also demonstrated significant positive correlations with the SSOSH (r = .100, p < .01),

MC-MHL total (r = .476, p < .01), AHSQ-formal (r = .333, p < .01), and MC-MHL-K subscale (r = .219, p < .01)

The General Help-Seeking Questionnaire (GHSQ-formal) demonstrated a significant positive correlation with GHSQ-informal scores (r = .383, p < .01). Additionally, the GHSQ-formal also demonstrated a significant negative correlation with AHSQ-formal (r = .189, p < .01). The Actual Help-Seeking Questionnaire (AHSQ-formal) demonstrated a significant positive correlation with AHSQ-informal scores (r = .175, p < .01). See Table 1.

Analyses Evaluating Study Hypotheses

H_1 Rural Appalachian women will demonstrate high levels of psychological distress.

For Hypothesis 1, results indicated that the current sample of Appalachian women demonstrated a significant level of psychological distress (M = 16.00, SD =3.62). The total score for the K6 is created by calculating the sum of all six items, yielding a score between 0 and 24, with higher scores indicating higher levels of psychological distress (Kessler et al., 2003). The mean score for the current sample falls within the severe psychological distress range as determined by the authors of the K6 measure (Kessler et al., 2003; Prochaska et al., 2012). A one-sample t-test was conducted utilizing the value determined by the authors of the K6 measure as indicating severe psychological distress (13). The results indicated the current sample demonstrated statistically significant levels of psychological distress when compared to the larger population, t(455) = 14.86, p <.001, d = .695. As such, Hypothesis 1 is supported.

H_2 : Rural Appalachian women will demonstrate low levels of mental health literacy.

For Hypothesis 2, results indicated that the current sample of Appalachian women demonstrated low levels of mental health literacy (M = 12.63, SD = 3.00). The total MC-MHL score is created by calculating the mean score across all 26 items. Higher scores on the MC-

MHL indicate higher levels of mental health literacy (Jung et al., 2016). A one-sample t-test was conducted to determine if the current sample's level of mental health literacy was significantly different from levels of mental health literacy reported in similar studies. The mean level of mental health literacy reported by participants in this study was significantly greater than the mean level of mental health literacy reported in other studies (e.g., DiGoacchino et al., 2018; M = 15.83, SD = 3.73), $t(446) = 22.75$, $p < .001$, $d = 2.98$; Jung et al., 2017; M = 19.18, SD = 4.87), $t(446)$, = 46.54, $p < .001$, $d = 2.29$).

When analyzed by MHL subscales, results indicated moderately accurate knowledge of mental health signs, symptoms, and risk factors on a scale from 0 to 12 (MC-MHL-K, M = 9.74, SD = 2.51). Results also indicated inaccurate beliefs about mental health concerns, common risk factors, and potential treatments for concerns among the sample group (MC-MHL-beliefs, M = 1.29, SD = 2.09) Additionally, the sample demonstrated adequate self-reported access to mental health resources and information (MC-MHL-R, M = 3.23, SD = 1.17). This collection of findings indicates that Hypothesis 2 was supported.

H_3: Rural Appalachian women will demonstrate high levels of internalized stigma of help-seeking.

For Hypothesis 3, results indicate that the current sample of Appalachian women demonstrated high levels of internalized stigma of help-seeking (SSOSH, M = 29.45, SD = 4.33). The total SSOSH score is created by calculating the mean score across all items. Higher scores on the SSOSH indicate higher levels of self-stigma (Vogel et al., 2006). A one-sample t-test was conducted to determine if the current sample's level of self-stigma was significantly different from levels of self-stigma reported in other similar studies. The mean level of self-stigma reported by participants in this study was significantly greater than the mean level of stigma

reported in other studies (e.g., Tucker et al., 2013; $M = 26.90$, $SD = 7.95$, $t(457) = 13.56$, $p < 001$, $d = .633$; Rafal et al., 2018; $M = 12.32$, $SD = 4.32$, $t(457) = 84.65$, $p < .001$, $d = 4.33$. As such, Hypothesis 3 was supported by data from the current sample.

H_4 : Rural Appalachian women will demonstrate low levels of mental health help-seeking.

For Hypothesis 4, results indicate that the current sample of Appalachian women demonstrated high levels of willingness to seek mental health care services from a formal help-seeking source (i.e., support groups, primary care provider, therapist or psychologist, phone helpline). Over 77% of the current sample reported willingness to seek help from a formal help-seeking source if they were experiencing psychological distress ($N = 364$). Additionally, a high proportion of Appalachian women in the sample indicated that they had sought help from a formal help-seeking source such as a psychologist and therapist, with 60% of participants indicating that they had sought help from a formal help-seeking source for a mental health concern in the past ($N = 278$). Of note, nearly 80% ($N = 365$) of the current sample reported willingness to seek help for a mental health concern from their primary care physician (PCP), with 62% ($N = 285$) of participants indicating that they had sought help for a mental health concern from a PCP in the past. Hypothesis 4 was not supported.

Moderation Analyses

Moderation analyses were conducted to test the following moderation hypotheses. According to Aiken and West (1991), a significant change for the interaction term would indicate a significant effect in a moderation analysis where the dependent variable is continuous. In analyses for the current study, the dependent variable (willingness to seek mental health services) is a dichotomous variable. Therefore, a logistic regression analysis was performed to examine the moderating effects of mental health literacy on the relationship between stigma and

willingness to seek mental health services. In logistic regression analyses, tests of effects are conducted by entering the predictor variable for the effect being examined in a final block of predictors and examining the chi-squared test of significance for the contribution of this final predictor variable to the logistic regression model.

Hypotheses Regarding Main Effects of Self-Stigma and Mental Health Literacy

H_5: There will be a significant main effect of self-stigma on mental health help-seeking, with those experiencing higher levels of self-stigma experiencing lower levels of mental health help-seeking.

The main effect of mental health stigma on willingness to seek mental health care services was statistically significant, $X^2(1, N = 461) = 4.59$, $p = .032$, OR = .289, with lower levels of mental health stigma being associated with greater willingness to seek mental healthcare services. As such, stigma of mental health help-seeking accounts for a significant amount of variability in participant's willingness to seek formal mental healthcare services. Therefore, Hypothesis 5 was supported.

H_6: There will be a significant main effect of level of mental health literacy on willingness to seek professional mental health services.

The results indicate that the main effect of mental health literacy on willingness to seek mental healthcare services was not significant, $X^2(1, N = 461) = 1.86$, $p = .172$; OR = .949. This finding indicates that there is no relationship between mental health literacy and willingness to seek mental health services in participants across the full range of scores for self-stigma of seeking help. As such, Hypothesis 6 was not supported by the current sample.

Hypotheses Regarding the Moderation Effect of Mental Health Literacy

H_7**:** Mental health literacy will moderate the relationship between the level of stigma toward mental health help-seeking and the level of willingness to seek professional mental health services.

The results indicated that the two-way interaction between mental health literacy and self-stigma was not statistically significant, $X^2(1, N = 461) = 3.21$, $p = .073$; OR = 1.016. These results indicate that the strength of the relationship between perceived mental health stigma and willingness to seek treatment does not vary as a function of mental health literacy. As such, Hypothesis 7 was not supported.

Of note, the combined effect of all three predictors (stigma, mental health literacy, and the interaction of stigma and mental health literacy) model was statistically significant, $X^2(1, N = 461) = 8.24$, $p = .041$; OR = 1.106. These findings indicate that there is some factor related to the combination of variables that accounts for a significant amount of variance in participants' willingness to seek mental healthcare services.

General Discussion

Psychological Distress

Hypothesis 1 proposed that the sample of Appalachian women would demonstrate high levels of psychological distress. This hypothesis was supported by the results of this study. The results indicated that the sample of Appalachian women experienced statistically significant levels of psychological distress when compared to the general population as determined by the authors of the Kessler Psychological Distress scale (K6; Kessler et al., 2003). These findings aligned well with previous findings indicating that rural Appalachians are at increased risk for significant psychological distress (Cheesmond et al., 2019; Snell-Rood et al., 2017; Thorne & Ebener, 2020). The rates of psychological distress among study participants additionally support

previous research findings that suggest rural individuals may be more likely to seek help only after mental health concerns have become severe and debilitating (Cheesmond et al., 2019).

Mental Health Literacy

Hypothesis 2 proposed that the sample of Appalachian women would demonstrate low levels of mental health literacy. This hypothesis was supported by the results of this study. The results indicated that the sample of Appalachian women demonstrated low levels of mental health literacy, meaning Appalachian women may be limited in their knowledge of mental health concerns, hold inaccurate beliefs about mental illnesses, and have limited knowledge of resources available for mental health treatment. Results from this study aligned well with previous research findings that document low levels of mental health literacy in rural Appalachia (Hill et al., 2015) and across rural America (Thorne & Ebener, 2020).

The relationship between mental health literacy and formal help-seeking behaviors in the sample was also demonstrated. A statistically significant positive correlation was detected between mental health literacy and participants' self-reported formal help-seeking behaviors. As such, greater levels of mental health literacy were associated with greater encounters for help-seeking from both formal (e.g., licensed mental healthcare provider, primary care doctor) and informal sources (e.g., friend, partner, family member). These findings support previous research findings indicating that individuals with higher levels of mental health literacy may be more willing to access formal mental healthcare services (Jung et al., 2017).

A statistically significant negative relationship was detected between mental health literacy and self-stigma of seeking help, wherein greater levels of mental health literacy were associated with lower levels of self-stigma. These results are supported by previous studies reporting this inverse relationship between mental health literacy and stigma (Cheng et al., 2018;

Jung et al., 2017). Some studies have additionally demonstrated the utility of targeted mental health literacy interventions to reduce stigmatizing attitudes and desire for social distance from someone experiencing a mental health concern (Bond et al., 2015; Eack et al., 2012). Results from the present study support the rationale for the development and distribution of mental health literacy programs to improve attitudes towards mental health help-seeking among rural Appalachian women.

Self-Stigma of Seeking Help

Hypothesis 3 proposed that the sample of Appalachian women would demonstrate high levels of internalized stigma of mental health help-seeking. This hypothesis was supported by the results of the study. Results of the current study reinforce previous qualitative research in which focus groups of Appalachian women identified fear of stigmatization as one of the foremost barriers to seeking formal mental healthcare services (Browning et al., 2000; Hill et al., 2016; Jesse et al., 2009; Snell-Rood, 2017). Across previous qualitative findings, rural Appalachian women cited feelings of "embarrassment," "shame," "worthlessness," and being "weak" when asked to speak on their feelings of depression (Jesse et al., 2008; Snell-Rood et al., 2017). Feelings of internalized stigma toward mental health help-seeking have been linked to lower overall feelings of self-efficacy and self-esteem (Corrigan et al., 2010). While self-stigma of mental illness and mental health help-seeking is experienced universally, some research findings suggest that rural Appalachians experience stigma at higher rates than those living outside of the region (NORC, 2008; Williams & Polaha, 2014). The high levels of self-stigma detected across the study sample further generalizes findings investigated throughout the qualitative help-seeking literature among rural Appalachian women (Browning et al., 2000; Hill et al., 2016; Jesse et al., 2009; Snell-Rood, 2017).

Mental Health Help-Seeking

Hypothesis 4 proposed that a sample of Appalachian women would demonstrate low levels of mental health help-seeking. This hypothesis was not supported by the sample. Interestingly, a majority of the sample (60%) reported previous help-seeking experiences from formal help-seeking sources (i.e., medical provider, mental health provider). Additionally, 77% of the study sample indicated willingness to seek professional mental health services when experiencing psychological distress. These findings were surprising in the context of national help-seeking data, which indicates approximately 42% of adults reported "having seen a therapist in their lifetime" (Barna et al., 2018). Findings from national survey data also indicated that about 36% of Americans polled demonstrated willingness to seek help from a mental health provider when in distress (Barna et al., 2018). These findings were also surprising in light of the well-documented shortage of mental healthcare providers across the Appalachian region. Research conducted by the Appalachian Regional Commission designated the region as a mental health provider shortage area, meaning the region falls below the designated provider-to-population ratio (HPSA; Hendryx, 2008; Marshall et al., 2017). In Appalachia, the number of mental health providers per 100,000 residents falls 35% lower than the national average (Elder & Robinson, 2018; Mitchell et al., 2017). Despite this, recent qualitative research exploring help-seeking patterns of Appalachian women has documented increasing levels of mental health help-seeking (Fortney et al., 2010; Hill et al., 2016; Snell-Rood et al., 2017).

Findings additionally suggested that participants demonstrated the highest levels of willingness to seek help from both primary care providers (PCPs) and mental health professionals. In measuring actual help-seeking behaviors, over 60% reported seeking help for a mental health concern from their PCP. This finding further bolsters previous research suggesting

that mental health is most commonly addressed by PCPs (Snell-Rood et al., 2017; Wang et al., 2005). Additionally, even when mental health concerns are not directly addressed in the primary care setting, national help-seeking data found that over 30% of survey respondents had chosen to initiate counseling services at the recommendation of their PCP (Barna et al., 2018). Rural residents' willingness to address mental healthcare concerns in the primary care setting is promising for the integrated care model of primary care behavioral health (PCBH). The rationale for the PCBH model has been strengthened through over a decade of research (Cummings & O'Donohue, 201l; Hornberger & Freeman, 2015; Robinson & Reiter, 2007). Models of PCBH have been shown to increase cost effectiveness of care, improve access to behavioral health services, improve coordination and satisfaction of primary care, and lead to better patient outcomes (Blount, 2003; Bryan et al., 2009; Chomienne et al., 2011; Smalley et al., 2010) The current findings further support the utility of the PCBH model of integrated service delivery and highlight the importance of continued research on the implementation of integrated models of care in rural Appalachian communities.

The high levels of reported psychological distress across the study sample is a potential factor contributing to the high rates of mental health help-seeking observed. Previous research with rural populations indicates that rural Americans are more likely to delay professional help-seeking until mental health concerns become severe and debilitating (Cheesmond et al., 2019; Thorne & Ebener, 2020). Therefore, the high levels of reported mental health help-seeking may be a further reflection of the severe nature of reported psychological distress among this sample of Appalachian women.

Self-Stigma and Mental Health Help-Seeking

Hypothesis 5 posited that there would be a significant main effect of self-stigma on willingness to seek mental healthcare services. This hypothesis was supported by the results, with lower levels of self-stigma being associated with greater willingness to seek mental healthcare services. This finding reinforced both quantitative and qualitative findings that identify self-stigma of mental health help-seeking as one of the foremost barriers to mental health help-seeking among rural Appalachians (Browning et al., 2000; Cheesmond et al., 2019; Hill et al., 2016; Jesse et al., 2009; Snell-Rood, 2017). Previous research findings indicate that individuals experiencing high rates of internalized stigma are likely to avoid initiating formal mental health services altogether (Corrigan, 2004; Hill et al., 2016). It is also suggested that high rates of self-stigma can lead to poor treatment adherence and poorer treatment outcomes even after one has initiated services (Corrigan, 2004). While rates of formal help-seeking across the study population were higher than expected, additional information is needed to better understand how Appalachian women engage with mental health treatment, their perception of its efficacy, and adherence to mental health treatment recommendations over the course of treatment.

Clearly, the impact that self-stigma exerts on willingness to seek formal mental healthcare services is a significant concern for Appalachian women. Results of the current study expand upon previous findings emphasizing the importance of continued efforts to reduce the impact that self-stigma exerts on help-seeking intentions and behaviors.

Mental Health Literacy and Mental Health Help-Seeking

Hypothesis 6 proposed there would be a significant main effect of mental health literacy on willingness to seek help. This hypothesis was not supported by the results. In other words, participants' level of mental health literacy did not appear to be associated with varying levels of

willingness to seek mental healthcare services. This finding was surprising based on previous research studies linking higher levels of mental health literacy to increased willingness to seek formal mental health services (Thorne & Ebener, 2020). Current mental health literacy literature highlights challenges faced by researchers and psychometricians due to the multi-component and complex nature of the construct (Spiker & Hammer, 2018). It may be possible that the measure of mental health literacy utilized in this research design did not accurately capture the multicomponent nature of mental health literacy as it is defined in the literature (Jorm et al., 1997; Spiker & Hammer, 2018). Perhaps additional research is needed to investigate more effective means of measuring and interpreting the results in the context of rural Appalachian populations.

Mental Health Literacy as a Moderator

Hypothesis 7 proposed that mental health literacy would moderate the relationship between self-stigma and willingness to seek help. This hypothesis was not supported by the results. In other words, a participant's level of mental health literacy did not significantly impact the strength of the relationship between mental health stigma and willingness to seek treatment. It is possible that the results of the current study were impacted by the restriction of range effect. The current sample demonstrated higher levels of education and income than would be expected in a random sample of Appalachian women. As a result, it is possible that a sample with a wider range of scores for mental health literacy would be more likely to detect the full strengths of the relationships among self-stigma, mental health literacy, and willingness to seek mental healthcare services.

Limitations

As with many psychological studies, the present study has limitations that should be considered in the interpretation of the study results. One limitation of the study is the potential impact of self-selection bias. Self-selection bias is most often encountered when participants actively elect to be involved in a given study and refers to the difference between those individuals who elect to participate in the study and those who do not (Alarie & Lupien, 2021). In the current study, it is likely that those who chose to participate in the study may have unique characteristics when compared to those who chose not to participate.

A second potential limitation in the current study includes social desirability bias. Social desirability bias refers to a type of response pattern in which participants tend to respond to items in a way that would be viewed favorably by others (Krumpal, 2013). In the current study, the intention of the study was clearly stated in informed consent and recruitment materials. Therefore, it may be possible that participants responded to study items in a socially desirable manner or in a way that was in accordance with the researcher's stated goals and expectations.

Recommendations for Future Research

The present study highlights many directions for future research. First, future studies examining the help-seeking patterns of Appalachians should aim to recruit a more representative sample in regard to level of income, level of education, and experiences with seeking mental healthcare services. A sample of participants that is more representative of the larger Appalachian population would increase the generalizability of the results.

Future researchers may benefit from implementing mixed research methods in order to gather data that is both generalizable and provides contextual background information detailing Appalachian experiences with mental health services in the region. While the present study

solicited information regarding intentions of seeking help as well as previous help-seeking behaviors, contextual data regarding specific help-seeking experiences were not collected. Future researchers should consider the importance of exploring Appalachians' specific experiences with seeking mental healthcare services and potential contextual barriers that may interfere with initial decisions to seek help as well as decisions to continue with care once behavioral health services are initiated. Soliciting additional information regarding the number of visits completed, general experiences with mental healthcare providers, perceived quality of available care, patient-therapist fit, as well as specific concerns related to confidentiality, may add additional depth to the findings presented in the present study.

Clinical Considerations

Little quantitative research has been conducted examining levels of psychological distress among Appalachian women. The results of the current study build from and generalize the results of previous qualitative findings investigating barriers to mental health help-seeking among Appalachian women (Browning et al., 2000; Hill et al., 2016; Jesse et al., 2009; Snell-Rood, 2017). The current study provides a clear rationale for creating avenues to increase access to culturally informed, licensed mental healthcare providers in the region. Clinicians may seek to expand the range of service delivery by utilizing telehealth technology to provide additional access to rural Appalachians encountering logistical barriers to treatment-seeking, such as transportation and childcare (Hubley et al., 2016; Snell-Rood et al., 2017).

Clinicians providing services to Appalachian women should be attuned to the fact that many Appalachian women, having made the decision to seek formal mental healthcare services, are likely to contend with the substantial impacts of internalized stigma (Cheesmond et al., 2019). Diminished feelings of self-esteem and self-efficacy are linked to the internalization of

stigma and can lead to the worsening of already-present psychological distress (Corrigan et al., 2010; Eisenberg et al., 2009). Clinicians should also be aware that Appalachian women who have made the decision to seek formal mental healthcare services are likely to have gone to great lengths to manage their symptoms on their own (Snell-Rood et al., 2017). Providers should be keen to assess a patient's past attempts to manage distress, highlighting potential resiliency factors and already established adaptive coping skills.

Self-stigma has not only been connected with delays or altogether avoidance of treatment seeking, but it has also been linked to poor treatment engagement and adherence even after services are initiated (Corrigan, 2004; Larson & Corrigan, 2010). Clinicians, therefore, may consider beginning treatment by addressing the negative effects of internalized stigma and the potential negative impact that stigma may exert on patients' self-image and overall feelings of well-being. Treatments may effectively minimize the impacts of self-stigma by targeting improvements in patients' sense of self-esteem, self-efficacy, and self-compassion (Corrigan et al., 2006). Cognitive interventions such as cognitive behavioral therapy may be useful in directly addressing maladaptive patterns of thinking linked to internalized stigma (Larson & Corrigan, 2010). Interventions delivered from a strengths-based approach may help to imbue Appalachian patients with a sense of empowerment by cultivating individual and community strengths and skills and by improving psychosocial sources of distress.

The low levels of mental health literacy found in the study population emphasize the importance of increasing health literacy in the Appalachian region. Clinicians may accomplish this by increasing engagement and visibility in their local communities. Both school-based and community-based interventions for increasing mental health literacy have been widely distributed to increase knowledge of mental health concerns and, in turn, decrease levels of

individual and community stigma (Kitchener & Jorm, 2002; Mendenhall et al., 2013). Among the most well-researched mental health literacy interventions is the Mental Health First Aid (MHFA) program (Kitchener & Jorm, 2002). The MHFA program is a standardized psychoeducational program developed to "empower the public to approach, support, and refer individuals in distress by improving course participants' knowledge, attitudes and behaviors" towards those struggling with mental health concerns (Hadlaczky et al., 2014, p. 468). The program, while initially developed and distributed in Australia, has been successfully implemented across 21 countries (Hadlaczky et al., 2014) and has shown impressive efficacy over a wide range of studies (Bond et al., 2015; Kitchener & Jorm, 2004; Kitchener & Jorm, 2006; Mendenhall et al., 2013). While the MHFA program has not yet been examined in rural Appalachia, it has shown effectiveness in other rural areas of the United States (Mendenhall et al., 2013; Talbot et al., 2017) and provides specialty training courses for those living and working in rural communities (MHFA, 2023). Clinicians providing mental healthcare services in rural Appalachia may benefit from organizing the implementation of literacy programs such as MHFA to increase community knowledge of mental health concerns and available resources for treatment.

CHAPTER TWO: LITERATURE REVIEW

Appalachia, broadly defined, is a vast sprawling region of the eastern United States primarily demarcated by the Appalachian Mountain range (Gore et al., 2016). The Appalachian region is comprised of portions of 13 different states, 420 counties, and holds a population of approximately 25 million (Hendryx, 2008). The term Appalachia is most often used to refer to the central Appalachian region often referred to as the "cultural center of Appalachia" (Russ, 2010). Central Appalachia is comprised of parts of Eastern Kentucky, Eastern Tennessee, Western Virginia, Northwestern North Carolina, and all of West Virginia (Russ, 2010). Much of central Appalachian is made up of dense woodlands and small rural communities. While not all rural areas are Appalachian, the majority of central Appalachian communities are rural and therefore face many of the same issues and concerns that are present in rural communities across the country.

Research regarding the prevalence of clinically significant mental health concerns in rural areas is mixed (Harowski et al., 2006). Some studies indicate that rural residents experience mental health concerns at a level comparable to their metropolitan counterparts (Hastings & Cohn, 2013; Hauenstein & Peddad, 2007) while others indicate that rural residents experience mental health concerns at a higher rate (Hendryx, 2008). While the prevalence of mental health concerns for rural residents may be analogous, the severity of concerns seems to vary widely (Hastings & Cohn, 2013; Helbok et al., 2003). A potential explanation for the increased severity of psychological distress is rural individuals' tendency to delay mental health help-seeking (Thorne & Ebener, 2020). Compared to their urban counterparts, rural Americans are more likely to delay professional help-seeking until mental health concerns become severe and debilitating (Cheesmond et al., 2019; Thorne & Ebener, 2020).

In addition to delayed mental health help-seeking, the nature of various stressors and risk factors that rural residents face also contributes to the chance of developing severe mental health concerns (Cheesmond et al., 2019). Compared to more urban areas, rural residents have been found to experience higher levels of extreme poverty, unemployment, and job-related accidents and injuries (Gamm et al., 2010). Accessibility of healthcare services, deep poverty, substance abuse and dependence, and rates of disability and unemployment have been longstanding issues in rural Appalachian communities (Blakeney, 2006). In 2018, poverty rates in central Appalachia were twice the national average (Elder & Robinson, 2018). Critical shortages of qualified mental healthcare providers and the perceived lack of access to care negatively impact the help-seeking behaviors of rural individuals (Cheesmond et al., 2019). In Appalachia the number of mental health professionals per 100,000 residents is 35% lower than the national average, identifying Appalachia as a designated mental health provider shortage area (HPSA; Elder & Robinson, 2018; Shamblin et al., 2016). HPSAs are designations used to identify areas of the United States in which an area falls below a pre-determined population-to-provider ratio (Hendryx, 2008). Critical shortages of qualified mental healthcare providers, in addition to the variety of serious risk factors, negatively impact the healthcare utilization patterns and help-seeking behaviors of Appalachian people (Cheesmond et al., 2019).

Women living in deep poverty experience higher rates of mental health concerns such as depression and anxiety than men and higher-income women (Snell-Rood et al., 2017). A variety of social risk factors such as chronic stress, interpersonal and caregiving responsibilities, and risk of trauma may further predispose Appalachian women to clinically significant mental health concerns (Hauenstein & Peddada, 2007). Appalachian women with mental health concerns must also contend with some of the most pervasive health disparities in the United States, such as

decreased access to licensed providers (Halverson et al., 2004). The barriers that Appalachian women face make mental healthcare utilization a difficult task. The unique stressors, social and systematic risk factors, and increased risk for serious mental health concerns highlight the need for a more in-depth understanding of the barriers that Appalachian women face in mental healthcare utilization.

Educational and attitudinal barriers to mental health help-seeking have also been identified as significant concerns for Appalachian women. Knowledge of mental illness or mental health literacy (MHL)—often defined as one's knowledge about mental health concerns, efficacious treatments for those concerns, and how good mental health is obtained and maintained over time—is a clear concern for Appalachian women living in underserved areas (Kutcher et al., 2016). MHL provides individuals with the information needed to make informed decisions about their care and management of long-term mental health concerns (Kutcher et al., 2016). MHL is a well-established predictor of willingness to seek professional mental healthcare in Appalachian and rural populations (Kutcher et al., 2016; Thorne & Ebner, 2020). Despite the clear importance of MHL, Appalachian individuals seem to hold inaccurate knowledge about mental illness, symptoms, etiology, and treatments, which may be linked to low levels of healthcare utilization (Thorne & Ebner, 2020). Improving mental health literacy among Appalachian women is of key importance when considering the underutilization of professional mental health services in rural and Appalachian areas (Thorne & Ebener, 2020).

In addition to MHL, the perceived stigma of mental health help-seeking is a significant predictor of willingness to seek help in Appalachian individuals (Hill et al., 2016). In a variety of qualitative studies, Appalachian women identified fear of stigma as one of the foremost barriers to help-seeking (Browning et al., 2000; Gore et al., 2016; Hill et al., 2016; Snell-Rood, 2017).

Appalachian women highlight the fear of being labeled as incompetent, inferior, or crazy as a result of seeking help for a mental health concern and often choose informal help-seeking, such as talking to a family member or religious leader (Hill et al., 2016; Jesse et al., 2008; Thorne & Ebener, 2020). While both stigma and MHL are strong predictors of mental health help-seeking, the effects of MHL on the relationships between perceived stigma and mental health help-seeking have not been studied with Appalachian women.

The research that has been conducted in Appalachian populations has been primarily through qualitative research methods (Browning et al., 2000; Cheesmond et al., 2019; Hill et al., 2016; Simmons et al., 2007; Snell-Rood et al., 2017). Qualitative studies conducted with Appalachian women have been instrumental in building the foundational understanding of the region, its people, and their experiences in mental healthcare. With the foundation of research firmly built with qualitative methods, a quantitative study of Appalachian women's mental health help-seeking patterns is warranted (Thorne & Ebner, 2020). Quantitative research methods will allow theory generated through qualitative methods to be generalized to a larger Appalachian population. Little current research exists regarding mental health literacy as a barrier to mental health help-seeking for Appalachian women and its relationship with stigma. This project aims to investigate the relationship between mental health literacy, perceived stigma, and mental health help-seeking in a sample of Appalachian women. Understanding the relationship between mental health literacy and attitudes about mental health services in Appalachian women will play a vital role in improving their utilization of professional mental health services.

Rurality

Rural America is expansive, containing 25% of the country's population, nearly 60 million people, and covering 90% of its landmass (Stewart, 2018). Rural populations are often considered homogenous in terms of race, ethnicity, and culture, when, in fact, rural communities differ from region to region, state to state, and town to town (Stewart, 2018). Rural communities across the United States are becoming more ethnically, racially, and culturally diverse as migration to non-metropolitan areas surges (Johnson, 2006). The influx of racially and culturally diverse families to non-metropolitan areas will continue to add to the rich cultural heritage of many small rural towns.

Many have argued that the term "rural culture" is inaccurate in and of itself due to the great diversity that the rural geographical areas in the United States hold (Stewart, 2018). While widely diverse, rural communities have been found to share some common values and characteristics, including low population density and greater distances between people and businesses, which often limit access to needed goods and services (Hargrove, 1986). Rural people often find themselves living and working long distances from metropolitan areas that are richer in social, economic, healthcare, and workforce resources (Harowski et al., 2006; Stewart, 2018). The geographic isolation of many rural and remote communities pushes rural people to live more interconnected and self-reliant lives (Hargrove, 1986). Some cultural similarities between rural U.S. communities have been identified, such as self-reliance, the importance of family and community, and religiosity (Harowski et al., 2006). An ongoing conversation between researchers continues to flourish regarding the identification of a "rural culture" since all rural people do not operate as a culturally homogenous group (Campbell & Gordon, 2003). The increasing ethnic and racial diversity of many rural

landscapes has also impacted the dynamic nature of rural culture across the nation (Johnson, 2006).

In addition to defining rural culture, many have struggled to define rurality as a concept, leading to a multitude of definitions. The U.S. Department of Health and Human Services reported that there is no standard definition of rurality among federal agencies, which has often led to significant issues in getting federal resources to rural areas in need (Stewart, 2018). In 2016, the U.S. Census Bureau defined rurality as what is "left over" after urban areas are accounted for (Ratcliffe et al., 2016). Urban areas are defined in terms of population density, large populations, land usage, and distance from resources. To be considered "urban," an area must have a population density of 1,000 people per square mile and an overall population of 50,000 or greater (Ratcliffe et al., 2016). Within the standards outlined above, rural areas are defined as "all population, housing, and territory not included within an urbanized area or urban cluster" (Ratcliffe et al., 2016; p. 3). It seems that even in the definitions set aside by an agency of the U.S. government, rural communities and individuals are continually cast as the "left overs," only defined in relation to their urban counterparts (Stewart, 2018).

While each rural area is unique, underutilization of mental healthcare services is a pervasive issue in rural America. Research concerning the incidence of mental health diagnoses is mixed, but logistical barriers that rural communities face, such as a lack of specialized providers and long distances to care centers, further complicate the issue of mental healthcare utilization (Hauenstein et al., 2007; Hendryx, 2008). While approximately 25% of the U.S. population resides in rural areas, less than 10% of the nation's medical providers live and practice in rural areas (Coward et al., 2005), with many medical professionals opting to work in urban and metropolitan areas. Access to more specialized providers such as mental healthcare

providers is even more restricted. As a result, people living in rural communities face distinct health disparities when seeking mental healthcare services. Hauenstein et al. (2007) found that rural residents consistently received less mental health treatment than their urban counterparts, despite reports of poorer mental health and overall well-being. Further research indicates that those living in rural areas encounter increased exposure to mental health risk factors such as substance abuse, domestic violence, child maltreatment, and trauma (Robinson et al., 2012). Limited access to service providers is additionally compounded by long travel distances to providers as well as a lack of culturally competent care (Carpenter-Song & Snell-Rood, 2017). As a result of increased exposure to mental health risk factors, some rural areas display higher rates of suicide and depression compared to their urban counterparts (Carpenter-Song & Snell-Rood, 2017). The complexity of risk factors impacting rural mental healthcare utilization leads many rural residents to enter into mental healthcare services later when symptoms are more persistent and severe (Smalley, 2010).

Poverty is also a significant risk factor for poor mental health (Gamm et al., 2010). The experience of poverty in rural areas is a growing issue, with some rural communities displaying poverty rates approaching those of dense urban centers (Hoyt et al., 1997). While rural areas were once dominated by agrarian employment, centering around agriculture and manufacturing, rural economies have recently become overrun with low-wage, part-time employment (Burton et al., 2013). Dramatic shifts in the economic landscape of rural America have diminished the stable, family-sustaining employment that was once a cornerstone for many small rural towns (Carpenter-Song & Snell-Rood, 2017). Many rural families find themselves living in “deep poverty.” Deep poverty is defined as living at less than one half of the pre-determined poverty threshold (Burton et al., 2013). For example, the deep poverty threshold for a family of

four is only $11,157 yearly (Burton et al., 2013). The effects of poverty in rural America are far-reaching, not only impacting individual families but entire communities. Rural communities in poverty have fewer employment opportunities, higher rates of food insecurity, underfunded schools, and decreased access to needed social services (Burton et al., 2013).

Many rural communities across the United States face unique difficulties due to cultural and geographical factors. Compounded risk factors for mental health concerns are exacerbated by lack of access to and long distances from providers, making the underutilization of mental healthcare services by rural residents particularly concerning (Carpenter-Song & Snell-Rood, 2017).

Appalachia

Appalachia broadly defined is a vast sprawling region of the eastern United States primarily demarcated by the Appalachian Mountain range (Gore et al., 2016). The Appalachian Mountain range spans 1,500 miles from the southeastern corner of Canada to central Alabama (Russ, 2010). The Appalachian region is comprised of portions of 13 different states, 420 counties, and holds a population of approximately 25 million (Hendryx, 2008). The term Appalachia is most often used to refer to the central Appalachian region that is comprised of parts of Eastern Kentucky, Eastern Tennessee, Western Virginia, Northwestern North Carolina, and all of West Virginia (Russ, 2010). Approximately 42% of Appalachians live in a designated rural area, compared to 20% of U.S. populations outside of the region (Elder & Robinson, 2018). Additionally, research by the Appalachian Regional Commission (ARC) revealed that two-thirds of Appalachia is comprised of rural counties, with the subregion of central Appalachia making up the highest concentration of rural counties in the region at 83% (ARC, 2004). As demonstrated by prior research, not all rural areas are Appalachian, but many Appalachian

communities are rural and, in turn, face many of the same issues and concerns that are present in rural communities across the country (Denham, 2016).

Culture is often defined as the "enduring behaviors, ideas, attitudes, and traditions shared by a large group of people that are transmitted from one generation to the next" (Brislin, 1993; Gore & Wilburn, 2010). In order to understand the complex and dynamic culture of Appalachia, it is imperative to understand the historical context of the region. The culture of a group of people is firmly founded in shared heritage and historical experiences; Appalachia and its people are no exception (Keefe, 2005; Salyers & Ritchie, 2006).

History of a Region

A multitude of Native American tribes lived and thrived in the Appalachian Mountains centuries before European settlers of any heritage explored the region (Eller, 1982). Pre-colonization, approximately 16 Native tribes occupied the region and made their living from the land itself (Eller, 1982). The Cherokee and Iroquois were the most dominant indigenous groups for thousands of years (Straw, 2006). While interactions between indigenous people groups and European settlers were sporadic, intense conflicts between cultures came to a climax in the mid-1700s (Straw, 2006). As settlers pressed further westward to expand settlements and trade routes, indigenous peoples opposed the expansion to save their homes and hunting grounds. As the colonial expansion continued, the British finally claimed victory over the large Cherokee nation in 1761 (Eller, 1982). After the many conflicts with European settlers, indigenous peoples were pushed farther west and, as a result, the number of White European settlers in the Appalachian Mountains increased rapidly (Straw, 2006).

Between the 18th and 19th centuries, a multitude of peoples immigrated to the Appalachian region. Many modern-day Appalachians trace their cultural heritage to European immigrants from England, Ireland, Germany, France, and Wales, while others maintain strong

cultural ties to Native tribes once living in the region (Huttlinger & Purnell, 2008; Jackson, 2006). Additionally, like regions throughout the United States, African Americans in Appalachia trace cultural heritage to the institution of slavery. While there were not many slaveholders in Central Appalachia, they did exist in the region (Jackson, 2006). After the Civil War, as the industrialization of Appalachian resources began, Black Americans and immigrants were recruited to work in Appalachia's growing industries of timber and coal with the promise of housing, livable wages, and job security (Eller, 1982). The promise of economic success drew migrants from a variety of different cultures, races, and backgrounds, making Appalachia a microcosm of the greater American "melting pot" (Jackson, 2006). But Appalachia was not unlike other parts of the nation in terms of the discrimination and racism that many Black and immigrant populations experienced elsewhere; even many industrial, company-owned towns were racially and ethnically segregated well into the 1960s (Eller, 1982). Despite instances of discrimination and mistreatment, many Black, Native, and immigrant families remained in the Appalachian region to build a livelihood, and with them came their own cultural values, beliefs, and strengths.

The Industrialization of Appalachia

Central Appalachia is rich in natural resources. In the early 1800s, Appalachian land was primarily used as small family farms for agricultural purposes (Eller, 1982). Due to the geographical isolation of the region, family farms were often self-sufficient, providing food, clothing, shelter, and other necessities for the extended family unit (Eller, 1982). In the 1800s, central Appalachia was home to more non-commercial family farms than any other region in the United States (Eller, 1982). Appalachia and those living in the region were an "invisible society" pre-Civil War, and only began to garner public attention when the reality of its rich natural

resources was discovered (Eller, 1982). When large corporations began to take interest in the capitalistic opportunities of Appalachia, the industrialization of the region began (Eller, 1982). In the late 1800,s, corporations began buying small family farms for commercial businesses, causing the number of small family farms to drop dramatically. This shift began signaling the Appalachian region's growing dependence on the resources that corporations provided to the area (Keefe, 2005).

The industrialization of the Central Appalachian region further perpetuated budding beliefs of the "backwardness" of Appalachian people (Edwards et al., 2006). Industrialization of the region was seen as the "saving grace" for a region of incapable and unmotivated people, unable to utilize the richness of their land to its fullest potential (Eller, 1982; Straw, 2006). Large corporations saw their investment in the Appalachian Mountains as a means of bringing needed order to the region in need of rescue, "converting a wilderness into civilization" (Straw, 2006, p. 11).

Timber. The dense and pristine forests of Appalachia were the first to draw attention from major corporations (Edwards et al., 2006). Early logging practices in the region did not initially negatively impact Appalachian people's way of life. In fact, many Appalachian families utilized measured timbering of family land to produce additional income throughout the year (Rouse & Greer-Pitt, 2006). In the late 1800s, as the "timber boom" hit the region, hundreds of thousands of acres were purchased by outside landowners with the intention of clearing the land and exporting the resources across the United States (Eller, 1982). After exhausting timber resources further north, notorious corporations such as the Kentucky Coal and Timber Development Company of New York and the Chicago Lumber Company turned their attention to the woods of the Appalachian foothills (Drake, 2001). In tandem with the large railroad

companies, corporations drove deep into the Appalachian Mountains and began setting up large full-time operations along the way (Rouse & Greer-Pitt, 2006).

Selective cutting of timber, which was utilized by small Appalachian homesteads, was quickly replaced by the practice of clear-cutting by the large corporations (Rouse & Greer-Pitt, 2006). The practice of clear-cutting refers to the complete removal of all timber in a given area. Clear-cutting became especially prominent when the mechanization of the timber industry began (Shannon, 2006). The practice of clear cutting has demonstrated devastating effects on the Appalachian landscape and has been deemed partially responsible for the issues in watershed areas that pervade the Appalachian foothills today (Shannon, 2006).

By 1900, the marked increase in serious flash flooding in Appalachian towns led environmental groups to propose environmental legislation to protect designated areas of land from further acquisition by large timber companies (Rouse & Greer-Pitt, 2006). Much of the dangerous flooding in Appalachia has been attributed to the widespread soil erosion linked directly to clear-cutting of thousands of acres of timber (Shannon, 2006). In addition to issues with flooding, the timber boom contributed to growing risks of wildfires that were exacerbated by the passage of steam engines through the mountains (Rouse & Greer-Pitt, 2006). With no protection from the once large and ancient forests, steam engines passing through the mountains would release cinders and ashes that ignited large swatches of exposed ground (Rouse & Greer-Pitt, 2006). As a result, millions of acres of timberlands were lost to wildfires, further impairing the health of the land and the health of the surrounding communities (Rouse & Greer-Pitt, 2006; Shannon, 2006).

Environmental legislation would eventually lead the U.S. Forest Service to purchase Appalachian land that would be converted into protected national parks and forests (Rouse &

Greer-Pitt, 2006). By 1920, approximately 90% of the mature forest regions in Appalachia and the southern United States had been cleared (Eller, 1982). The environmental impact of the timber boom in Appalachia is clear; dangerous rates of erosion, permanent loss of indigenous flora and fauna, and gravely damaged soil cover are believed to have led to the persistent environmental concerns that Appalachia faces today (Shannon, 2006). By the 1920s, the majority of the lumber corporations had abandoned the Appalachian Mountains, leaving the remnants of the timber boom behind (Eller, 1982).

Coal. Among Appalachia's most valuable and well-known natural resources is coal, or "black diamonds" (Rouse & Greer-Pitt, 2006). For decades, central Appalachia was known as home to the coal industry, with Appalachian coal mines once producing two-thirds of the nation's coal (Lewis, 1993). Following the coal boom of the 1910s, an economic boom followed for Appalachian communities (Eller, 1982). Workers from all over the country, including European immigrants and former African slaves, poured into the region to work for the successful mining corporations (Shifflett, 1991). Mining corporations often moved into once sleepy towns and asserted control over the housing, commerce, and larger economy of the area (Rouse & Greer-Pitt, 2006). Soon, the coal industry became marred by a struggle for control (Lewis, 1993). Larger corporations found themselves fighting over the land's rich natural resources, often leaving the Appalachian people caught in conflict. The industrialization of Appalachia provided many Appalachian people with livable wages, housing, and an invigorated local economy, but only for a short time (Eller, 1982). As time passed it became clear the funds being produced from Appalachian coal were being funneled into other communities. The Appalachian people who had worked the land on behalf of corporations failed to see the invigorated economy that was once promised (Rouse & Greer-Pitt, 2006).

Company-owned coal camps and coal towns were a common sight throughout the Appalachian Mountains in the early 20th century (Eller, 1982). Company towns were a solution to the rural and remote nature of many coal mines, with roads leading to and from the mines often rugged and nearly impassable, making it difficult for corporations to daily deliver the work force to the workplace (Eller, 1982). While quaint, company towns included housing as well as other amenities such as a school, church, medical practice, and company store (Drake, 2001), miners were often paid in company store scrip that had no monetary value and was only redeemable at the company-owned store, where prices were inflated due to the lack of local competition (Drake, 2001; Edwards, 2006). Some records indicate that prices at company-owned stores were 5% to 12% higher than other similar stores in the same county, highlighting the predatory nature of company-owned institutions in the region (Eller, 1982). In addition to providing cheap housing and other amenities for a large labor supply near worksites, company-owned towns also allowed for near-complete company control over the lives of the workers (Eller, 1982). Company towns were managed by company-appointed officials who oversaw the functions of the towns in every aspect of life, from housing and education, to health and wellness (Drake, 2001). As a result of the wide influence companies exerted over the land, coal companies were also deeply ingrained into the local politics of the region, some coal counties becoming "little more than industrial autocracies" (Eller, 1982, p. 212). Control of the Appalachian region by industrial powers gave corporations immense power, with reports of ballot fraud, voter intimidation, and corruption becoming increasingly widespread (Eller, 1982). There are records indicating threats of loss of employment were utilized in many coal camps, as miners were instructed who to vote for and were required to turn out to the polls (Eller, 1982). Methods of corruption utilized by corporations ensured that only company-allied men became elected

officials such as city councilmen, sheriffs, and tax assessors (Eller, 1982). Corporations wielded their power over local governments and communities to defend their own interests, such as suppression of unionization by local law enforcement and low taxes for mining operations through tax assessors (Drake, 1982). While not all corporations garnered such control over the small Appalachian communities, the pattern of oppression was common in the mountains and still remains an ever-present concern today.

The coal economy often became entrapped in a boom-and-bust cycle that waxed and waned with the demands for coal across the nation (Shannon, 2006). The economic busts of the coal industry were exacerbated by rapid corporation-led expansion during boom periods. Appalachians working in the mines were directly impacted by the economic fluctuations of coal (Shannon, 2006). Large corporations felt intense pressure to minimize costs and maximize output, which often resulted in the reduction of workers' wages and increase in working hours (Shannon, 2006). In the early years, coal mining was physically exhausting and hazardous work. Coal miners would enter the mines with hand tools and blasting powder, as much of the work had to be completed by hand (Rouse & Greer-Pitt, 2006). Risk of death or serious injury in mining accidents was high but was simply viewed as an occupational hazard (Eller, 1982). Records show that because coal miners were often paid according to the amount of coal extracted, the pressure to produce caused lapses in adherence to safety precautions. As a result, deadly mine disasters increased significantly after 1900 (Eller, 1982). Between 1906 and 1935, 48,000 deadly mining accidents occurred in the United States; 16% of these accidents were a result of gas and dust explosion while the other 71% were a result of roof falls (Eller, 1982). The causes of mine explosions, deadly accumulation of flammable gas and coal dust were widely known, but little precautions and regulations were put in place and enforced to reduce the risk of

mine explosions (Eller, 1982). In deaths resulting from mining accidents, corporations were almost never implicated or liable. Laws regarding workplace hazards of coal mining placed the sole responsibility for health and safety in the mines on the miners themselves, further shielding companies from liability (Eller, 1982).

While the immediate hazards of the job were well-known, additional chronic health concerns have become clear as a result of coal mining. Excessive exposure to deadly coal dust has been shown to cause a progressive condition called Coal Worker's Pneumoconiosis (CWP) or "black lung" (Rouse & Greer-Pitt, 2006). CWP occurs when fine particles of coal dust enter the body and travel to the lungs causing severe inflammation, lesions, and destruction of lung tissue (Arnold, 2016). CWP is a devasting and incurable disease that can be delayed but not reversed; currently no cure exists for black lung (Attfield, 1992). Despite the clear devastation of the disease, it took many years for CWP to be legitimized as a medical condition in the United States, as it was not identified as a medical disease until the mid-20th century (Smith, 2017). Coal miners were well-aware of the breathing difficulties associated with the occupation, often referring to the condition as "miner's asthma" or "miner's consumption" (Smith, 2017, p. 3). Miners' breathing concerns were often dismissed by local medical providers, many of whom were employed by the coal industry, with some medical providers even insisting that coal dust was good for the lung health (Smith, 2017). When the medical facts around the urgency of CWP became known, coal dust acts were put into place in the 1970s to reduce inhalation of coal dust among miners (Smith, 2017). Upon the immediate enactment of the initial coal dust laws, a significant decrease in cases of CWP was noted, further touting the completely preventable nature of the disease and impetus on federal legislation to hold corporations accountable for workers' health and well-being (Smith, 2017).

The resurgence of severe CWP in recent years has become a pressing concern for public health officials (Arnold, 2016). Between 2000 and 2012, levels of CWP in Appalachian states had risen to levels not seen since before the 1970s when modern coal dust laws were put into place (Arnold, 2016; Smith, 2017). While theories regarding the reason behind this are mixed, surface mining is thought to be partially responsible (Rouse & Greer-Pitt, 2006). Although the mechanization of coal mining led to a significant reduction in mining accidents, health and safety concerns have increased, due to increased production of coal dust around modern Appalachian communities (Rouse & Greer-Pitt, 2006). While many mining safety laws are in place to protect worker's health, adherence to regulations is inconsistent in their application (Smith, 2017).

While the discovery of coal among the Appalachian Mountains may have felt like the saving grace of the region at one time, the innumerable damages to the land and to the people of the region continue to be unearthed. In addition to the negative health outcomes associated with miners and their families working in direct proximity to the mines, negative health outcomes for those living near coalfields is pervasive. In addition to the resurgence of CWP among Appalachian miners, surface mining has caused environmental devastation for the region. Surface mining refers to the practice of mining in which soil and rock are removed to exposed coal deposits (Rouse & Greer-Pitt, 2006). Mountaintop removal is a common form of surface mining in Appalachia and has been directly linked to detrimental impacts on the Appalachian environment and the people of the region. Approximately 12 million acres of Central Appalachia are directly impacted by mountaintop removal mining (MTR; Hendryx & Innes-Wimsatt, 2013). The EPA has outlined, at length, the many negative environmental impacts that surface mining causes to the environment, including permanent destruction of natural streams, distribution of

dangerous chemicals downstream, degraded water quality, flash foods, and large-scale deforestation (United States Environmental Protection Agency, 2019).

Among the most critical environmental concerns regarding MTR is the negative water pollution for nearby communities (Rouse & Greer-Pitt, 2006). Throughout the mining process, coal refuse is produced and allowed to accumulate, with rainwater eventually leaching acid from the refuse, polluting both the surrounding land and water (Rouse & Greer-Pitt, 2006). Pollution generated from surface mining has clear negative health effects on those living near mining operations. Water polluted by coal refuse can cause kidney disease, heart disease, cancer, and kidney failure (Cordial et al., 2012). Additionally, children living in Appalachia's coal counties experience increased incidence of asthma, headaches, and blisters (Reece, 2006). Research indicates that Appalachians living in coal mining counties reported significantly less healthy days for both physical and mental domains (Zullig & Hendryx, 2010). Surface mining techniques may demonstrate significant negative effects on the mental health of those living in close proximity. The Appalachian Regional Commission concluded that coal mining counties demonstrate the poorest mental health of the region, with increased rates of traumatic stress, substance abuse, anxiety, and depression (Cordial et al., 2012). Clearly, more research is needed regarding the detrimental effects that coal mining may impose on Appalachian communities.

By the 1950s and 60s, the coal industry had been largely mechanized and had significantly reduced the workforce. Facing job loss, many Appalachians chose to leave the mountains in search of employment and community, many of which ended up in urban hubs such as Cincinnati, Cleveland, Chicago, and Detroit (Obermiller et al., 2006). The influx of millions of Appalachians to northern urban cities has been dubbed Appalachia's "Great Migration" (Drake, 2001). Between 1940 and 1970, an estimate of over 3 million Appalachians migrated out

of the region (Drake, 2001). Appalachian migrants had trouble finding community that resembled what they knew from the mountains; as a result, many Appalachian families opted to move to areas where many Appalachian families were already established (Eller, 2008). One such area was in Uptown, Chicago that was also referred to as "hillbilly heaven" (Eller, 2008). Urban Appalachians faced a unique set of difficulties as they moved from their mountain homes to the urban sprawl. Negative perceptions and stereotypes of mountain folk abounded in urban areas, where Appalachian families faced prejudice and discrimination from locals (Eller, 2008). Appalachians were viewed as pathetic, lazy, dirty, backwards, and immoral, and were often blamed for the crime and overcrowding in the cities (Votaw, 1958). Community leaders in Chicago likened Appalachian migrants to "a sore to the city and a plague to themselves" (Eller, 2008, p. 25).

While rationalized at the time as an asset to the region and its residents, the industrialization of Appalachia is primarily characterized as a time of mass exploitation of the natural and human resources of Appalachia by absent corporations (Shannon, 2006). The stark comparison of natural wealth and physical poverty in Appalachia exemplify the history of exploitation clearly, with those residing in Central Appalachia still demonstrating poverty rates twice that of the national average (Elder & Robinson, 2018). Appalachia, as a region was integrated in the larger fabric of American life based on what the region could produce rather than the engrained richness of the land and the people. The industrialization of Appalachia has been compared to patterns of paternalistic "third world" colonialism encountered elsewhere throughout history (Shannon, 2006). The burst of economic development in Appalachia primarily benefited urban populations outside of the region as well as a small group of wealthy elites such as the coal and timber barons (Rouse & Greer-Pitt, 2006). As a result of Appalachian

industrialization, communities outside of the region experienced an improvement in living standards, while many Appalachians remained in poverty (Shannon, 2006).

The historical experiences of the Appalachian region have drastically shaped the people and the land itself. From the displacement of native tribes to the influx of European immigrants, the cultural fabric of the Appalachian Mountains is closely tied to the patterns of immigration and out-migration that have long-characterized the region. The deeply ingrained agrarian values of the region were heavily influenced by the wave of industrialization and external management that dominated the timber and coal industries. While time has changed the ways in which many Appalachians view their place in the larger American narrative, mountain folk hold tight to their willingness to work, even in squalid and unsafe conditions, if it means the family and community can thrive. Throughout the difficulties that Appalachian families have faced, a sense of resilience and shared understanding binds the people of the region together. Despite patterns of oppression, exploitation, and maltreatment, the people of Appalachia remain proud of the mountains and the land that has sustained the region for so long.

Appalachian Culture

Central Appalachia is often considered the cultural center of the Appalachia region. Along the central and southern portions of the Appalachian Mountains, Central Appalachia is comprised of West Virginia, parts of eastern Kentucky, Ohio, Northwestern North Carolina, Western Virginia, and Tennessee (Russ, 2010). To many mainstream Americans, the term "Appalachia" is closely linked to this subregion and subculture (ARC, 2004). Appalachian culture is also present outside the region, carried to parts of the North and Midwest such as Cincinnati, Cleveland, and Detroit during the large out-migration in the 1970s (Russ, 2010). Appalachian people living outside of the region have been termed "urban Appalachians," and,

while not first-generation migrants, they often carry cultural similarities to families still residing in the mountains (Eller, 2008).

Today, Central Appalachia is less diverse than other areas of the United States. As of 2018, Central Appalachia was 90% White compared to 64% of the total United States, with Central Appalachia being the least diverse region and Southern Appalachia being the most diverse (Elder & Robinson, 2018). Throughout Appalachia, Hispanic populations are rapidly growing over the past 10 years, with a percentage change of 120% in Appalachia compared to 43% nationally. Additionally, the total minority growth rate in Appalachia (42%) is nearly 50% greater than the national rate (29%; Elder & Robinson, 2018). Clearly, the diversity of the region is dynamic and continues to change over time. While Appalachia remains a predominately White region, the influx of racial, ethnic, and cultural minorities will undoubtedly continue to shape the culture of the region.

The definition of an Appalachian culture has been one marred with controversy in recent years. Some researchers have argued that there is no distinct American subculture of Appalachia, and that rural Appalachia is no different than rural areas elsewhere in the country (Denham, 2016; Obermiller & Maloney, 2016). Others have argued that shared historical experiences and heritage have shaped the cultural values and perceptions of those living in the region (Russ, 2010; Thacker & Gibbons, 2019). Amongst the controversy, a variety of cultural strengths and misconceptions have been identified in the literature, with recent researchers aiming to highlight a strengths-based approach to the Appalachian experience (Gibbons et al., 2019; Keefe, 2005; Russ, 2010). Despite the controversy surrounding Appalachian culture, scholars note that the unique history of the Appalachian region, immigration and out migration patterns of the residents, and the distinctive landscape in which Appalachians live and thrive have impacted

engrained cultural values (Thacker & Gibbons, 2019). While demographic and regional differences may impact the expression of cultural values, a number of core values, as described in the following sections, are central to the culture of Appalachia (Keefe, 2005; Thacker & Gibbons, 2019).

Pride in Appalachian Identity

Despite the negative stereotypes towards Appalachians that have pervaded the public eye for over a century, pride in Appalachian identity is a key cultural value (Denham, 2016). Pride in one's Appalachian cultural identity has been an area of discussion when considering Appalachian migrants or "urban Appalachians." During the 1970s and 80s, the mass out-migration of mountain folk to urban centers placed Appalachian culture under the public spotlight (Eller, 2008). As Appalachian families moved from their mountain homes to dense urban landscapes, their understanding of cultural values, cultural heritage, and sense of belongingness was closely tied to their home in the mountains (Eller, 2008). During the out-migration, journalists warned of an "invasion of the hillbillies," clearly using the term as derogatory and demeaning. As time passed, Appalachian migrants both within and outside of the region reclaimed the term "hillbilly" as it was seen as a direct tie to their faraway ancestral homes in the mountains. Pride in Appalachian identity was burgeoned by the discriminatory practices and jeering of urban locals as Appalachians reminisced on their connections to land, community, and family in the mountains (Eller, 2008).

The word "hillbilly" has long been used to describe mountain folk from Appalachia. While originally coined as a derogatory term in the early 20th century, many Appalachian folks bear the title of "hillbilly" with pride. Participants in Coyne et al.'s (2006) study stated,

> I'm a hillbilly, and I'm proud of it. But my idea of a hillbilly is not the world's perception of a hillbilly. To me, my perception of a hillbilly is somebody who loves the mountains, who loves their family, who loves their home, who loves this way of life. (p. 3)

Importance of Place

Appalachian culture also emphasizes the importance of place and connection to the land (Keefe, 2005). For many early Appalachians, the land was a source of nurturance, vital for survival. Before the industrialization of the region, Appalachia was agrarian in nature. Mountain families relied on the land to provide for many needs for the family unit (Eller, 1982). So naturally, the physical mountain land was important. While the physical land of the mountains holds a clear importance for many Appalachians, the concept of "place" similarly refers to a distinct attachment to community, family, and kin (Russ, 2010). Place represents not only one's home, but one's ties to familial roots, traditions, and ancestors (Foster, 1988). The mountains that many call home evoke an emotional resonance that is ignited by ties to one's own cultural identity as well as the collective identity of "place" (Foster, 1988).

The exploitation of Appalachian land and its people threatened many families' ties to their homeland. It should be no surprise how deeply the sense of place is ingrained in a group of people whose physical homes were taken and exploited by those outside of the region. Perhaps the historical experiences of oppression and exploitation have heightened Appalachian individuals' commitment and loyalty to the place they call home (Eller, 1988).

Familism and Community

At the core of the Appalachian community is the Appalachian family. The importance of the family unit and kinship ties has long been associated with Appalachian culture. As discussed in the history of the region, relying on members of one's family and community was at one time

vital for survival (Keefe, 2005). The family unit has often been described as “the fundamental institution in Appalachia” (Keefe, 2005, p. 301).

Appalachian culture differs distinctly from the mainstream American culture by taking a more collectivistic approach to culture and well-being (Keefe, 2005). Collectivism places importance on the needs of the community over the needs of the individual and emphasizes the importance of family cohesion, cooperation, and connection. In Appalachia the importance of connection is not only extended to blood relatives but also the fictive kin, such as friends, neighbors, and community members (Keller, 2005). Close ties to family and community provide a sense of deep connection, togetherness, and collective identity. Additionally, close ties with others provide needed encouragement, problem-solving, and social support in times of difficulty (Coyne et al., 2006).

Egalitarianism

The cultural value of egalitarianism is closely linked to the importance of family and community. Egalitarianism refers to a form of social organization where social responsibilities and tasks are shared equally among family and community members (Coyne et al., 2006). Early literature centered on patriarchal organization of Appalachian families, while more current researchers illuminate the more egalitarian social structure in Appalachia among families and communities (Coyne et al., 2006). Appalachian folks may place particular importance on viewing all people as equal and demonstrating humility and modesty when discussing their successes and achievements (Helton & Keller, 2010). Mutual respect for others is closely entwined with egalitarianism, as no one person is considered better than the next (Helton & Keller, 2010).

Resilience

Despite the many trials and hardships that mountain folks have endured, Appalachian communities and families remain deeply resilient. Resiliency is defined as an adaptive quality that has the power to inoculate individuals from the negative impacts of adverse life events (Helton & Keller, 2010).

The resilience that Appalachia displays is clear in the region's upward trends in statistics that were once used to liken the region to a third-world country. While many individuals in Appalachia face issues related to poverty, unemployment, and disability, the regional poverty rates continue to draw closer to the national average (Denham, 2016). The ARC (2019) reported the economic resilience of the Appalachian region by highlighting Appalachian communities' ability to "bounce back" from devastating economic downturns. While Appalachia has suffered economically for many years, ARC's findings suggest that rural Appalachia counties have begun to employ policies that increase the diversity of industry in the region, increase workforce participation, decrease poverty rates, and protect and enhance natural resources (ARC, 2019). Appalachia's economy is one of many examples of how Appalachia and its people continue to bounce back from difficult circumstances.

Communities in Appalachia demonstrate great resilience but so do the individual families that make up those communities. One study conducted with Appalachian women concluded that other Appalachian cultural values such as self-reliance, pride, empowerment, and a sense of place predisposed participants to higher levels of resilience (Helton & Keller, 2010). The presence of strong social support networks is key in the development of resiliency, the importance of familism and community among Appalachian folks likely lends the needed social support to endure hardship with grace and heal from difficult life experiences (Coyne et al., 2006).

Misconceptions of Appalachian Culture

Many misconceptions of Appalachian culture have originated and been perpetuated by popular media. In 1875, Lippincott Magazine published an article titled *A Strange Land and Peculiar People* authored by William Harney. Harney's article depicted Appalachian people in many ways that are consistent with the negative prevailing "mountain hillbilly" stereotypes of modern day (Denham, 2016). The purpose of stereotypes is twofold in nature. First, they mock the subject for perceived deviation from prevailing norms and, second, they rationalize the discrimination and mistreatment of the subject (Obermiller et al., 2016). Through hurtful and negative stereotypes, Appalachian people are often portrayed as ruggedly independent, stubbornly fatalistic, and hopelessly backwards (Denham, 2016; Harkins, 2003; Hess et al., 2018).

Independence and Individualism. The perception of Appalachian folks as fiercely individualistic is a misnomer (Denham, 2016). Definitions of individualism highlight the importance of personal goals, uniqueness, and individual achievement. In contrast, collectivistic cultures are defined by the importance of community, harmony within the group, and strong relationships (Markus & Kitayama, 1991). The individualism of Appalachia is complex in definition and interpretation (Keefe, 2005). Mainstream American culture is likely to emphasize aspects of individualism, such as freedom from conformity and equal opportunity to pursue the American dream, while Appalachian folks may highlight the importance of aspects such as self-reliance and sovereignty (Keefe, 2005). When compared to the individualism of mainstream American culture, Appalachian communities are likely to take a more collectivistic approach to culture (Russ et al., 2010). Appalachians' approach to culture has often been referred to as cooperative independence, highlighting the importance of self-reliance coupled with

interdependence among community members (Keefe, 2005). Appalachian culture places a keen emphasis on aspects of collectivism, such as the importance of kinship ties and connection to community (Keefe, 2005). Appalachian culture is innately family-centered (Russ, 2010; Keefe, 2005). Many modern historians have emphasized the historical importance of interdependence for Appalachian communities (Denham, 2016; Slapp & McKinney, 2010). Historically, Appalachian folks shared the triumphs and tribulations of mountain life with one another, often facing similar challenges and lending a helping hand along the way (Denham, 2016).

Fatalism. Researchers and historians alike have long characterized Appalachian people as hopelessly fatalistic (Batteau, 1982; Browning et al., 2000; Elam, 2002; Hendryx, 2008; Salyers & Ritchie, 2006). Fatalism refers to a sort of resignation and passivity towards future events, embodied by a lack of motivation to seek positive change (Denham, 2016). It is important to highlight that fatalism is a stereotype that has been applied by individuals from outside the region, as Appalachian people do not seem to identify themselves in this manner (Coyne et al., 2006; Denham, 2016; Helton & Keller, 2010). Fatalism as an Appalachian cultural ideal has long been used to explain the many societal and economic issues that the region faces (Russ, 2010). The concept of fatalism is also closely tied to the concept of traditionalism in the area and has recently been uncovered as one of the most problematic characterizations of Appalachian people by modern researchers (Russ, 2010). While there is no doubt that the Appalachian region encounters a myriad of significant difficulties, the idea of fatalism discounts the extent to which larger American society created the difficulties faced by the peoples of Appalachia. Fatalism is an easy scapegoat for researchers from outside of the region and places the blame solely on Appalachian people for not wanting better for themselves (Drew & Schoenberg, 2011). By stamping the entire region of Appalachia as fatalistic in their approach to

culture and progress, the economic and social disparities present in the region are upheld and allowed to persist (Denham, 2016; Drew & Schoenberg, 2011).

Among the many regions of the United States, Appalachia is consistently cast as the "other America," with Appalachian people being framed as "yesterday's people" (Eller, 1982; Weller, 1965). Some researchers even highlighted the Appalachians' position as an "invisible minority," standing as one of the last disadvantaged and underprivileged groups at which larger society can continue to poke fun (Blee & Billings, 1999; Eller, 2008). Negative stereotypes and inaccurate media representation have long contributed to the "othering" of mountain folk (Denham, 2016; Hess et al., 2018). The process of "othering" can be defined as the process by which those in the more dominant group actively marginalize those whom they perceive as different (Hess et al., 2018). Othering is a type of social oppression closely tied to issues of power that eventually labels those who are different as inherently inferior, and, as a result, marginalized groups are often not permitted to participate fully in society (Hess et al., 2018; Keefe, 2005). The continued othering of Appalachian people builds on the foundation of ostracization that began in the reconstruction era portrayal of the region and its people. As long as negative images of Appalachian folks find permanence in the public eye, Appalachian people will continue to be perceived as caricatures, a parody of their true selves.

Central Appalachia is the cultural heartland of the Appalachian region. While Appalachia shares cultural similarities with other rural regions in the United States, the shared history of the region has created a unique subculture amongst the mountains. Developing a strengths-based approach to Appalachian values is vital to understanding the cultural factors that contribute to health attitudes and health outcomes of those living in the region.

Appalachian Women

Little current empirical research has been conducted regarding the experiences of rural Appalachian women. Much of the existing research is qualitative and focuses exclusively on the incidence of depression, substance use, domestic abuse, and post-partum mental health difficulties (Helton & Keller, 2010; Hill et al., 2016;; Jesse et al., 2006; Snell-Rood et al., 2017).

Nationwide, women may bear the brunt of many debilitating mental health conditions, with women being at greater risk of experiencing clinically significant depressive symptoms (Hauenstein & Peddada, 2007). Women's risk for mental health concerns makes low levels of mental healthcare utilization in rural communities of particular interest. The reality of rural challenges such as poverty, chronic stress, and caregiving responsibilities may further exacerbate rural Appalachian women's risk for developing mental health concerns (Snell-Rood et al., 2017). Poverty is a pervasive issue across Central Appalachia (Elder & Robinson, 2018). Research indicates that low-income women experience higher rates of depression than low-income men and higher-income women (Snell-Rood et al., 2017). Adding to the higher rates of mental health concerns such as depression, rural women have been found to utilize mental healthcare services at significantly lower rates than women living in non-rural areas (Gehlert et al., 2006).

A variety of barriers to mental healthcare utilization exist in rural Appalachia. Cultural values of self-reliance and community cohesion, in addition to more logistical barriers such as long travel times, poverty, lack of health insurance, and shortage of mental healthcare providers, are significant barriers to help-seeking for rural Appalachian women (Snell-Rood et al., 2017). One study found that a primary barrier to help-seeking for rural women was negative attitudes towards help-seeking. Rural women demonstrated more negative attitudes towards mental health help-seeking than other groups and additionally demonstrated low willingness to seek

professional counseling as a result (Gehlert et al., 2006). Findings highlighting the impact of stigma on Appalachian women's help-seeking echo that of many other studies (Hill et al., 2016; Snell-Rood et al., 2017).

Snell-Rood et al. (2017) found that rural, low-income Appalachian women demonstrated an ambivalence towards mental health counseling and its effectiveness. Much of the ambivalence was explained by the women's mistrust of mental healthcare providers and the process of counseling as well as a desire to not burden others with their concerns. The researchers found that Appalachian women voiced a desire to cope with their difficulties on their own, enacting coping mechanisms such as positive self-talk, controlling worry, reflection, prayer, and caring for others (Snell-Rood et al., 2017). Throughout the study, Appalachian women demonstrated determination, strength, and grit in the face of difficult mental health concerns, with some acknowledging the potential benefits and barriers to seeking formal mental healthcare. Snell-Rood et al.'s (2017) study highlighted the attitudinal and logistic barriers that many Appalachian women face when experiencing psychological distress.

Thorne and Ebener (2020) concluded that knowledge about mental illness was the only significant predictor of the willingness to seek psychological help in a sample of 140 rural residents, 112 of whom were women. Additionally, knowledge about mental illness was positively associated with willingness to seek help, meaning the more knowledgeable that participants were about mental illnesses, the more willing they were to seek psychological help for their mental health concerns (Thorne & Ebener, 2020). Improving mental health literacy among Appalachian populations is of key importance when considering the underutilization of professional mental health services in rural and Appalachian areas (Thorne & Ebener, 2020).

Appalachian women may face a higher risk for mental health concerns. In addition to the increased incidence of psychological distress, Appalachian women encounter a variety of logistical and attitudinal barriers to seeking help (Hauenstein & Peddada, 2007). Exploring the interplay between internalized stigma and mental health literacy is vital to developing a more holistic understanding of mental healthcare utilization among Appalachian women.

Perceptions of Appalachian Women

While not centered in the spotlight of media consciousness Appalachian women began to come under, Appalachian women began to come under scrutiny in the late 1880s (Harkins, 2003). In reconstruction era writings, Appalachian women were portrayed in a multitude of ways (Denham, 2016). Young Appalachian women were likely to be cast as lovely but ignorant and dull, while middle-aged and older women were portrayed as homely and crude old crones bound to a laborious and unsatisfying life (Harkins, 2003). In a work titled "Comments on Kentucky," Charles Dudley shared his perception of an Appalachian women's lifecycle, stating, "The girls marry young, bear many children, work like galley-slaves and at the time when women should be at their best they fade, lose their teeth, become ugly, and look old" (Warner, 1889, p. 429). Clearly, depictions of Appalachian women, both longstanding and modern, set Appalachian women apart from the rest of the of America. Appalachian women, along with their male counterparts, are cast as "counterparts to the modern world" or a humorous caricature of a bygone age (Maggard, 1999).

Mental Health Literacy

The theory of mental health literacy was born from health literacy research, which primarily focused on the impact of an individual's literacy skills on health outcomes (Jorm et al., 1997; Spiker & Hammer, 2018). For many years, health literacy was defined as one's ability to

obtain, understand, and act on healthcare information to make informed and accurate decisions about one's health and well-being (Jorm et al., 1997). Research on health literacy was a key area of interest for public health researchers due to its link to health outcomes and implications for health practices (Furnham & Swami, 2018). Health literacy research has expanded over recent years and has been proven fundamental in improving health outcomes at the individual and population levels (Kutchner et al., 2016). Recently, the World Health Organization (WHO) has released a report stressing the importance of health literacy as a significant predictor of overall health and well-being (Furnham & Swami, 2018). Public health researchers internationally have highlighted the importance of health literacy in improving overall health outcomes, decreasing health disparities, enhancing the distribution of health services, and developing effective health policies and legislation (Kutcher, 2016).

In the seminal article on the topic, Jorm et al. (1997) addressed the shortcomings of the then-current health literacy model and argued the importance of fully addressing issues related to the knowledge and skills needed to pursue mental wellness. Research suggests that mental health literacy is made up of seven distinct concepts: recognition of mental health conditions, knowledge of how to seek mental health information, knowledge of mental health risk factors, knowledge of the cause of mental health concerns, knowledge of self-treatment, knowledge of professional help available, and attitudes that promote appropriate mental health help-seeking behaviors (Spiker & Hammer, 2018). While the theory and model of mental health literacy are relatively young, the important impact of attitudes and beliefs on mental health help-seeking has been long understood (Jung et al., 2017). Inaccurate or negative beliefs about mental health help-seeking have been well-established as a significant barrier to receiving adequate care (Jung et al., 2017).

Despite its clear importance, research indicates that the public has poor levels of mental health literacy (Jorm, 2012), with many holding inaccurate knowledge and beliefs about mental health diagnoses, availability and effectiveness of treatments, and potential community resources. The application and distribution of the mental health literacy curriculum have been spotty. Researchers agree that efforts must be made to increase mental health literacy in the general population but have not yet reached a consensus on the best means of integration (Kutcher et al., 2016). To be effective, mental health literacy materials must apply to everyday life situations, be developmentally appropriate for the audience, and be able to be integrated seamlessly into existing social structures such as schools (Kutcher et al., 2016). While researchers have arrived at a consensus as to the importance of increasing mental health literacy with the general public, more research is needed to determine how and where mental health information could be deployed effectively to the population.

Mental health literacy and health outcomes are closely intertwined; low levels of mental health literacy have been linked to a multitude of negative health outcomes such as increased rates of chronic illness, delayed and decreased usage of healthcare services, and increased healthcare costs (Kutcher et al., 2016). Without the tools to effectively seek out and interpret health information, individuals often do not understand that the psychological distress they are experiencing is a treatable mental health condition, therefore delaying professional help-seeking (Eisenberg et al., 2009). Additionally, poor mental health literacy at the community level can lead to increased stigma and discrimination towards those struggling with mental health concerns, which, in turn, also negatively affects mental health help-seeking (Jung et al., 2017). Mental health literacy and stigma are closely related, with both demonstrating an effect of

mental healthcare utilization. More research is needed to better understand the interplay of mental health literacy and stigma as it pertains to mental health help-seeking.

Stigma

The concept of stigma was originally defined by Erving Goffman in his seminal 1963 article as a deviance from a social norm that leads to a "spoiled identity" where an individual is viewed as discredited by society. In the 2001 World Health Report, the World Health Organization stated, "The single most important barrier to overcome in the community is the stigma and associated discrimination towards persons suffering from mental and behavioral disorders" (Walsh & Foster, 2021 p. 98). In recent years, reducing stigmatization of and discrimination against those struggling with mental health concerns has become a central goal of national public health research and policy (Walsh & Foster, 2021). Due to the profound impact of stigma on help-seeking and health outcomes, the impact of stigma on psychological distress and help-seeking has been investigated at length (Corrigan, 2004; Jung et al., 2017; Rickwood et al., 2005). Stigma is a clear barrier in the process of mental health help-seeking, and, additionally, stigma has also been linked to poor treatment adherence among those who do end up receiving treatment (Corrigan et al., 2004).

Stigma is a complex social process that occurs on multiple levels: interpersonal (public stigma), intrapersonal (self-stigma), and systematic (discriminatory laws and policies; Corrigan, 2014; Knaak et al., 2017). While the term stigma, as it relates to mental health issues, is often used broadly, it can be better defined as consisting of two clear dimensions: public stigma and self-stigma (Corrigan & Shapiro, 2011).

Public Stigma

Public stigma refers to the interpersonal process of stigma and is defined as negative stereotypes towards mental illness held by the larger community and general public (such as "people seeking mental health services are weak" or "people with mental illness are unpredictable"; Eisenberg et al., 2009). The stereotype of public stigma towards mental illness is closely linked to behaviors of prejudice and discrimination (Corrigan, 2004). The negative impacts of public stigma are clear. Those identified as "mentally ill" often face tangible ramifications in their everyday life such as employment and housing. A multitude of research studies has indicated that publicly held prejudices towards people with mental health concerns have harmful effects on an individual's ability to obtain and maintain gainful employment (Corrigan, 2004; Farina & Felner, 1973; Farina et al., 1973) and get and keep safe and reliable housing (Corrigan et al., 2006a; Page, 1977; Wahl, 1999).

Public stigma towards mental illness has also been shown to have negative effects on an individual's ability to navigate general healthcare services, with medical providers perpetuating negative stereotypes of someone with mental health concerns (Wahl, 1999). Instances of stigmatization, especially while navigating the healthcare system, can further dissuade individuals from seeking professional help for mental health concerns (Knaak et al., 2017). The presence of stigmatizing beliefs and behaviors in healthcare systems has proven pervasive (Thornicroft et al., 2007). Stigmatization in healthcare settings leads to decreased willingness to seek help for both general health and mental health concerns in the future as well as to further internalization of negative stigmatizing beliefs (Corrigan, 2004).

The perception of public stigma from important others is of particular importance, as threats to social networks by stigma can be particularly devastating (Corrigan & Kleinlein, 2005). Social support is a key protective factor for those struggling with psychological

distress; perceived stigma from important others can leave individuals feeling alienated and further distressed by their condition. As a result, many choose to conceal their mental health symptoms or help-seeking efforts from family for fear of stigmatization (Corrigan & Kleinlein, 2005). Conversely, those who expected important others to demonstrate positive attitudes towards help-seeking were far more willing to engage in mental health treatment (Corrigan, 2004).

Self-Stigma

Self-stigma occurs when an individual self-identifies with a stigmatized group (such as a person with a mental illness or a person seeking mental health services) and then applies known stereotypes to the self, thereby internalizing negative beliefs (Corrigan, 2004; Eisenberg et al., 2009). Corrigan et al. (2006) posited that the process of the internalization of stigma develops sequentially once an individual perceives public stigma. Once an individual becomes aware of public stigma towards a group, they then form personal beliefs and move to determine whether or not to apply these beliefs towards the self (Eisenberg et al., 2009).

For many people, the stigma of being diagnosed with a mental illness and seeking professional psychological help can act as a catalyst towards the internalization of negative beliefs (Corrigan, 2004). The internalization process can then lead to diminished feelings of self-esteem and self-efficacy and increased feelings of self-prejudice (Corrigan et al., 2010). Damage to one's self-efficacy may negatively impact one's belief in their ability to recover and heal from the impact of mental health concerns, further discouraging one from seeking professional help. Self-prejudice is equally as harmful, as individuals agree with negative stereotypes and begin to treat themselves in accordance (i.e., "I am worthless and unable to care for myself"; Corrigan et al., 2004). Self-prejudice also further invokes negative emotional reactions, which continue to

spiral downward towards heightened psychological distress (Eisenberg et al., 2009). Prominent negative emotional experiences associated with stigma include shame, guilt, and blame. Those experiencing high levels of shame related to their mental health concerns demonstrated less willingness to pursue mental health treatment (Corrigan, 2004).

Self-stigma can be a strong predictor of one's willingness to seek mental health services. In addition to enacting an effect on willingness to seek help, self-stigma also impacts one's willingness to adhere to treatment recommendations and complete a treatment plan (Corrigan & Kleinlein, 2005). Self-stigma exerts a variety of negative outcomes on those experiencing it, such as low self-efficacy and self-esteem, self-prejudice, shame, and guilt, which impact one's mental well-being and ability to receive adequate care.

Mental Illness Self-Stigma

Stigma towards individuals suffering from mental health issues is a significant concern for researchers and providers alike. Many years of research have indicated that members of the general population view those with mental health concerns as being dangerous, unpredictable, worthless, and strange (Ben-Porath, 2002). Wahl (1999) conducted a national survey of mental health consumers and found that nearly all respondents reported experiences of stigmatization. The two most common stigmatizing experiences were portrayals of mental illness in the media and offensive and discriminatory remarks made by others about those with mental illness. Stigmatizing experiences from the community can then lead to the internalization of stigmatizing beliefs about having a mental illness. Throughout this process someone struggling with a mental illness may begin to view themselves in a way that reflects the negative and stigmatizing beliefs of the public, viewing oneself as worthless, strange, and unpredictable (Ben-Porath, 2005; Corrigan, 2004).

Self-Stigma of Seeking Help

In contrast to research conducted on the stigma towards mental illness, the body of research regarding care-seeking for a mental health concern is markedly more limited (Ben-Porath, 2005). The stigma of seeking professional mental health services is closely linked to low levels of mental healthcare utilization among those displaying psychological distress (Corrigan, 2004).

Individuals identified as having utilized counseling services are more likely to be treated negatively and receive less favorable ratings than those who are not identified (Corrigan & Kleinlein, 2005). Ben-Porath's (2005) research indicates that individuals experiencing depression were more likely to be viewed as unstable, with those seeking counseling services for depression viewed as even more unstable. The results of Ben-Porath's 2005 study indicate that perhaps the act of seeking professional psychological help is more stigmatizing and looked upon more critically than is struggling with a mental health concern and not seeking help. The negative association attributed to those who seek psychological services further explains many individuals' resistance to accessing formal mental health treatment, even when experiencing significant distress (Corrigan, 2004).

Stigma and Mental Health Literacy in Rural Appalachia

While stigma towards mental health help-seeking and mental illness is a pervasive issue across the United States, some research suggests that sigma may act as a more significant barrier in rural areas (Smalley et al., 2010). A survey conducted by the Appalachian Regional Commission found that more Appalachian residents (28%) cited stigma as a barrier to receiving psychological treatment than those living outside of the region (22%; NORC, 2008). The results of the ARC's findings emphasized the unique impact that stigma may enact on rural

Appalachian communities when considering seeking mental healthcare services. Fear of stigmatization is consistently one of the most cited reasons for not seeking help among rural Appalachian folks (Cheesmond et al., 2019; Dschaak & Juntunen, 2018).

Perpetuation of public stigma may be of particular importance in Central Appalachia. Appalachian cultural values centering on the importance of family cohesion and community may heighten the negative impacts of perceived public stigma (Keefe, 2005; Russ, 2010). Many rural Appalachians may choose to hide their mental health symptoms and reject treatment to avoid being identified and stigmatized by family and other loved ones (Corrigan, 2004).

At the community level, poor mental health literacy can lead to increased stigma and discrimination towards those struggling with mental health concerns, and this is closely linked to issues related to public stigma (Spiker & Hammer, 2019). Additionally, research indicates that adequate mental health literacy is a strong predictor of more positive attitudes towards people with mental health concerns and mental health help-seeking, thereby reducing the experience of public stigma within the community (Jung et al., 2017). Self-stigma is also impacted by mental health literacy. Knowledge about mental health conditions, their treatment, and self-efficacy in one's ability to seek out and understand mental health information is linked to lower levels of self-stigma, decreased feelings of shame, and increased self-efficacy (Crowe et al., 2018). Increasing mental health literacy in rural Appalachian communities is vital to improving the dismal rates of mental healthcare utilization in the region.

To begin developing approaches to increase mental health literacy in rural Appalachian communities, there must first be a foundational knowledge of where Appalachian communities are currently lacking. More research is needed to explore the levels of mental health literacy among rural Appalachian populations.

Mental Health Help-Seeking

The concept of mental health help-seeking is not new, with research discussing barriers to help-seeking ranging back to the 1970s (Rickwood et al., 2012). Help-seeking as a concept is closely linked to research associated with "illness behavior" (Mechanic, 1966). Illness behavior refers to the ways in which people interpret signals from their bodies as symptoms and process decisions to seek preventive measures and access healthcare systems (Mechanic, 1966; Rickwood & Thomas, 2012). Research regarding illness behavior initially began in response to low healthcare utilization rates and has been widely used to investigate continued trends in underutilization of mental healthcare services (Rickwood & Thomas, 2012).

Over the past 10 years, research revolving around the help-seeking process as well as barriers specific to cultural, ethnic, and racial minorities has exploded, as low levels of mental healthcare utilization come into focus (Cauce et al., 2002). Mental health help-seeking refers to an "adaptive coping process that is an attempt to obtain external assistance to deal with a mental health concern" (Rickwood et al., 2012, p. 6).

While theories of help-seeking over time have not been unified, a process model of help-seeking has been developed to better understand the steps involved in seeking help (Rickwood et al., 2005). For the help-seeking process to begin, an individual must experience a mental health concern, understand that what they are experiencing is a mental health concern, perceive a need for professional help, evaluate the costs and benefits of receiving treatment, and finally take action to receive care (Eisenberg et al., 2009; Mechanic, 1966). The initial step involved in the process model of help-seeking involves awareness that an issue constitutes a need for professional intervention and cannot be resolved on its own (Cauce et al., 2002; Eisenberg et al., 2009). In the initial step, a mental health concern must be identified as undesirable and in need of

changing. After awareness and appraisal of the concern, an individual must evaluate the potential costs and benefits of help-seeking. To proceed, an individual must determine that the benefits outweigh the costs of seeking help and must then move towards assessing the availability of services. If services are readily available, a person must then demonstrate the willingness to take action and seek out care for themselves (Cauce et al., 2002; Eisenberg et al., 2009; Rickwood et al., 2005). The help-seeking process is multifaceted and complex, with multiple points in the process in which one can decide against seeking help, making interventions at multiple levels of the process vital to ensure those who need help feeling comfortable seeking it.

Patterns of Help-Seeking

Patterns of mental health help-seeking are of particular interest when investigating potential barriers to help-seeking. While research on mental health help-seeking has demonstrated mixed results based on the context and presenting concerns, a few patterns of help-seeking have emerged. Underutilization of mental healthcare services is a problem across all age groups, with younger individuals being less likely to seek professional mental healthcare services than older adults (Rickwood et al., 2005). While young people are less likely to seek help from formal sources of care, young people demonstrate an increased willingness to seek help and support from informal sources of care such as family and friends (Rickwood et al., 2005).

While the context of the psychological concern must be considered, generally women are more likely to seek help for psychological concerns than men (Rickwood et al., 2005). Men, on the other hand, are more likely to avoid recognition of a concern and may be more likely to deal with mental health issues in isolation (Rickwood et al., 2005). Generally, men seem to delay the process of help-seeking altogether, with many men delaying initial awareness and appraisal of

their symptoms as a mental health concern. As a result, when men do seek help, they demonstrate longer delays in formal treatment seeking than women (Rickwood et al., 2012).

Past positive experiences with formal help-seeking have been identified as a significant predictor of future help-seeking and overall willingness to seek help (Rickwood et al., 2005). Additionally, those with past help-seeking experiences demonstrate less stigma and greater mental health literacy than those who have never received mental health services (Jung et al., 2017). Past help-seeking experiences increase an individual's willingness to encourage others to seek help for mental health concerns, demonstrating greater knowledge of the effectiveness of mental health treatments and more positive attitudes towards help-seeking generally.

Considering sources of mental health help-seeking is vital as stigma seems to demonstrate differential effects on formal versus informal help-seeking (Pattyn et al., 2014). General help-seeking from formal sources (e.g., medical providers) is less stigmatizing than help-seeking from more specialized sources (e.g., psychologists). Additionally, stigma towards more formal sources of help is greater than that of informal sources (Pattyn et al., 2014).

Formal Help-Seeking

Formal sources of help-seeking refer to professionals such as medical providers, social workers, psychologists, and other licensed professionals. Research indicates that formal specialized help-seeking (e.g., psychologist, mental health therapist) is the most stigmatized form of help-seeking with many opting to seek help from a medical provider or important others before seeking help from a mental health professional (Pattyn et al., 2014). While some emotional concerns may improve on their own, many mental health diagnoses require professional interventions such as psychotherapy and psychotropic medications to show improvement. A study by the National Alliance on Mental Illness (NAMI) indicated that with the

proper care and treatment, between 70-90% of individuals with mental health concerns will experience a significant improvement in symptoms and overall well-being (NAMI, 2016). Despite the efficacy of many mental healthcare interventions, most people struggling with a mental health concern will not receive professional help. The cost of untreated mental illness in the United States is high, with the economic burden of untreated mental illness exceeding $317 billion annually (Robinson et al., 2012). Dismantling existing attitudinal and logistical barriers to formal help-seeking is vital to improving mental health outcomes nationwide.

Informal Help-Seeking

Informal sources of help-seeking refer to help sought from anyone other than a professional source, such as family, friends, community members, and other members of one's social network (Rickwood et al., 2012). Informal help-seeking can provide adaptive means of social support, coping, and encouragement that are associated with decreased psychological distress (Barker, 2007). While some mental and emotional concerns may be treated with help from informal sources, some concerns undoubtedly require professional intervention. In some cases, informal sources of help can act as a bridge to more formal means of help, if necessary. Social encouragement from important others (e.g., family, friends, etc.) has been identified as a key facilitator for help-seeking from a formal source (Rickwood et al., 2005). Research has shown that patients who believed that important others would support the use of mental health treatment displayed a greater willingness to accept psychotherapy than those who perceived important others as unsupportive (Jung et al., 2017; Vogel et al., 2007). Informal help-seeking plays an important role in the treatment of many emotional and mental health concerns. Additional research is needed to better understand the role of informal help-seeking in addressing psychological concerns.

Mental Health Literacy and Help-Seeking

Individuals with more accurate knowledge about mental health concerns display consistently more positive attitudes towards mental health help-seeking and demonstrate greater willingness to refer others to counseling services for mental health concerns (Cheng et al., 2018). Since many adults struggling with mental health concerns have never sought professional counseling, inaccurate expectations and concerns regarding psychotherapy may act as a deterrent to help-seeking (Rickwood et al., 2005).

Regarding the process model of mental health help-seeking, adequate mental health literacy is vital in the initial recognition and appraisal of psychological distress. To initiate the process of help-seeking, one must first be able to identify that what they are experiencing is a mental health concern that warrants help-seeking (Thorne & Ebener, 2020). The initial awareness process must be facilitated by accurate knowledge regarding the nature and symptoms of mental health concerns so that individuals will be able to appraise their own need for professional intervention.

Adequate mental health literacy is also important in the treatment-seeking phase of the help-seeking process. For an individual to receive mental health services, they must have accurate knowledge about available treatments and resources for their condition (Thorne & Ebener, 2020). Additionally, individuals must also demonstrate an awareness of where treatment is available to them. The process of identifying and engaging appropriate treatment for a mental health concern can be difficult when resources and providers are limited as they often are in rural areas (Thorne & Ebener, 2020). Individuals must be able to identify which treatments and providers are appropriate for their concerns.

Stigma and Help-Seeking

There is a myriad of factors that impact an individual's willingness to seek professional mental health services. Among the most researched barriers to formal mental health help-seeking is stigma (Corrigan, 2004). Models for help-seeking for general health concerns have long provided a simple framework when seeking to understand the factors that impact the decision to seek mental health services (Mechanic, 1966). Stigma can intervene at the level of evaluating the costs and benefits of seeking treatment, with many perceiving the detrimental effects of internalized and public stigma as too great to rationalize initiating the act of seeking help (Eisenberg et al., 2009). For many, the act of seeking help may jeopardize their relationships with important others, threaten their sense of self-esteem, and open doors for prejudice and discrimination (Corrigan et al., 2004). With these potential outcomes in mind, it is understandable why so many choose to deal with psychological distress alone.

Barriers to Mental Health Help-Seeking in Rural Appalachia

Over the past 50 years, the effectiveness of mental healthcare services has improved tremendously. Despite this, many of those in need of treatment do not access mental health services and resources (Corrigan, 2004). Some research estimates that in any given year approximately 11% of people experiencing a diagnosable mental health concern will seek psychological services (Corrigan, 2004). In 2020, 57% of adults nationwide with a diagnosed mental illness received no professional mental health services (Cales et al., 2021). While low rates of mental healthcare utilization are problematic nationwide, research indicates that those living in rural Appalachian areas may face additional barriers to receiving mental health services (Cheesmond et al., 2019; Snell-Rood et al., 2017).

There are a variety of key concerns among rural communities. Research indicates that rural residents experience higher levels of extreme poverty, unemployment, and work-related accidents and injuries (Barbopoulos & Clark, 2003). Recent studies also indicate that rates of suicide, substance use, child maltreatment, and disability are higher in rural areas (Barbopoulos & Clark, 2003; Hastings & Cohn, 2013). The unique stressors and increased risk of serious health concerns in rural areas are contrasted by the strikingly low levels of healthcare utilization (Cheesmond et al., 2019).

Healthcare utilization is a key area of concern in rural communities. Research is mixed regarding the incidence of mental health concerns and psychological distress in rural versus urban communities (Cheesmond et al., 2019; Harowski et al., 2006; Judd et al., 2006). Despite the incidence of mental health concerns, people living in rural areas are less likely to seek professional help for mental health concerns than their urban counterparts (Cheesmond et al., 2019). In instances when rural individuals do seek professional mental health services, they are more likely to delay help-seeking for much longer periods once symptoms emerge (Cheesmond et al., 2019). Green et al. (2012) concluded that mental health help-seeking delays in rural areas more than doubled delays in other more urban areas, with some people delaying help-seeking for greater than 10 years from the initial onset of symptoms. Long delays in help-seeking for rural Appalachians are concerning. Research on help-seeking in Appalachian populations has indicated that many rural Appalachians choose to delay help-seeking until psychological symptoms and distress becomes severe and debilitating (Gore et al., 2016). With many mental health concerns, long delays in help-seeking lead to significantly worse prognosis and treatment resistance (Cheesmond et al., 2019).

Several explanations have been attributed to the low levels of mental healthcare utilization in rural areas. Barriers for those living in rural Appalachia center around accessibility, availability, acceptability, and affordability (Stewart, 2018). Accessibility of services is a key area of concern in rural Appalachia, as critical shortages of mental healthcare providers in Appalachia are well-established (Cheesmond et al., 2019). Appalachia has been identified as a designated mental health provider shortage area (HPSA) by the U.S. federal government (Elder & Robinson, 2018). HPSA designations are used to identify areas of the United States in which a geographical area falls below the designated provider-to-population ratio (Hendryx, 2008). In Appalachia, the number of mental health providers per 100,000 residents is 35% lower than the national average, identifying a key shortage of concern (Elder & Robinson, 2018). Critical shortages of qualified mental healthcare providers in Appalachia can make formal mental health help-seeking near-impossible for many rural Appalachian families. In addition to the clear shortages in mental healthcare providers, the geographical isolation of many rural communities can make reaching providers a feat in and of itself. Rural Appalachian people often must travel long distances to reach service providers which further acts as a deterrent to seeking help (Cheesmond et al., 2019). As a result of the provider shortage, many Appalachians with mental health concerns seek help from their family medical providers, where mental health concerns may go undetected for long periods (Fortney et al., 2010). The lack of specialized mental healthcare indicates that rural residents may receive lower-quality care for mental health concerns as a result.

In addition to logistical barriers to seeking help, such as the lack of providers and general geographical isolation, attitudinal barriers to help-seeking are also a concern. Acceptability and perceived stigma of mental health help-seeking is also a key concern for rural Appalachian

folks (Stewart, 2018). For many rural Appalachians, the idea of receiving counseling services for a mental health concern is seen as "unacceptable" due to the potential for stigmatization by important others and community members (Snell-Rood et al., 2017; Stewart, 2018).

The cultural values of Appalachians may also contribute to the perceived acceptability of help-seeking (Russ, 2010). Values related to familism, cohesion, and community may deter Appalachian folks from seeking care due to their desire to deal with family conflict within the family system rather than sharing personal family business with someone outside of the family system (Russ, 2010). The value of self-reliance has been identified as an important trait among rural communities and may also deter rural Appalachians from seeking help out of a desire to address their problems on their own (Keefe, 2005).

Research indicates that many rural Appalachians are concerned with issues related to confidentiality when considering seeking professional mental healthcare services (Cheesmond et al., 2019). The sparsity of mental healthcare providers in rural areas compounds the concern of confidentiality, as even the act of pulling into the parking lot of the mental health therapist in town can threaten confidentiality for the patient and increase fears of stigmatization by community members (Stewart, 2018). Many rural Appalachians have voiced fears of being identified as "crazy" or "unstable" by important others (Cheesmond et al., 2019; Hill et al., 2016; Jesse et al., 2008). Compounding the fear of perceived stigmatization, research has indicated that rural residents are more likely to display negative attitudes toward those who have sought professional mental healthcare services (Gehlert et al., 2006). Fears of being stigmatized for seeking counseling for mental health concerns highlight the impact of public stigma on rural Appalachian folks (Gore et al., 2016).

Poverty rates in Central Appalachia are still higher than the national rate by almost double (Elder & Robinson, 2018). Issues related to poverty in Appalachia are exacerbated by a variety of factors including high levels of disability and unemployment. For most, health insurance is closely linked to employment, leaving many rural Appalachians in poverty with no or poor health insurance. The rate of uninsured Appalachians under the age of 65 is 18.2% in rural counties, compared to the national average of 12% (Elder & Robinson, 2018). Affordability is a key barrier to mental health help-seeking for many rural Appalachians (Stewart, 2018). Research on barriers to mental health help-seeking for rural Appalachians is scarce and dated, highlighting the need to illuminate the many barriers that beset Appalachian folks in distress (Gore et al., 2016).

The Present Study

The present study seeks to provide empirical evidence of the relationship between levels of internalized stigma, mental health literacy, and mental health help-seeking in Appalachian women.

Hypotheses

Research Question 1: What is the relationship between stigma, mental health literacy, psychological distress, and help-seeking in Appalachian women?

H_1: Rural Appalachian women will demonstrate high levels of psychological distress.

H_2: Rural Appalachian women will demonstrate low levels of mental health literacy.

H_3: Rural Appalachian women will demonstrate high levels of internalized stigma of help-seeking.

H_4: Rural Appalachian women will demonstrate low levels of mental health help-seeking.

Hypotheses Regarding Main Effects of Self-Stigma and Mental Health Literacy

H_5: There will be a significant main effect of self-stigma on mental health help-seeking, with those experiencing higher levels of self-stigma experiencing lower levels of willingness to seek mental healthcare services. See Figure 1.

Figure 1

The Conceptual Model for the Main Effect of Internalized Stigma on Willingness to Seek Formal Mental Healthcare Services

H_6: There will be a significant main effect of mental health literacy on mental health help-seeking in which individuals with higher levels of mental health literacy will demonstrate higher willingness to seek mental healthcare services. See Figure 2.

Figure 2

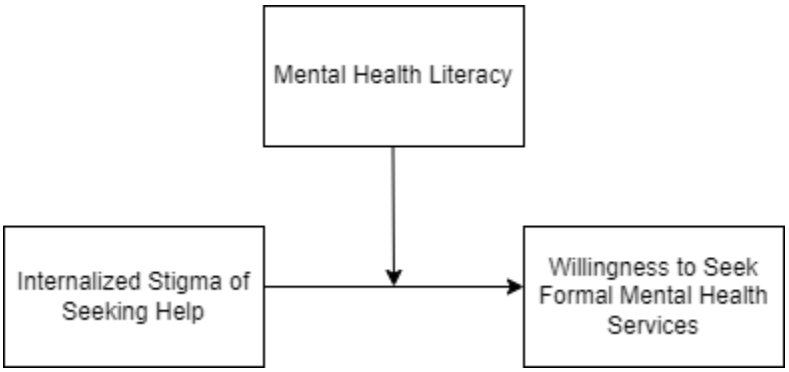
The Conceptual Model for the Main Effect of Mental Health Literacy on Willingness to Seek Formal Mental Healthcare Services

Hypotheses Regarding Main Effects

H_7: Mental health literacy will moderate the relationship between the level of stigma toward mental health help-seeking and the level of willingness to seek professional mental health services. See Figure 3.

Figure 3

The Conceptual Model for the Moderation Hypothesis: Mental Health Literacy as a Moderator for the Relationship Between Internalized Stigma and Willingness to Seek Formal Mental Health Services



Summary

The Appalachian region is a distinct geographical and cultural region of the eastern United States. Appalachian folks encounter many risk factors for psychological distress such as increased rates of poverty, disability status, substance abuse, etc. Additionally, Appalachian communities also struggle with many barriers to receiving adequate mental health services such as issues of accessibility, acceptability, stigma, and affordability. Internalized stigma of mental health help-seeking is a common and problematic barrier in Appalachia. Inadequate mental health literacy is also common in rural Appalachia, which negatively impacts Appalachian folk's ability to correctly identify a mental health concern as well as appropriate treatments and

resources. The current study seeks to investigate the relationship between internalized stigma, mental health literacy, and mental health help-seeking among Appalachian women. Chapter three will provide an overview of the sample, measures, and procedure used in the current study.

CHAPTER THREE: METHOD

Review of the Study

The present study sought to determine if mental health literacy is a significant moderator of the relationship between internalized stigma and mental health help-seeking. Chapter three will provide an overview of the sample, measures, and procedure used in the current study to address the research hypotheses. As such, the following hypotheses were considered in this investigation:

Research Question 1: What is the relationship between stigma, mental health literacy, psychological distress, and help-seeking in Appalachian women?

H_1: Rural Appalachian women will demonstrate high levels of psychological distress.

H_2: Rural Appalachian women will demonstrate low levels of mental health literacy.

H_3: Rural Appalachian women will demonstrate high levels of internalized stigma of help-seeking.

H_4: Rural Appalachian women will demonstrate low levels of mental health help-seeking.

Hypotheses Regarding Main Effects

H_5: There will be a significant main effect of self-stigma on mental health help-seeking, with those experiencing higher levels of self-stigma experiencing lower levels of willingness to seek mental healthcare services.

H_6: There will be a significant main effect of mental health literacy on mental health help-seeking in which individuals with higher levels of mental health literacy will demonstrate higher willingness to seek mental healthcare services.

Hypotheses Regarding Main Effects

H_7: Mental health literacy will moderate the relationship between the level of stigma toward mental health help-seeking and the level of willingness to seek professional mental health services.

Participants

This study received approval from the Radford University Institutional Review Board for the Protection of Human Subjects was obtained (IRB # 2021-300). Participants consisted of a sample of adult women from Appalachia (N = 461). Participants were recruited through social media sites (Facebook and Instagram) via geographically targeted marketing to complete an online Qualtrics survey. Research suggests that social media sites such as Facebook are efficient in recruiting representative samples from geographical areas such as Appalachia (Akers & Gordon, 2018). Due to researchers' ability to geographically target advertisements for research, Facebook has become a widely used method of research recruitment. Additionally, geographically and topic-specific Facebook groups are numerous, allowing for targeted access to specific groups (Akers & Gordon, 2018). While some rural communities lack high-speed internet access, research suggests that Facebook remains an ideal form of communication for rural and remote areas due to its widespread use (Dickson et al., 2017). Additionally, Gilbert and colleagues found that rural women make up a significant proportion of social network users compared to their urban counterparts (Dickson et al., 2017). The widespread accessibility and utilization of Facebook make geographically targeted advertising through social media an effective means of recruiting participants for the current study. Before completing the survey, participants were presented with and asked to complete an informed consent document detailing specific aspects of the study. After consenting to the study, the participants were directed to an inclusion criteria screener to determine their eligibility for participation.

An *a-priori* power analysis was conducted for the moderation effect using G*Power 3.1 online software (Faul et al., 2007, 2009). For the G*Power analysis, a power level of .80 and a significance level of .05 ($\alpha = .05$) were used. Effect size values for the study were determined using Cohen's (1998) guidelines regarding recommendations for a-priori power analysis. The analysis concluded that for a large effect size ($f^2 = .40$), a sample size of 48 participants would be needed. For a medium effect size ($f^2 = .25$), 69 participants would be needed. For a small effect size ($f^2 = .10$), 172 participants would be needed. Based on the results of the G*Power analysis, we planned to recruit approximately 200 participants in order to detect a small effect size.

Based on data gained from the U.S. Census Bureau and Appalachian Regional Commission, we aimed to gather a sample that was representative of the Appalachian region's demographics (Pollard & Jacobson, 2020). As of a 2020 report, 81% of the Appalachian population was comprised of White, non-Hispanic individuals, 9.8% Black individuals, 5.3% Hispanic or Latino individuals, and 3.8% encompassing those of Asian American and Indigenous descent (Pollard & Jacobson, 2020). Regarding education, 13.2% of Appalachians recorded receiving less than a high school degree, 53.90% reported receiving a high school degree and no postsecondary degree, 8.7% reported receiving an associate's degree, and 24.2% reported receiving a bachelor's degree or more (Pollard & Jacobson, 2020). The mean household income for Appalachian families fell at $67,559, with a median household income of $49,747 (Pollard & Jacobson, 2020). See Table 1 for Demographic information.

Table 1

Sample Demographics

Variable	*n*	Percentage
Race		
Non-Hispanic White	359	77.9%
Black or African American	22	4.8%
Latino or Hispanic	29	6.3%
Asian American	31	6.7%
Middle Eastern or Arab American	7	1.5%
Native American or Indigenous	29	6.3%
Relationship Status		
Single	86	18.7%
Non-committed relationship	20	4.3%
Committed relationship	94	20.4%
Married	234	50.8%
Divorced or separated	23	5.0%
Widowed	2	0.4%
Education		
Less than high school	4	0.9%
High school or GED	37	8.0%
Some college, no degree	110	23.9%
Associates degree	72	15.6%
Bachelor's degree	138	29.9%
Graduate degree	100	21.7%
Household Income		
Less than $24,999	80	17.4%
$25,000 - $34,999	72	15.6%
$35,000 - $49,000	69	15.0%
$50,000 - $74,999	97	21.0%
$75,000 - $99,999	72	15.6%
$100,000 - $149,999	51	11.1%
$150,000 or more	17	3.7%
Access to reliable transportation		
Yes	416	90.2%
No	43	9.3%
Access to health insurance		
Yes	401	87.0%
No	58	12.6%
Distance to nearest mental health provider		
Less than 15 minutes	93	20.2%
Between 15 and 30 minutes	185	40.1%
Between 30 minutes and 1 hour	137	29.7%
Between 1 hours and 1.5 hours	37	8.0%
Over 2 hours	9	2.0%

Note. The total number of participants was 461.

Measures

Five measures were used in the study, including (1) *Self-Administered Kessler Psychological Distress Scale* (K6; Kessler et al., 2002), (2) *Self-Stigma of Seeking Help* (SSOSH; Vogel et al., 2006), (3) *Multicomponent Mental Health Literacy Measure* (MC-MHL; Jung et al., 2016), (4) *General Help-Seeking Questionnaire* (GHSQ; Wilson et al., 2005), and (5) *Actual Help-Seeking Questionnaire* (AHSQ; Rickwood et al., 2005). A demographic questionnaire was also administered. A total of 65 items were included in this study and completed by participants. The complete survey can be found in Appendix A.

Demographics

Participants were asked to provide demographic information including their age, race, ethnicity, sexual orientation, level of education, annual household income, occupational status, current state and county, marital status, access to reliable transportation, access to health insurance, and estimated distance to the closest mental healthcare provider.

Inclusion Criteria Screen

Participants' eligibility for study participation was determined by a three-item eligibility screen. Item one inquired about the participant's gender ("Do you identify as a female?"). Item two asked if the participant was over the age of 18 ("Are you over the age of 18?"). Item three inquired about the participant's identity as an Appalachian person ("Do you consider yourself as being from a rural Appalachian area?"). If an individual identified themselves as a rural Appalachian woman over the age of 18, they were deemed eligible to participate in the study and were directed to the following study measures.

Psychological Distress

Self-Administered Kessler Psychological Distress Scale. The Kessler Psychological Distress Scale (K6; Kessler et al., 2002) was utilized to measure the participant's level of psychological distress within the 30 days before completing the study. The K6 includes items that define behavioral, emotional, cognitive, and psychophysiological manifestations of psychological distress (Kessler et al., 2003). The measure presents questions assessing nonspecific depressive and anxious symptomology. The K6 scale is a truncated version of the lengthier K10 scale (Kessler et al., 2003). The K6 has been demonstrated to perform just as well psychometrically as the K10 in a multitude of populations and is more widely used than the lengthier K10 (Kessler et al., 2003). A sample item is "During the past 30 days, how often did you feel worthless?" Participants were asked to respond to the six-item measure via a Likert-type rating scale in which they rated items ranging from "0 - *None of the time*" to "4 - *all of the time*" (Kessler et al., 2003; Prochaska et al., 2012).

The total score for the K6 is created by calculating the sum of all six items, yielding a score between 0 and 24, with higher scores indicating higher levels of psychological distress while lower scores indicate lower levels of psychological distress (Kessler et al., 2003). Scores on the K6 are divided into three distinct categories with scores of 1-8 indicating little to no distress, scores of 9-12 indicating moderate distress, and scores of 13-24 indicating serious distress (Prochaska et al., 2012). A cutoff score of 13 or higher suggests a severe level of psychological distress while a score between 6 and 12 is indicative of moderate psychological distress (Prochaska et al., 2012).

Various research studies have suggested that the brevity and accuracy of the K6 measure make it one of the most efficient assessments for psychological distress in a variety of settings,

such as inpatient, research-based, and outpatient care (Kessler et al., 2003). The K6 has been utilized in some of the largest health surveys in the United States including the SAMHSA National Household Survey and the CDC Behavioral Risk Factors Survey (Green et al., 2010). The K6 has been used widely as a public health tool by accurately identifying those most at-risk for severe psychological distress to supply the appropriate community and primary care interventions (Prochaska et al., 2012).

In their review of various distress scales, Kessler et al. (2003) determined that the K6 measure displayed high internal consistency ($\alpha = .89$). Regarding the measure of validity, the K6 was shown to have high concurrent criterion validity when used to assess psychological distress among individuals with mild, moderate, and severe mental illness (Prochaska et al., 2012). The K6 was shown to demonstrate high sensitivity to psychological distress, making it an effective and efficient means of screening for psychological distress in a variety of populations (Kessler et al., 2003; Prochaska et al., 2012).

Stigma

Self-Stigma of Seeking Help (SSOSH). Self-stigma refers to the perception held by the individual that his or her actions are socially unacceptable (Vogel et al., 2006). In the context of mental health help-seeking, if an individual holds high levels of self-stigma for mental health, help-seeking could be linked to a reduction in feelings of self-esteem and self-worth, which may be indicative of internalized negative beliefs regarding seeking mental health services (Vogel et al., 2006).

The 10-item SSOSH was utilized to assess participants' self-stigma associated with seeking psychological help (Vogel et al., 2006). Participants were asked to respond to the instrument prompt:

People at times find that they face problems that they consider seeking help for. This can bring up reactions about what seeking help would mean. Please use the 5-point scale to rate the degree to which each item describes how you might react in this situation.

Participants were asked to respond using a 5-point Likert scale ranging from 1 – *strongly disagree* and 5 – *strongly agree*. For example, when completing the SSOSH, participants were asked to indicate the degree to which they agree with the following statement: "I would feel inadequate if I went to the therapist for psychological help" (Vogel et al., 2006).

Total SSOSH scores were created by calculating the mean score across all 10 items, after reverse scoring items 2, 4, 5, 7, and 9. A single SSOSH score was calculated across all 10 items. Higher scores on the SSOSH indicate higher levels of self-stigma toward mental health help-seeking (Vogel et al., 2006).

The SSOSH has demonstrated good internal consistency ($\alpha = .89$) as well as good test-retest reliability over a time period of approximately 2 months ($\alpha = .72$; Vogel et al., 2006). The convergent validity of the SSOSH was confirmed when the measure demonstrated the expected relationship with similar measures such as the Inventory of Attitudes towards Seeking Mental Health Services and the Attitudes Towards Seeking Professional Psychological Health scale that also measure self-stigma of seeking mental healthcare services (Vogel et al., 2006).

Vogel et al. (2006) demonstrated the SSOSH's ability to accurately predict participants' attitudes towards seeking professional mental health services as well as participants' intentions to seek professional counseling for mental health issues. In both instances, the SSOSH uniquely predicted both attitudes and intentions above and beyond other variables included in the model (Vogel et al., 2006). While the SSOSH has not been used specifically with Appalachian women,

the SSOSH has been used to measure self-stigma of seeking mental healthcare services among both rural and Appalachians populations.

Mental Health Literacy

Multicomponent Mental Health Literacy Measure (MC-MHL). To assess mental health literacy, an altered version of the 26-item multicomponent mental health literacy measure was utilized. The MC-MHL was developed around three sub-constructs of mental health literacy: Knowledge of Mental Health Concerns (KO-MHL), Mental Health Beliefs (BO-MHL), and Knowledge of Mental Health Resources (RO-MHL; Jung et al., 2016).

The original coding of the MC-MHL utilized a dichotomous approach to identify adequate and inadequate levels of mental health literacy, with values of 1 and 0 being used respectively (Jung et al., 2016). Subsequent studies utilized a continuous approach with possible scores ranging from 0 to 130. In both versions, higher scores on the MC-MHL indicate higher levels of mental health literacy (Jung et al., 2016).

Participants were asked to respond to the KO-MHL and BO-MHL subscales using a 5-point Likert-type scale ranging from 1 – *strongly disagree* to 5 – *strongly agree* with an additional option of "*I don't know*." For example, participants were asked to indicate the degree to which they agreed with the following statement: "Depression is a sign of personal weakness" (Jung et al., 2016).

The total MC-MHL score is created by calculating the mean score across all 26 items. A single MC-MHL score was calculated. Higher scores indicate higher levels of mental health literacy (Jung et al., 2016). Items related to BO-MHL were reverse-coded so that a higher sum score would reflect more accurate beliefs about mental health concerns and mental illness in general (Debate et al., 2018).

The MC-MHL has previously demonstrated good internal consistency (KR-20 coefficient = .83). Additionally, the three subscales have also demonstrated good internal consistency individually (Knowledge-oriented MHL KR-20 = .74, Beliefs-oriented MHL KR-20 = .77, and Resource-oriented MHL KR-20 = .76; Jung et al., 2016). While the measure was originally assessed using the Kuder-Richardson-20 coefficient regarding internal consistency, the measure has also been assessed using Cronbach's alpha in which each subscale also demonstrates good internal consistency (KO-MHL α = .70, BO-MHL α =.72, RO-MHL α = .79).

The MC-MHL demonstrates good convergent validity. Studies utilizing the MC-MHL confirm that those with higher levels of mental health literacy are more willing to interact with people with mental health concerns and more likely to seek professional mental healthcare services for themselves (Jung et al., 2016). Additionally, individuals with a history of mental health treatment demonstrate higher levels of mental health literacy (Jung et al., 2016). The MC-MHL was included in a systematic review analyzing the psychometric properties of various global mental health literacy measures (Fulcher & Pote, 2021). Among the seven measures that were analyzed, the MC-MHL was identified as the most psychometrically robust measure of global mental health literacy (Fulcher & Pote, 2021). While the MC-MHL has not been used specifically with Appalachian women, the MC-MHL has been used to measure levels of mental health literacy among rural populations (Jung et al., 2016).

Mental Health Help-Seeking

The General Help-Seeking Questionnaire (GHSQ). Participants' past mental health help-seeking behaviors were measured using the 10-item General Help-Seeking Questionnaire (GHSQ; Wilson et al., 2005). Participants were asked to respond to the prompt: "If you were having a personal or emotional problem, how likely is it that you would seek help from the

following people?" Participants were then provided with a list of potential sources of help (intimate partner, friend, parent, other relative, mental health professional, phone helpline, medical provider, religious leader). Additionally, participants were able to respond, "I would not seek help from anyone" and "I would seek help from another not listed." Participants then rated their intentions to seek help using a 7-point Likert-type scale ranging from 1 - *extremely unlikely* to 7 - *extremely likely*. Higher scores on the GHSQ indicate higher levels of help-seeking intention.

The GHSQ has been widely used as a measurement of general mental health help-seeking intentions (Wiljer et al., 2020; Wilson et al., 2005). The GHSQ consistently demonstrates good validity and reliability. The GHSQ demonstrates good internal consistency ($\alpha = .85$; Wilson et al., 2005). Convergent and divergent validity for the GHSQ were supported with positive correlations found between intentions to seek professional counseling and quality of past help-seeking experiences as well as a negative correlation between students' help-seeking intentions and self-reported barriers to help-seeking (Wilson et al., 2005). The GHSQ has also been shown to demonstrate both predictive and content validity through significant associations between help-seeking intentions and help-seeking behaviors (Wilson et al., 2005). Additionally, the GHSQ has demonstrated good test-retest reliability over a period of 3 weeks ranging from $r = .86$ to $r = .92$ (Wilson, 2005). While the GHSQ has not been used specifically with Appalachian women, the GHSQ has been used to measure past help-seeking experiences among rural populations (Rickwood et al., 2005).

Actual Help-Seeing Questionnaire (AHSQ). In addition to measuring participants' help-seeking intentions, participants were asked to indicate previous sources of mental health help-seeking. Research suggests that past mental health help-seeking experiences are correlated

with an increased willingness to seek professional help in the future (Rickwood et al., 2005). A modified version of the AHSQ was used (Rickwood et al., 2005). Participants were asked to respond to the following prompt: “Please indicate any of those that you have gone to for advice or help in the last 6 months for a personal or emotional problem.” Participants were then provided with a list of potential sources of help (intimate partner, friend, parent, other relative, mental health professional, phone helpline, medical provider, religious leader), the same list as utilized in the GHSQ. Additionally, participants were also given the chance to respond, “I have not sought help from anyone” and “I have sought help from another not listed above” (Wilson et al., 2005).

The AHSQ has been used at length in conjunction with the GHSQ by multiple researchers when addressing the link between help-seeking intentions and help-seeking behaviors (Rickwood et al., 2005; Wiljer et al., 2020; Wilson et al., 2005). The AHSQ and GHSQ have been used together across different contexts (i.e., college counseling centers, community health centers), sources of help (i.e., formal and informal help-seeking sources), and presenting concerns (i.e., depressive symptoms, suicidality, general emotional distress; Rickwood et al., 2005). The AHSQ demonstrates both convergent and discriminant validity by expected patterns of association with other measures of mental health help-seeking (GHSQ; Wilson et al., 2005). While the AHSQ has not been used specifically with Appalachian women, the AHSQ has been used to measure past help-seeking experiences among rural populations (Rickwood et al., 2005).

Procedures

Informed Consent, Recruitment, and Participation

All research procedures and protocols were approved by Radford University Institutional Review Board for the Protection of Human Subjects was obtained (IRB # 2021-300) before initiating study recruitment. Participants were recruited via a social media site (Facebook). An ad for the study was distributed via targeted geographical advertisement through the site. The study ad included the name of the study, study description, inclusion criteria, compensation details for study completion, and a link to the survey. The survey was completed electronically via Qualtrics, an online survey platform (www.qualtrics.com). Surveys that were not at least 50% completed were removed from the data analysis (Hair et al., 2018). Those responses missing 30% of data were screened for other indicators of questionable testing (Hair et al., 2018).

After being recruited and directed to the Qualtrics study survey page, participants were directed to the informed consent text where they were provided with information regarding the study and asked to provide their informed consent. Consent for the study was collected passively by clicking a button to "agree" to complete the survey. Throughout the informed consent document, participants were reminded of their ability to discontinue participation at any time for any reason. Participants who declined to participate in the study by indicating "decline" were redirected to the end of the survey debriefing statement, which thanked them for their time. Individuals who declined to participate in the study were removed from the data set.

After consenting to complete the survey, participants were then directed to complete a brief eligibility measure to ensure their status as an eligible participant for the study. After confirming that the participant was eligible for the study (status of a woman residing in Appalachian areas of the United States who is over the age of 18), they were presented with the demographic questionnaire first and then the five questionnaires. The five questionnaires were randomized by Qualtrics to control for fatigue effects. The survey consisted of demographic

questions, the Self-Administered Kessler Psychological Distress Scale (K6), the Self-Stigma of Seeking Help (SSOSH), the Multicomponent Mental Health Literacy Measure (MC-MHL), the General Help-Seeking Questionnaire (GHSQ), and the Actual Help-Seeking Questionnaire (AHSQ). The web-based Qualtrics survey took an average of 17 minutes to complete.

After the final questionnaire item was completed, the participants were then directed to the study debriefing page. The debriefing page included information about the researchers as well the 1-800-273-TALK (8255) information where they can be directed to free phone-based support from their local crisis center if the survey proved distressing. After completing the survey, participants were given the opportunity to be entered into a drawing to receive one of five $50 Amazon gift cards. If participants opted into the raffle, they were directed to a separate survey page where they were asked to provide contact information. Information provided in the raffle survey was not linked to participants' survey responses.

Formulation of the Survey. The full survey consisted of 73 questions: six questions comprised the K6, 10 questions comprised the SOSSH, 26 questions comprised the MC-MHL, eight questions comprised the GHSQ, and 10 questions comprised the AHSQ. Eleven items were used to measure demographics and two validity check questions were inserted randomly in the survey (e.g., "Answer somewhat true for this question") to ensure participants were answering conscientiously throughout the survey.

Data Analysis

Regarding data collection and cleaning, participants' responses were removed from the data set if they did not meet the inclusion criteria for the study (e.g., not 18 years of age or older, identifying as a woman, identifying as being from or living in the Appalachian region). Participants' data were also removed for not completing the survey in its entirety or for

answering the validity check questions incorrectly. Missing data were analyzed using the Little's Missing Completely at Random (MCAR) test, as needed (Schafer & Graham, 2020). The MCAR analysis determined if participants' responses were truly missing at random or if missing responses were related to the content of the survey. Means, standard deviations, and correlations are displayed in table form.

Moderation Analysis

The moderation hypothesis posits that mental health literacy would moderate the relationship between stigma and mental health help-seeking so that those who report more mental health literacy would experience increased mental health help-seeking than those with low mental health literacy. According to Aiken and West (1991), a significant R^2 change for the interaction term would indicate a significant effect in a moderation analysis where the dependent variable was continuous A logistic regression analysis was performed to examine the moderating effects of mental health literacy on the relationship between stigma and willingness to seek mental health services. In logistic regression analyses, tests of effects are conducted by entering the predictor variable for the effect being examined in a final block of predictors and examining the chi-squared test of significance for the contribution of this final predictor variable to the logistic regression model.

Summary

The current study sought to examine the relationship between stigma, mental health literacy, and mental health help-seeking. The current chapter outlined the participants, materials, and procedures used to test the study hypotheses. The K6 was utilized to measure the participant's level of psychological distress. The SSOSH was used to measure participants' internalized self-stigma toward mental health help-seeking. The MC-MHL was utilized to

measure participants' level of mental health literacy. The GHSQ was utilized to measure participants' mental health help-seeking intentions. The AHSQ was utilized to measure participants' past mental health help-seeking behaviors. Participants were recruited via Facebook. Participants completed an online Qualtrics questionnaire and were compensated by being entered into a drawing for one of five $50 Amazon gift cards. The current study sought to gather a minimum of 200 participants. Chapter four will provide the empirical results of the current study.

CHAPTER FOUR: RESULTS

The current study sought to determine if mental health literacy is a significant moderator of the relationship between internalized stigma and mental health help-seeking. A logistic regression analysis was utilized to analyze the relationships among mental health literacy, stigma, and help-seeking. The results of the data-cleaning process, moderation analyses, and exploratory analyses are described in detail below.

Data Exclusion Decisions

A total of 1,022 participants provided responses for the current study. Data from five participants were removed because they did not identify as women. Data from 406 participants were removed after being identified as bot responses due to containing identical responses from identical Internet Protocol (IP) addresses. An additional 32 responses were removed due to their being completed from duplicate IP addresses. Forty-six responses were removed due to the completion of less than 80% of the survey. Fifty-seven responses were removed due to answering one of the two validity check items incorrectly. Finally, an additional 15 responses were removed for completing the survey in less than five minutes. The final sample consisted of 461 participants.

Preliminary Analyses

Means, standard deviations, correlations, and Cronbach alpha for each variable are reported in Table 2.

Psychometric Properties of the Measures

Cronbach's alpha scores were calculated for the Kessler Psychological Distress Scale (K6), Self-Stigma of Seeking Help (SSOSH), Multicomponent Mental Health Literacy Scale

(MC-MHL), and each subscale of the MC-MHL to understand the reliability of the data amongst the current study sample of Appalachian women.

Kessler Psychological Distress Scale (K6). The *Kessler Psychological Distress Scale*, a six-item measure, assessed participants' psychological distress in the last 30 days (K6; Kessler et al., 2002). The Cronbach's alpha for the K6 was .75. This is an acceptable reliability coefficient that indicates the items of the K6 are strongly correlated with one another. Item analysis of the scale indicated that removing an item would not significantly improve the reliability of the scale. A composite score of the K6 was calculated to indicate the level of psychological distress that each participant recorded.

Self-Stigma of Seeking Help (SSOSH). The *Self-Stigma of Seeking Help* scale (SSOSH; Vogel et al., 2006) was used to assess participants' level of internalized stigma of seeking mental health services. The Cronbach's alpha for the 10-item SSOSH was .70. This is an acceptable reliability coefficient that indicates items on the SSOSH group together. A review of the data indicated that removing an item would not significantly improve the reliability of the scale. A composite score of the SSOSH was calculated to indicate the level of self-stigma for mental health help-seeking reported by each participant.

Multicomponent Mental Health Literacy Scale (MC-MHL). The *Multicomponent Mental Health Literacy Scale* (MC-MHL; Jung et al., 2018) was used to assess participants' levels of mental health literacy. The MC-MHL is a 26-item multicomponent measure made of up three distinct subscales: knowledge of mental health concerns (MHL-K), mental health beliefs (MHL-B), and knowledge of mental health resources (MHL-R; Jung et al., 2016).

The Cronbach's alpha for the 26-item MC-MHL was .80. This is an acceptable reliability coefficient that indicates the items of the MC-MHL are strongly correlated with one another.

Item analysis of the measure indicated that removing an item would not significantly improve the reliability of the scale.

A composite score of the MC-MHL was calculated to describe each participant's level of mental health literacy. Reliability coefficients for each of the three subscales were also obtained. Cronbach's alpha for the Knowledge subscale (MHL-K) was .75. The Cronbach's alpha for the Beliefs subscale (MHL-B) was .77. The Cronbach's alpha for the Resources subscale (MHL-R) was .72. A summary of the psychometric properties of all measures is presented in Table 2.

Table 2

Psychometric Properties of the K6, SSOSH, MC-MHL

Measure	*M*	*SD*	Alpha
1. K6	16.00	3.62	.75
2. SSOSH	29.45	4.33	.70
3. MC-MHL	12.63	3.0	.80
4. MC-MHL-K	9.74	2.51	.75
5. MC-MHL-B	1.29	2.09	.77
6. MC-MHL-R	3.23	1.17	.72

Correlations

Pearson correlations were calculated to determine the relationships among the measures (see Table 3). The Kessler Psychological Distress Sale (K6) demonstrated a significant positive correlation with both formal and informal domains of the General Help-Seeking Questionnaire (GHSQ). The GHSQ was utilized to measure participants' self-reported willingness to seek help from both formal (e.g., therapist/psychologist) and informal (e.g., friend) help-seeking sources. The K6 correlated with both the GHSQ-formal ($r = .142$, $p < .01$) and the GHSQ-informal scale ($r = .198$, $p < .01$)

The Self-Stigma of Seeking Help (SSOSH) scale demonstrated a significant negative correlation with the Multicomponent Mental Health Literacy Scale (MC-MHL) (r = -.220, p < .01). The SSOSH additionally demonstrated a significant positive correlation with the GHSQ-formal (r = .099, p < .05) and GHSQ-informal scale (r = .217, p < .01). The Actual Help-Seeking Questionnaire (AHSQ) was paired with the GHSQ to measure participants' self-reported experiences of help-seeking from both formal (e.g., therapist/psychologist) and informal (e.g., friend) sources. The SSOSH also demonstrated a significant positive correlation with the AHSQ-formal scale (r = .114, p <.05).

The Multicomponent Mental Health Literacy Scale (MC-MHL) demonstrated a significant positive correlation with the AHSQ-formal (r = .205, p < .01) and the AHSQ-informal (r = .118, p < .05). Correlations among MC-MHL subscales were also calculated. The MC-MHL Knowledge (MC-MHL-K) subscale demonstrated significant positive correlations with the K6 (r = .126, p < .01), SSOSH (r = .098, p < .05), MC-MHL total score (r = .664, p < .01), GHSQ-formal (r = .103, p < .05), GHSQ-informal (r = .227, p < .01), AHSQ-formal (r = .129, p < .05), and AHSQ-informal (r = -.512, p < .01). The MC-MHL-Beliefs (MC-MHL-B) subscale demonstrated significant negative correlations with the SSOSH (r = -.512, p < .01), GHSQ-formal (r = -.168, p < .01), GHSQ-informal (r = -.299, p < .01). The subscale additionally demonstrated a significant positive correlated with the MC-MHL total score (r = .490, p < .01). The MC-MHL-Resources (MC-MHL-R) subscale demonstrated a significant negative correlation with the K6 (r = -.185, p < .01). The MC-MHL-Resources subscale also demonstrated significant positive correlations with the SSOSH (r = .100, p < .01), MC-MHL total (r = .476, p < .01), AHSQ-formal (r = .333, p < .01), and MC-MHL-K subscale (r = .219, p < .01)

The General Help-Seeking Questionnaire (GHSQ-formal) demonstrated a significant positive correlation with GHSQ-informal scores ($r = .383$, $p < .01$). Additionally, the GHSQ-formal also demonstrated a significant negative correlation with AHSQ-formal ($r = .189$, $p < .01$). The Actual Help-Seeking Questionnaire (AHSQ-formal) demonstrated a significant positive correlation with AHSQ-informal scores ($r = .175$, $p < .01$)

Table 3

Pearson Correlations Between K6, SSOSH, MC-MHL, GHSQ, and AHSQ

Measure	1	2	3	4	5	6	7	8	9	10
1. K6	-	.034	.014	.142**	.198**	.023	-.025	.126**	-.019	-.185**
2. SSOSH	-	-	-.220**	.099*	.217**	.114*	-.058	.098*	-.512**	.100*
3. MC-MHL	-	-	-	-.064	-.020	.205**	.118*	.664*	.490**	.476**
4. GHSQ-formal	-	-	-	-	.383**	-.189**	-.018	.103*	-.168*	-.072
5. GHSQ-informal	-	-	-	-	-	-.055	-.007	.227**	-.299**	.004
6. AHSQ-formal	-	-	-	-	-	-	.175**	.129*	-.003	.333**
7. AHSQ-informal	-	-	-	-	-	-	-	.137*	.052	-.014
8. MHL-Knowledge	-	-	-	-	-	-	-	-	-.208	.219**
9. MHL-Beliefs	-	-	-	-	-	-	-	-	-	-.076
10. MHL-Resources	-	-	-	-	-	-	-	-	-	-

Note. *$p < .05$. ** $p < .01$

Analyses Evaluating Study Hypotheses

$\boldsymbol{H_1}$**:** Rural Appalachian women will demonstrate high levels of psychological distress.

For Hypothesis 1, results indicated that the current sample of Appalachian women did demonstrate a significant level of psychological distress (M = 16.00, SD =3.62). The total score for the K6 is created by calculating the sum of all six items, yielding a score between 0 and 24, with higher scores indicating higher levels of psychological distress (Kessler et al., 2003). The mean score for the current sample falls within the severe psychological distress range as determined by the authors of the K6 measure (Kessler et al., 2003; Prochaska et al., 2012). A one-sample t-test was conducted utilizing the value determined by the authors of the K6 measure indicating severe psychological distress (M = 13). The results indicated the current sample demonstrated statistically significant levels of psychological distress when compared to the larger population, $t(455) = 14.86$, $p < .001$, d =.695. As such, Hypothesis 1 is supported.

$\boldsymbol{H_2}$: Rural Appalachian women will demonstrate low levels of mental health literacy.

For Hypothesis 2, results indicated that the current sample of Appalachian women demonstrated low levels of mental health literacy (M = 12.63, SD = 3.00). The total MC-MHL score is created by calculating the mean score across all 26 items. Higher scores on the MC-MHL indicate higher levels of mental health literacy (Jung et al., 2016). A one-sample t-test was conducted to determine if the current sample's level of mental health literacy was significantly different from levels of mental health literacy reported in similar studies. The mean level of mental health literacy reported by participants in this study was significantly greater than the mean level of mental health literacy reported in other studies (e.g., DiGoacchino et al., 2018; M = 15.83, SD = 3.73, $t(446) = 22.75$, $p < .001$, d = 2.98; Jung et al., 2017; M = 19.18, SD = 4.87, $t(446)$, = 46.54, $p < .001$, d = 2.29).

When analyzed by MHL subscales, results indicated moderately accurate knowledge of mental health signs, symptoms, and risk factors on a scale from 0 to 12 (MC-MHL-K, $M = 9.74$, $SD = 2.51$). Results also indicated inaccurate beliefs about mental health concerns, common risk factors, and potential treatments for concerns among the sample group (MC-MHL-beliefs, $M = 1.29$, $SD = 2.09$) Additionally, the sample demonstrated adequate self-reported access to mental health resources and information (MC-MHL-R, $M = 3.23$, $SD = 1.17$). This collection of findings indicates that Hypothesis 2 is supported.

$\boldsymbol{H_3}$: Rural Appalachian women will demonstrate high levels of internalized stigma of help-seeking.

For Hypothesis 3, results indicate that the current sample of Appalachian women demonstrated high levels of internalized stigma of help-seeking (SSOSH, $M = 29.45$, $SD = 4.33$). A total SSOSH score was created by calculating the mean score across all items. Higher scores on the SSOSH indicate higher levels of self-stigma (Vogel et al., 2006). A one-sample t-test was conducted to determine if the current sample's level of self-stigma was significantly different from levels of self-stigma reported in other similar studies. The mean level of self-stigma reported by participants in this study was significantly greater than the mean level of stigma reported in other studies (e.g., Tucker et al., 2013; $M = 26.90$, $SD = 7.95$, $t(457) = 13.56$, $p <$ 001, $d = .633$; Rafal et al., 2018; $M = 12.32$, $SD = 4.32$), $t(457) = 84.65$, $p < .001$, $d = 4.33$). As such, Hypothesis 3 is supported by data from the current sample.

$\boldsymbol{H_4}$: Rural Appalachian women will demonstrate low levels of mental health help-seeking.

For Hypothesis 4, results indicate that the current sample of Appalachian women demonstrated high levels of willingness to seek mental health care services from a formal help-seeking source (i.e., support groups, primary care provider, therapist or psychologist, phone

helpline). Over 77% of the current sample reported willingness to seek help from a formal help-seeking source if they were experiencing psychological distress (N = 364). Additionally, a high proportion of Appalachian women in the sample indicated that they had sought help from a formal help-seeking source such as a psychologist and therapist, with 60% of participants indicating that they had sought help from a formal help-seeking source for a mental health concern in the past (N = 278). Of note, nearly 80% (N = 365) of the current sample noted willingness to seek help for a mental health concern from their primary care physician (PCP), with 62% (N = 285) of participants indicating that they had sought help for a mental health concern from a PCP in the past. Hypothesis 4 was not supported.

Moderation Analyses

Moderation analyses were conducted to test the following moderation hypotheses. According to Aiken and West (1991), a significant change in the interaction term would indicate a significant effect in a moderation analysis where the dependent variable is continuous. In analyses for the current study, the dependent variable (willingness to seek mental health services) is a dichotomous variable. Therefore, a logistic regression analysis was performed to examine the moderating effects of mental health literacy on the relationship between stigma and willingness to seek mental health services. In logistic regression analyses, tests of effects are conducted by entering the predictor variable for the effect being examined in a final block of predictors and examining the chi-squared test of significance for the contribution of this final predictor variable to the logistic regression model.

Hypotheses Regarding Main Effects

$\boldsymbol{H_5}$**:** There will be a significant main effect of self-stigma on mental health help-seeking, with those experiencing higher levels of self-stigma experiencing lower levels of mental health help-seeking.

The main effect of mental health stigma on willingness to seek mental healthcare services was statistically significant, $X^2(1, N = 461) = 4.59$, $p = .032$, OR = .289, with lower levels of mental health stigma being associated with greater willingness to seek mental healthcare services. As such, the stigma of mental health help-seeking aids significantly in predicting which participants would seek mental health healthcare. Therefore, Hypothesis 5 is supported.

$\boldsymbol{H_6}$: There will be a significant main effect of level of mental health literacy on willingness to seek professional mental health services.

The results indicate that the main effect of mental health literacy on willingness to seeking mental healthcare services was not significant, $X^2(1, N = 461) = 1.86$, $p = .172$; OR = .949. This finding indicates that there is no relationship between mental health literacy and willingness to seek mental health services in participants across the full range of scores for self-stigma of seeking help. As such, Hypothesis 6 is not supported by the current sample.

Hypotheses Regarding the Moderation Effect of Mental Health Literacy

$\boldsymbol{H_7}$: Mental health literacy will moderate the relationship between the level of stigma toward mental health help-seeking and the level of willingness to seek professional mental health services.

The results indicated that the two-way interaction between mental health literacy and self-stigma was not statistically significant, $X^2(1, N = 461) = 3.21$, $p = .073$; OR = 1.016. These results indicate that the strength of the relationship between perceived mental health stigma and

willingness to seek treatment does not vary as a function of mental health literacy. As such, Hypothesis 7 is not supported.

Of note, the combined effect of all three predictors (stigma, mental health literacy, and the interaction of stigma and mental health literacy) model was statistically significant, $X^2(1, N = 461) = 8.24$, $p = .041$; OR = 1.106. These findings indicate that the combination of effects yields predicted categories of membership in the dichotomous outcome variable (willingness to seek mental healthcare services) that are significantly more accurate than predictions based solely on chance.

Exploratory Analyses Including Education and Income as Third Predictor Variables

Additional analyses were conducted to further understand the relationship among mental health literacy, self-stigma of seeking help, and willingness to seek help across various demographic groups.

Education. Due to the potential relationship between general education level and mental health literacy, the education demographic variable was added as an additional predictor for willingness to seek mental health services (Jorm et al., 1997; Spiker & Hammer, 2018). A logistic regression model was utilized to test a three-way interaction investigating the impact of education on the moderation model. Results of the analyses indicated that there is no moderated moderation effect involving level of education in the current sample, X^2 (1, $N = 461$) = 12.30, $p = .102$; OR = 1.013. The two-way interaction of stigma and education was also investigated. Results indicated that there is no significant two-way interaction between stigma and education, $X^2(1, N = 461) = 12.323$, $p = .882$; OR = 1.099. Additionally, the two-way interaction between education and mental health literacy was not statistically significant, $X^2(1, N = 461) = 12.323$, $p = .188$; OR = .964. Thus, no moderation effects involving education were statistically significant.

Income. Income was also analyzed as a third predictor of willingness to seek mental healthcare services. Previous research has indicated that level of income may significantly impact individuals' willingness and ability to seek mental healthcare services (Elder & Robinson, 2018). A logistic regression model was utilized to test a three-way interaction investigating the impact of income on the moderation model. Results of the analyses indicated that there is no moderated moderation effect involving level of income, X^2 (1, N = 461) = 10.23, p = .115; OR = 1.202.

Summary

Chapter four described the outcome of the data cleaning procedures, which resulted in a final sample of 461 participants. Results from the reliability analyses, Pearson correlations, and moderation analyses were also presented. Exploratory analyses of the data were also reported.

The main effect of mental health stigma on willingness to seek mental healthcare services was statistically significant with lower levels of mental health stigma being associated with greater willingness to seek mental healthcare services. The results indicate that the main effect of mental health literacy on willingness to seek mental healthcare services was not significant. The moderation analysis indicated that mental health literacy did not moderate the relationship between self-stigma of seeking help and mental health help-seeking intentions. Additional exploratory analyses were conducted to examine the impact of education and income demographics on the relationships among stigma, mental health literacy, and willingness to seek help. Results indicated that neither education nor income yielded significant moderated moderation effects. Chapter five will discuss the current findings within the context of the current help-seeking and rural health literature.

CHAPTER FIVE: DISCUSSION

The purpose of the study was to examine the relationships among mental health literacy, self-stigma of seeking mental health services, and willingness to seek mental health services in a sample of Appalachian women. Chapter four outlined the results from statistical analyses utilized to address the hypotheses of the current study. Several of the hypotheses were supported by the analyses. Chapter five will orient the results of the current study within the larger literature on help-seeking and rural health literacy, outline the limitations of the study, offer future directions for research, and provide practical clinical implications for the study results.

General Discussion

Psychological Distress

Hypothesis 1 proposed that the sample of Appalachian women would demonstrate high levels of psychological distress. This hypothesis was supported by the results of this study. The results indicated that the sample of Appalachian women experienced statistically significant levels of psychological distress when compared to the general population, as determined by the authors of the Kessler Psychological Distress Scale (K6; Kessler et al., 2003). These findings aligned well with previous findings that rural Appalachians are at increased risk for significant psychological distress (Cheesmond et al., 2019; Snell-Rood et al., 2017; Thorne & Ebener, 2020). The rates of psychological distress among study participants additionally support previous research findings suggesting that rural individuals may be more likely to seek help only after mental health concerns have become severe and debilitating (Cheesmond et al., 2019).

It is also notable that the data for the present study were collected at the height of the COVID-19 pandemic. The mental health impacts of the onset of the COVID-19 pandemic are undeniable. Conditions created by the onset of the pandemic such as increased social isolation,

health anxiety, and uncertainty led to a spike in mental health concerns such as depression, anxiety, post-traumatic stress, and substance use (Daly & Robinson, 2021). As such, it is of vital importance to consider how the COVID-19 pandemic may have impacted rates of psychological distress among the study sample.

Mental Health Literacy

Hypothesis 2 proposed that the sample of Appalachian women would demonstrate low levels of mental health literacy. This hypothesis was supported by the results of this study. The results indicated that the sample of Appalachian women demonstrated low levels of mental health literacy, meaning Appalachian women may be limited in their knowledge of mental health concerns, hold inaccurate beliefs about mental illnesses, and have limited knowledge of resources available for mental health treatment. Results from this study aligned well with previous research findings that document low levels of mental health literacy in rural Appalachia (Hill et al., 2015) and across rural America (Thorne & Ebener, 2020).

The relationship between mental health literacy and formal help-seeking behaviors in the sample was also demonstrated. A statistically significant positive correlation was detected between mental health literacy and participants' self-reported formal help-seeking behaviors. As such, greater levels of mental health literacy were associated with greater encounters for help-seeking from both formal (e.g., licensed mental healthcare provider, primary care doctor) and informal sources (e.g., friend, partner, family member). These findings support previous research findings indicating that individuals with higher levels of mental health literacy may be more willing to access formal mental healthcare services (Jung et al., 2017).

A statistically significant negative relationship was detected between mental health literacy and self-stigma of seeking help, wherein greater levels of mental health literacy were

associated with lower levels of self-stigma. These results are supported by previous studies reporting this inverse relationship between mental health literacy and stigma (Cheng et al., 2018; Jung et al., 2017). Some studies have additionally demonstrated the utility of targeted mental health literacy interventions to reduce stigmatizing attitudes and desire for social distance from someone experiencing a mental health concern (Bond et al., 2015; Eack et al., 2012). Results from the present study support the rationale for the development and distribution of mental health literacy programs to improve attitudes towards mental health help-seeking among rural Appalachian women.

Self-Stigma of Seeking Help

Hypothesis 3 proposed that the sample of Appalachian women would demonstrate high levels of internalized stigma of mental health help-seeking. This hypothesis was supported by the results of the study. Results of the current study reinforce previous qualitative research in which focus groups of Appalachian women identified fear of stigmatization as one of the foremost barriers to seeking formal mental healthcare services (Browning et al., 2000; Hill et al., 2016; Jesse et al., 2009; Snell-Rood, 2017). Across previous qualitative findings, rural Appalachian women cited feelings of "embarrassment," "shame," "worthlessness," and being "weak" when asked to speak on their feelings of depression (Jesse et al., 2008; Snell-Rood et al., 2017). Feelings of internalized stigma toward mental health help-seeking have been linked to lower overall feelings of self-efficacy and self-esteem (Corrigan et al., 2010). While self-stigma of mental illness and mental health help-seeking are experienced universally, some research findings suggest that rural Appalachians experience stigma at higher rates than those living outside of the region (NORC, 2008; Williams & Polaha, 2014). The high levels of self-stigma detected across the study sample further generalize findings investigated throughout the

qualitative help-seeking literature among rural Appalachian women (Browning et al., 2000; Hill et al., 2016; Jesse et al., 2009; Snell-Rood, 2017).

Mental Health Help-Seeking

Hypothesis 4 proposed that a sample of Appalachian women would demonstrate low levels of mental health help-seeking. This hypothesis was not supported by the sample. Interestingly, a majority of the sample (60%) reported previous help-seeking experiences from formal help-seeking sources (i.e., medical providers and mental health providers). Additionally, 77% of the study sample indicated a willingness to seek professional mental health services when experiencing psychological distress. These findings were surprising in the context of national help-seeking data, which indicates approximately 42% of adults reported "having seen a therapist in their lifetime" (Barna et al., 2018). Findings from national survey data also indicated that about 36% of Americans polled demonstrated a willingness to seek help from a mental health provider when in distress (Barna et al., 2018). These findings were also surprising in light of the well-documented shortage of mental healthcare providers across the Appalachian region. Research conducted by the Appalachian Regional Commission (ARC) designated the region as a mental health provider shortage area, meaning the region falls below the designated provider-to-population ratio (HPSA; Hendryx, 2008; Marshall et al., 2017). In Appalachia, the number of mental health providers per 100,000 residents falls 35% below the national average (Elder & Robinson, 2018; Mitchell et al., 2017). Despite this, recent qualitative research exploring help-seeking patterns of Appalachian women has documented increasing levels of mental health help-seeking (Fortney et al., 2010; Hill et al., 2016; Snell-Rood et al., 2017).

Findings additionally suggested that participants demonstrated the highest levels of willingness to seek help from both primary care providers (PCPs) and mental health

professionals. In measuring actual help-seeking behaviors, over 60% reported seeking help for a mental health concern from their PCP. This finding further bolsters previous research suggesting that mental health is most commonly addressed by PCPs (Snell-Rood et al., 2017; Wang et al., 2005). Additionally, even when mental health concerns are not directly addressed in the primary care setting, national help-seeking data found that over 30% of survey respondents had chosen to initiate counseling services at the recommendation of their PCP (Barna et al., 2018). Rural residents' willingness to address mental healthcare concerns in the primary care setting is promising for the integrated care model of primary care behavioral health (PCBH). The rationale for the PCBH model has been strengthened over a decade of research (Cummings & O'Donohue, 201l; Hornberger & Freeman, 2015; Robinson & Reiter, 2007). Models of PCBH have been shown to increase the cost-effectiveness of care, improve access to behavioral health services, improve coordination and satisfaction of primary care, and lead to better patient outcomes (Blount, 2003; Bryan et al., 2009; Chomienne et al., 2011; Smalley et al., 2010). The current findings further support the utility of the PCBH model of integrated service delivery and highlight the importance of continued research on the implementation of integrated models of care in rural Appalachian communities.

The high levels of reported psychological distress across the study sample is a potential factor contributing to the high rates of mental health help-seeking observed. Previous research with rural populations indicates that rural Americans are more likely to delay professional help-seeking until mental health concerns become severe and debilitating (Cheesmond et al., 2019; Thorne & Ebener, 2020). Therefore, the high levels of reported mental health help-seeking may be a further reflection of the severe nature of reported psychological distress among this sample of Appalachian women.

Self-Stigma and Mental Health Help-Seeking

Hypothesis 5 posited that there would be a significant main effect of self-stigma on the willingness to seek mental healthcare services. This hypothesis was supported by the results, with lower levels of self-stigma being associated with a greater willingness to seek mental healthcare services. This finding reinforced both quantitative and qualitative findings that identify self-stigma of mental health help-seeking as one of the foremost barriers to mental health help-seeking among rural Appalachians (Browning et al., 2000; Cheesmond et al., 2019; Hill et al., 2016; Jesse et al., 2009; Snell-Rood, 2017). Previous research findings indicate that individuals experiencing high rates of internalized stigma are likely to avoid initiating formal mental health services altogether (Corrigan, 2004; Hill et al., 2016). It is also suggested that high rates of self-stigma can also lead to poor treatment adherence and poorer treatment outcomes even after one has initiated services (Corrigan, 2004). While rates of formal help-seeking across the study population were higher than expected, additional information is needed to better understand how Appalachian women engage with mental health treatment, their perception of its efficacy, and adherence to mental health treatment recommendations over the course of treatment.

The impact that self-stigma exerts on willingness to seek formal mental healthcare services is a significant concern for Appalachian women. Results of the current study expand upon previous findings emphasizing the importance of continued efforts to reduce the impact that self-stigma exerts on help-seeking intentions and behaviors.

Mental Health Literacy and Mental Health Help-Seeking

Hypothesis 6 proposed there would be a significant main effect of mental health literacy on willingness to seek help. This hypothesis was not supported by the results. Participants' level

of mental health literacy did not appear to be associated with varying levels of willingness to seek mental healthcare services. This finding was surprising based on previous research studies linking higher levels of mental health literacy to an increased willingness to seek formal mental health services (Thorne & Ebener, 2020). The current mental health literacy literature highlights challenges faced by researchers and psychometricians due to the multi-component and complex nature of the construct (Spiker & Hammer, 2018). It may be possible that the measure of mental health literacy utilized in this research design did not accurately capture the multi-component nature of mental health literacy as it is defined in the literature (Jorm et al., 1997; Spiker & Hammer, 2018). Perhaps additional research is needed to investigate more effective means of measuring and interpreting the results in the context of rural Appalachian populations.

Mental Health Literacy as a Moderator

Hypothesis 7 proposed that mental health literacy would moderate the relationship between self-stigma and willingness to seek help. This hypothesis was not supported by the results. A participant's level of mental health literacy did not significantly impact the strength of the relationship between mental health stigma and willingness to seek treatment. The results of the current study may have been impacted by the restriction of range effect. The current sample demonstrated higher levels of education and income than would be expected in a random sample of Appalachian women. As a result, it is possible that a sample with a wider range of scores for mental health literacy would be more likely to detect the full strength of its relationships with self-stigma and willingness to seek mental healthcare services.

Limitations

As with many psychological studies, the present study has limitations that should be considered in the interpretation of the study results. One limitation of the study is the potential

impact of self-selection bias. Self-selection bias is most often encountered when participants actively elect to be involved in a given study and refers to the difference between those individuals who elect to participate in the study and those who do not (Alarie & Lupien, 2021). The potential impacts of self-selection bias in research include decreased generalizability of study findings (Heckman, 1990). In the current study, it is likely that those who chose to participate in the study may have unique characteristics when compared to those who chose not to participate. For example, women with prior knowledge of mental health concerns, previous experiences seeking mental health services, and special interest in study topics may have been more interested in participation than those who did not, which has the potential to bias study results.

A second potential limitation in the current study includes social desirability bias. Social desirability bias refers to a type of response pattern in which participants tend to respond to items in a way that would be viewed favorably by others (Krumpal, 2013). In the current study, the intention of the study was clearly stated in informed consent and recruitment materials. Therefore, it may be possible that participants responded to study items in a socially desirable manner or in a way that was in accordance with the researcher's stated goals and expectations. Additionally, regarding participants' completion of study items, due to the impact of social desirability bias, participants may have been less likely to answer honestly to items indicating stigmatizing attitudes toward individuals with mental health concerns or previous experiences seeking mental healthcare services.

A final potential limitation for the current study includes the method of study recruitment. Study participants were recruited for the online survey through an online social media platform. While targeted geographical marketing has been successfully utilized to recruit rural research

participants, additional measures of recruitment should be utilized to account for rural residents with a lack of access to a reliable internet connection (Akers & Gordon, 2018). As a result of recruiting participants only via online mediums, it is likely that those individuals experiencing the most limited access to mental health care services were perhaps the least likely to participate in the current study. While targeted marketing through social media remains an effective means of recruiting rural samples, it is recommended that researchers implement additional recruitment measures to ensure a diverse and representative pool of participants (Dickson et al., 2017).

The limitations outlined for the present study should be taken into consideration when generalizing the findings to a broader population. Despite the limitations outlined above, the current study provides novel findings that contribute to the knowledge of potential barriers to mental health help-seeking for Appalachian women.

Recommendations for Future Research

The present study highlights many directions for future research. First, future studies examining the help-seeking patterns of Appalachians should aim to recruit a more representative sample regarding level of income, level of education, and experiences of seeking mental healthcare services. A sample of participants that is more representative of the larger Appalachian population would increase the generalizability of the results.

A variety of additional recruitment methods may assist future researchers in accessing samples that are more representative of the general Appalachian population. Future researchers may benefit from implementing mixed research methods in order to gather data that are both generalizable and provide contextual background detailing Appalachian experiences with mental health services in the region. While the present study solicited information regarding intentions of seeking help as well as previous help-seeking behaviors, contextual data regarding specific

help-seeking experiences were not collected. Future researchers should consider the importance of exploring Appalachians' specific experiences with seeking mental healthcare services and potential contextual barriers that may interfere with initial decisions to seek help, as well as decisions to continue with care once behavioral health services are initiated. Soliciting additional information regarding the number of visits completed, general experiences with mental healthcare providers, perceived quality of available care, patient-therapist fit, as well as specific concerns related to confidentiality, may add additional depth to the findings presented in the present study.

Future lines of research would also benefit from investigating psychosocial stressors specific to Appalachian women that may impact help-seeking intentions and behaviors. Previous qualitative data identify caregiving responsibilities, childcare costs, maternal mental health, rates of poverty, and intimate partner violence as sources of influence on Appalachian women's ability and willingness to seek formal mental healthcare services (Hauenstein & Peddada, 2007; Snell-Rood et al., 2018; Thorndyke et al., 2005).

Additionally, researchers should consider further assessment of social determinants of health for those living in the Appalachian region. Social determinants of health refer to the context in which individuals are born, grow up, live, work, and age, and the impact of these factors on health and well-being (Elder & Robinson, 2018). Potential avenues for investigation may include assessment of disability status, household size, perceived quality of nearest healthcare providers, adverse childhood experiences, and housing insecurity (Compton & Shim, 2015). By further investigating the impact of social determinants of health on Appalachian residents, researchers may further awareness of significant logistical barriers that Appalachians face when seeking mental healthcare services.

Finally, few comprehensive measures of mental health literacy currently exist. Additional psychometric research is needed to further explore means of measuring the ever-evolving construct and theory of mental health literacy. While mental health literacy has commonly been conceptualized as a primary mental health knowledge construct, an additional line of discourse has encouraged the reconceptualization of mental health literacy as a multicomponent theory versus a singular construct (Spiker & Hammer, 2018). Additional research is needed regarding more effective means of conceptualizing and measuring the multicomponent structure of mental health literacy (Spiker & Hammer, 2018).

Clinical Implications

Little quantitative research has been conducted examining levels of psychological distress among Appalachian women. The results of the current study build from and generalize the results of previous qualitative findings investigating barriers to mental health help-seeking among Appalachian women (Browning et al., 2000; Hill et al., 2016; Jesse et al., 2009; Snell-Rood, 2017). The current study provides a clear rationale for increasing access to culturally informed licensed mental healthcare providers in the region. Clinicians may seek to expand the range of service delivery by utilizing telehealth technology to provide additional access to rural Appalachians encountering logistical barriers to treatment seeking such as transportation and childcare (Hubley et al., 2016; Snell-Rood et al., 2017).

Clinicians providing services to Appalachian women should be attuned to the fact that many Appalachian women, having made the decision to seek formal mental healthcare services, are likely to contend with the substantial impacts of internalized stigma (Cheesmond et al., 2019). Diminished feelings of self-esteem and self-efficacy are linked to the internalization of stigma and can lead to the worsening of already-present psychological distress (Corrigan et al.,

2010; Eisenberg et al., 2009). Clinicians should also be aware that Appalachian women who have made the decision to seek formal mental healthcare services are likely to have gone to great lengths to manage their symptoms on their own (Snell-Rood et al., 2017). Providers should be keen to assess a patient's past attempts to manage distress, highlighting potential resiliency factors and already-established adaptive coping skills.

Self-stigma has not only been connected with delays or altogether avoidance of treatment-seeking, but it has also been linked to poor treatment engagement and adherence, even after services are initiated (Corrigan, 2004; Larson & Corrigan, 2010). Clinicians, therefore, may consider beginning treatment by addressing the negative effects of internalized stigma and the potential negative impact that stigma may exert on a patient's self-image and overall feelings of well-being. Treatments may effectively minimize the impacts of self-stigma by targeting improvements in patients' senses of self-esteem, self-efficacy, and self-compassion (Corrigan et al., 2006). Cognitive interventions such as cognitive behavioral therapy may be useful in directly addressing maladaptive patterns of thinking linked to internalized stigma (Larson & Corrigan, 2010). Interventions delivered from a strengths-based approach may help to imbue Appalachian patients with a sense of empowerment by cultivating individual and community strengths and skills and by improving psychosocial sources of distress.

The low levels of mental health literacy found in the study population emphasize the importance of increasing health literacy in the Appalachian region. Clinicians may accomplish this by increasing engagement and visibility in their local communities. Both school-based and community-based interventions for increasing mental health literacy have been widely distributed to increase knowledge of mental health concerns and, in turn, decrease levels of individual and community stigma (Kitchener & Jorm, 2002; Mendenhall et al., 2013). Among

the most well-researched mental health literacy interventions is the Mental Health First Aid (MHFA) program (Kitchener & Jorm, 2002). The MHFA program is a standardized psychoeducational program developed to "empower the public to approach, support, and refer individuals in distress by improving course participants' knowledge, attitudes and behaviors" towards those struggling with mental health concerns (Hadlaczky et al., 2014, p. 468). The program, while initially developed and distributed in Australia, has been successfully implemented across 21 countries (Hadlaczky et al., 2014) and has shown impressive efficacy over a wide range of studies (Bond et al., 2015; Kitchener & Jorm, 2004; Kitchener & Jorm, 2006; Mendenhall et al., 2013). While the MHFA program has not yet been examined in rural Appalachia, it has shown effectiveness in other rural areas of the United States (Mendenhall et al., 2013; Talbot et al., 2017) and provides specialty training courses for those living and working in rural communities (MHFA, 2023). Clinicians providing mental healthcare services in rural Appalachia may benefit from organizing the implementation of literacy programs such as MHFA to increase community knowledge of mental health concerns and available resources for treatment.

Summary

The current study aimed to describe the relationship between mental health literacy, self-stigma of seeking help, and willingness to seek mental healthcare services among Appalachian women. Consistent with the previous literature, the current sample of Appalachian women demonstrated high levels of psychological distress, high levels of help-seeking stigma, and low levels of mental health literacy. Findings from the current study generalize previous qualitative research findings investigating barriers to mental health help-seeking for Appalachian women.

The findings enhance the imperative for clinicians and researchers to better understand the various barriers to mental health help-seeking for Appalachian women.

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Appendix A

Informed Consent

You are invited to participate in a research study entitled "Where Literacy and Stigma Meet: Barriers to Mental Health Help-Seeking for Appalachian Women". The study is being conducted by Brittney A. C. Gray M.S. and Dr. Tracy Cohn, Ph.D. of Radford University 801 Main St. Radford, VA 24141.

The purpose of this study is to examine the relationship between stigma, mental health literacy, and willingness to seek mental healthcare services among Appalachian women. Your participation in the survey will contribute to a better understanding of the barriers to help-seeking for Appalachian women. You are free to contact the investigator at the above address and phone number to discuss the survey

This study has no more risk than you may find in daily life. Some of the questions we ask may make you feel uncomfortable. You may refuse to answer any of the questions, take a break or stop your participation in this study at any time.

The investigators will work to protect your data to the fullest extent possible. It is possible, although unlikely, that an unauthorized individual could gain access to your responses because you are responding online. This risk is similar to your everyday use of the internet

IP addresses will be deleted upon download of the completed data set. A limited number of research team members will have access to the data during data collection. Any identifying information will be removed from the final data set.

Your participation in the survey is completely voluntary. You may decline to answer any question and you have the right to withdraw from participation at any time without penalty. If you wish to withdraw from the study or have any questions, contact the investigator listed above. At the end of the survey you will be redirected to another survey to enter into a drawing for one of 10, $20 Amazon gift cards.

If you have any questions or wish to follow up about the results of the survey, please e-mail Brittney Gray at bgray24@radford.edu. You may also request a hard copy of the survey from the contact information above.

This study was approved by the Radford University Committee for the Review of Human Subjects Research. If you have questions or concerns about your rights as a research subject or have complaints about this study, you should contact Dr. Benjamin Caldwell, Dean, College of Graduate Studies and Research, Radford University, bcaldwell13@radford.edu, 1-540-831-5723.

If you agree to participate, please press the arrow button at the bottom right of the screen. Otherwise use the X at the upper right corner to close this window and disconnect.

Thank you for your participation.

Appendix B

Demographics Questionnaire (11 Questions)

Please indicate your race:

- White
- Black or African American
- American Indian or Alaska Native
- Asian
- Native Hawaiian or Pacific Islander
- Hispanic or LatinX
- Other (please specify) _____

What is your age?

- 18-24 years
- 25-34 years
- 35-44 years
- 45-54 years
- 55-64 years
- 65-75 years
- 75 or older

What is your sexual orientation?

- Heterosexual or Straight
- Gay or Lesbian
- Bisexual
- Pansexual
- Asexual
- Queer
- Prefer not to answer

What is your current relationship status?

- Single
- Non committed relationship
- Committed relationship
- Married
- Divorced or Separated
- Widowed

What is your level of education?

- Less than a high school degree
- High school degree or GED
- Some college, but no degree
- Associate's or technical degree (2 year)

- Bachelor's degree
- Graduate or professional degree

What is your primary employment status?

- Full-time, paid employment
- Part-time, paid employment
- Full-time student
- Homemaker, volunteer work
- Currently unemployed, not seeking work
- Currently unemployed, seeking work
- Retired or on disability leave

What was your household income in the past year?

- Less than $25,999
- $25,000 - $34,999
- $35,000 - $49,999
- $50,000 - $74, 999
- $75,000 - $99,999
- $100,000 - $149,999
- $150,000 or more

What state do you currently live in?

- Alabama
- Georgia
- Kentucky
- Maryland
- Mississippi
- New York
- North Carolina
- Ohio
- South Carolina
- Tennessee
- Pennsylvania
- Virginia
- West Virginia

Do you have access to reliable transportation?

- Yes
- No
- Prefer not to answer

Do you currently have health insurance?

- Yes
- No

- Prefer not to answer

If you wanted in-person counseling, how long would it take you to get to get to the nearest mental health provider? Guess if you're not sure.

- Less than 15 minutes
- Between 15 and 30 minutes
- Between 30 minutes and 1 hour
- Between 1 hour and 1.5 hours
- Over 2 hours

Appendix C

Self-Administered Kessler Psychological Distress Scale (K6; Kessler et al., 2002)

1	2	3	4
None of the time	Rarely	Some of the time	All of the time

The following questions ask about how you have been feeling during the past 30 days. For each question, please circle the number that best describes how often you had these feelings.

1. During the past 30 days how often did you feel…
    a. Nervous?
    b. Hopeless?
    c. Restless or fidgety?
    d. So depressed that nothing could cheer you up?
    e. That everything was an effort?
    f. Worthless?
2. The last six questions are about feelings that may have occurred during the past 30 days. Taking them altogether, did these feelings occur more often in the past 30 days than is usual for you, about the same as usual, or less often than usual?
3. During the past 30 days how many out of the 30 days were you totally unable to work or carry out your normal activities because of these feelings?
4. Not counting the days you reported above, how many days in the past 30 days were you only able to do half or less of what you would have normally been able to do because of these feelings?
5. During the past 30 days how many times did you see a doctor or health professional about these feelings?
6. During the past 30 days how often have physical health problems been the primary cause of these feelings?

Appendix D

Self-Stigma of Seeking Help (SSOSH; Vogel et al., 2006)

People at times find that they face problems that they consider seeking help for. This can bring up reactions about what seeking help would mean. Please use the 5-point scale to rate the degree to which each item describes how you might react in this situation.

1	2	3	4	5
Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

1. I would feel inadequate if I went to a therapist for psychological help.
2. My self-confidence would NOT be threatened if I sought professional help.
3. Seeking psychological help would make me feel less intelligent.
4. My self-esteem would increase if I talked to a therapist.
5. My view of myself would not change just because I made the choice to see a therapist.
6. It would make me feel inferior to ask a therapist for help.
7. I would feel okay about myself if I made the choice to seek professional help.
8. If I went to a therapist, I would be less satisfied with myself.
9. My self-confidence would remain the same if I sought professional help for a problem, I could not solve.
10. I would feel worse about myself if I could not solve my own problems.

Appendix E

Multicomponent Mental Health Literacy Measure (MC-MHL; Jung et al., 2016).

Knowledge-Oriented Mental Health Literacy

1. Counseling is a helpful treatment for depression
2. A person with schizophrenia may see things that are not really there
3. Early diagnosis of a mental illness can improve chances of getting better
4. Attending peer support groups helps recovery from mental illness.
5. Unexplained physical pain or fatigue can be a sign of depression.
6. Cognitive behavioral therapy can change the way a person thinks and reacts to stress
7. A person with bipolar disorder may show a dramatic change in mood.
8. Taking prescribed medications for mental illness is effective.
9. When a person stops taking care of his or her appearance, it may be a sign of depression
10. Drinking alcohol makes symptoms of mental illness worse
11. A person with mental illness can receive treatment in a community setting.
12. A person with anxiety disorders has excessive anxiousness or fear.

Beliefs- Oriented Mental Health Literacy

13. A highly religious/spiritual person does not develop mental illnesses.
14. Depression is a sign of personal weakness.
15. Mental illness is a short-term disorder
16. Recovery from mental illness is mostly dependent on chance or fate.
17. A person with depression should not be asked if he or she has thoughts of suicide
18. Poor parenting causes schizophrenia.
19. Mental illness will improve with time, even without treatment.
20. Recovering from a mental illness is the same as being cured.
21. A person can stop hoarding whenever he/she wants to.
22. A person with depression will get better on his or her own without treatment.

Resource- Oriented Mental Health Literacy

23. I know where to go to receive mental health services.
24. I know how to get the number of a suicide prevention hotline.
25. I know where to get useful information about mental illness
26. I know how to contact a mental health clinic in my area.

Appendix F

General Help-Seeking Questionnaire (GHSQ; Wilson et al., 2007)

If you had a mental health concern, how likely would you be to seek help from the following?

1	2	3	4	5	6	7
Extremely Unlikely	Unlikely	Somewhat Unlikely	Unsure	Somewhat Likely	Likely	Extremely Likely

If I had a mental health concern, I would consider seeking help from:

- A close friend
- A parent or family member
- An intimate partner (spouse/boyfriend/girlfriend)
- A minister or religious leader
- A support groups
- A family doctor or medical provider
- A psychologist or therapist
- A Phone helpline/hotline
- I would not seek help from anyone
- I would seek help from someone not listed _____

Appendix G

Actual Help-Seeking Questionnaire (AHSQ; Rickwood et al., 2005)

The following questions focus on your general experiences with seeking help related to your mental well-being. Choose all that apply.

I have sought help for a mental health concern from:

- A close friend
- A parent or family member
- An intimate partner (spouse/boyfriend/girlfriend)
- A minister or religious leader
- A support groups
- A family doctor or medical provider
- A psychologist or therapist
- A Phone helpline/hotline
- I would not seek help from anyone
- I would seek help from someone not listed _____