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Understanding Help-Seeking in Rural Counties: A Serial Mediation Model of Self-Reliance, Stigma, and Attitudes toward Psychologists

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To the Graduate Council:

I am submitting herewith a dissertation written by Emily M. Keller entitled "Understanding Help-Seeking in Rural Counties: A Serial Mediation Model of Self-Reliance, Stigma, and Attitudes toward Psychologists." I have examined the final electronic copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, with a major in Psychology.

Gina P. Owens, Major Professor

We have read this dissertation and recommend its acceptance:

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Vice Provost and Dean of the Graduate School

(Original signatures are on file with official student records.)

Understanding Help-Seeking in Rural Counties: A Serial Mediation Model of Self-Reliance, Stigma, and Attitudes toward Psychologists

A Dissertation Presented for the
Doctor of Philosophy
Degree
The University of Tennessee, Knoxville

Emily Molly Keller
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ABSTRACT

Rural areas in the Southern United States are characterized by certain cultural values, including self-reliance. Prior research has shown that cultural values can affect stigmatizing beliefs about mental health needs and service utilization. The present study examined a four-stage chain of serial mediation where higher levels of general self-reliance would be related to higher levels of public stigma, which would, in turn, be related to greater levels of self-stigma, followed by higher self-reliance about managing mental health problems, and finally, more negative attitudes toward seeking out help from psychologists. Community members who lived in rural counties in the Southern United States ($N = 783$) completed measures of these constructs through an online survey. Mediation analyses supported a direct association between general self-reliance and attitudes toward seeking help from a mental health professional that was explained in serial by higher levels of public stigma, self-stigma, and mental health self-reliance. Clinical implications for rural practitioners are suggested, including increasing provider visibility in the community and addressing self-reliance over the course of therapy. Future research might consider including variables related to acceptability and availability of mental healthcare services in order to determine how these constraints impact mental healthcare attitudes in rural localities.

Keywords: rural, self-reliance, culture, stigma, attitudes toward mental healthcare services

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CHAPTER ONE

INTRODUCTION AND LITERATURE REVIEW

Approximately 46.6 million adults in the United States (nearly 20%) experienced a diagnosable mental illness in 2017 (National Institute of Mental Health (NIMH), 2019). However, studies generally have found that less than half of these individuals obtain mental health treatment, such as inpatient or outpatient treatment/counseling or prescription medication (NIMH, 2019; Wang et al., 2005), meaning that many people who could benefit from mental health treatment do not receive psychological services. Research has suggested that certain sociodemographic variables, including age and gender, can predict this underutilization of mental health services (Wang et al., 2005).

One such sociodemographic variable that has received less attention in the literature but may complicate seeking treatment for mental health symptoms is geographic location, specifically residency in a rural area. According to the United States Department of Agriculture Economic Research Services (USDA ERS, 2018), rural areas comprise non-metropolitan or “non-metro” counties that meet the following criteria in some combination: open countryside, rural towns with fewer than 2,500 people, and other non-metropolitan areas with populations ranging from 2,500 to 49,999 inhabitants. Using this definition, 14% of the U.S. population or 46.2 million people live in rural counties (USDA, 2016). As specific rural regions in the United States may be subject to different cultural values and healthcare availability (Mohatt et al., 2006; Wagenfeld, 2003), the current study focused on the rural South, which includes much of the Appalachian region.

Limited research has explored prevalence rates of mental illnesses in rural compared to urban areas, but findings have generally demonstrated that mental illness is a significant concern that affects similar, if not higher, numbers of rural versus urban individuals (e.g., Marshall et al., 2017; Probst et al., 2006). Some studies have indicated that rates of depression are significantly higher in rural compared to urban localities (Probst et al. 2006; Marshall et al., 2017) and that there is a higher risk for suicide completion in nonmetro versus metro counties (Marshall et al., 2017). However, a meta-analysis found that in developed countries, including the United States, both mood and anxiety disorders were more prevalent in urban versus rural localities (Peen et al., 2010).

In order to understand how rural individuals who may experience psychological symptoms contemplate seeking treatment for mental health concerns, we proposed a serial mediation model that considers such factors as self-reliance (reliance on oneself) and stigma (negative views toward help-seeking), as well as the connections that these variables may have with attitudes toward seeking professional psychological help. Our approach ultimately extends existing models of help-seeking created by Vogel et al. (2007) and expanded upon more recently by Jennings and colleagues (2015). As conceptualized by Vogel and colleagues (2007), this initial model was based upon Ajzen and Fishbein's (1980) theory of reasoned action, wherein an individual's personal attitude toward a specific behavior and their perception of how others view this behavior combine to create intent to perform the behavior. Accordingly, the model tested by Vogel and colleagues (2007) posited that one's intention to seek help is primarily determined by a person's attitude toward mental health treatment, which is formed through expectations about how seeking psychological help is viewed by the community (public stigma) and how this

perception has been internalized (self-stigma). More recently, Jennings and colleagues (2015) extended Vogel and colleagues' (2007) model by proposing a three-path serial mediation model where mental health self-reliance was found to mediate the relationship between self-stigma and attitudes toward psychotherapists.

Research has suggested that group differences in mental illness stigma and the utilization of mental health services based on sociodemographic factors can be explained by cultural values (Abdullah & Brown, 2011; Kim & Omizo, 2003; Omizo et al., 2008). In a review of the literature, Abdullah and Brown (2011) established that ethnocentric beliefs, values, and norms of certain racial groups may explain group differences in mental illness stigma. Omizo and colleagues (2008) found that adherence to European cultural values in Asian American youths was associated with negative attitudes toward seeking professional help. Other studies (e.g., Kim & Omizo, 2003) have supported an inverse relationship between Asian cultural values and attitudes toward seeking professional psychological help. Collectively, these findings highlighted the importance of cultural factors in explaining the association between social location and attitudes toward mental health treatment. Specifically, the current study investigated how the rural Appalachian cultural factor of general self-reliance influenced attitudes toward seeking psychological help.

Therefore, the current study expanded the model proposed by Jennings et al. (2015) by incorporating the rural Appalachian cultural value of self-reliance (Wagenfeld, 2003) as the first step in a serial mediation model ultimately leading to attitudes toward seeking psychological help. We utilized this variable as an extension of the serial mediation model proposed by Jennings et al. (2015) to examine a four-stage chain of serial mediation that predicted an inverse

relationship between general self-reliance and attitudes toward seeking psychological help via higher public stigma, self-stigma, and mental health self-reliance.

General Self-Reliance

Self-reliance has been identified as a general societal value in rural (e.g., Wagenfeld, 2003) and Appalachian parts of the United States (Jones, 1991). More recently, researchers have found that there is a separation between New and Old Appalachia that is characterized by growing gaps between the middle-class and working-class and by the rural and urban divide (Eller, 2008). Old Appalachia, which often maintains traditional values such as self-reliance, tends to be composed of working-class individuals who live in rural areas (Eller, 2008).

Results from qualitative studies have supported the notion that self-reliance continues to characterize rural areas in the United States. For example, in a study investigating the prevalence of diabetes in West Virginia, participants described family legacies of raising and producing their own food and identified symptom management as the sole responsibility of patients (Smith et al., 2005). In another study, rural men in the Western United States described a cultural value of self-reliance as contributing to public health measures, such as the rejection of medical care due to veneration of persevering alone through pain and illness (Morgan et al., 2016). Lastly, in research seeking to elucidate reluctance to use technology in rural Appalachia, participants emphasized self-reliance as a cultural trait of the area and identified modern technology as potentially interfering with this value (Hamby et al. 2018).

General Self-Reliance and Attitudes Toward Seeking Help

As a cultural value, self-reliance is present early in life as part of the socialization process of living in a rural area. Historically, this value has been linked to treatment-seeking attitudes

due to problems associated with the acceptability of mental health concerns (e.g., Mohatt et al., 2006). In rural localities, help-seeking may involve a variety of formal and informal sources in addition to mental health professionals, such as friends, family, or church officials (e.g., Blank et al., 2002; Fox et al., 1999; Fox et al., 1995; Mohatt et al., 2006).

Research investigating potential variations in help-seeking based on rural versus urban habitation has found mixed results. One study supported potential variations in help-seeking based on rural versus urban residency with fewer rural individuals (9%) who screened positive for a mental disorder comparatively seeking out professional treatment (Fox et al., 1999). However, other research indicated that both rural and urban adults expressed negative attitudes toward help-seeking (Stewart et al., 2015).

To our knowledge, no study has considered general self-reliance as the initial predictor and therefore an extension of the model proposed by Jennings and colleagues (2015), but the association between general self-reliance and attitudes toward professional psychological help has been firmly established both qualitatively and quantitatively in the literature (e.g., Fischer et al., 2016; Gulliver et al., 2010; Snell-Rood et al., 2017). Qualitative studies have identified a value of general self-reliance as a barrier for treatment-seeking in rural veterans and rural low-income women living in Appalachia who had been diagnosed with depression (Fischer et al., 2016; Snell-Rood et al., 2017). Young adults in qualitative and quantitative research also tended to identify self-reliance as a major barrier for help-seeking (see Gulliver et al., 2010 for review). In a quantitative study of undergraduate and graduate college men, self-reliance was negatively related to attitudes toward help-seeking and yielded a medium effect size (Mahalik et al., 2003). Lastly, quantitative research investigating barriers to help-seeking for physical health problems

found that rural Appalachian undergraduates were less likely to seek help in comparison to urban students, and self-reliance emerged as a major factor for rural students (Starcher et al., 2017).

Based on this evidence, it appeared likely that general self-reliance would be inversely related to attitudes toward seeking help in rural Appalachia.

Potential Serial Mediators

Our study extended previous research by predicting a direct relationship between general self-reliance and attitudes toward seeking psychological help as an extension of the model proposed by Jennings et al. (2015) in rural Appalachian participants. More specifically, we empirically examined the roles of stigma and self-reliance about coping with mental health problems in order to understand the link between general self-reliance and attitudes toward seeking mental health help (see Figure 1 for our conceptual model).

Public Stigma about Seeking Professional Psychological Help

We predicted through its enforcement of relying only on oneself that a general societal value of self-reliance would create a perception that society views sources of professional psychological help negatively (public stigma; Vogel et al., 2006), which would in turn lead to an internalization of these stigmatizing beliefs (self-stigma; Corrigan, 2004; Vogel et al., 2006). We could not find any evidence in prior research that directly linked general self-reliance and public stigma, but both factors represent aspects of acceptability (Mohatt et al., 2006). As a rural value, it seemed likely that self-reliance would predict the development of a perception that society specifically views seeking external professional help for mental illnesses as unacceptable.

While we could not find any research connecting public stigma with general self-reliance, prior research has related public stigma directly to attitudes toward seeking professional

psychological help (e.g., Bathje & Pryor, 2011; Corrigan, 2004; Pattyn et al., 2014; Tucker et al., 2013). For example, Corrigan (2004) indicated that public stigma was inversely associated with help-seeking. Other research has established support for a significant negative relationship between public stigma about seeking psychological help and attitudes toward counseling among undergraduates (Tucker et al., 2013). Bathje and Pryor (2011) found that elements of public stigma, including attributions of blame and feelings of pity and sympathy, were associated with attitudes toward seeking help even when self-stigma was added to their model.

Research evidence has suggested that rural areas might be especially susceptible to public stigma about psychological help (e.g., Hoyt et al., 1997; Stewart et al., 2015). Studies of older adults (Stewart et al., 2015) and community members (Hoyt et al., 1997) have consistently found that people living in the most isolated rural environments are more likely to perceive higher levels of public stigma about seeking professional psychological help. However, a recent study that recruited participants using Amazon Mechanical Turk found that there were no significant differences in public stigma levels based on rurality (Dschaak & Juntunen, 2018). Overall, research has indicated that rural individuals display higher levels of public stigma compared to urban individuals.

Self-Stigma of Seeking Psychological Help

Limited research has directly linked general self-reliance and self-stigma (Heath et al., 2017; Vogel et al., 2011) and has corroborated self-stigma as a mediator that explains the relationship between general self-reliance and attitudes toward seeking psychological help. Self-reliance has been conceptualized as a masculine norm leading to higher self-stigma when seeking psychological help (e.g., Heath et al., 2017), and the relationship between masculine

norms in general and attitudes toward seeking professional help has been found to be mediated by self-stigma (Vogel et al., 2011). Furthermore, some evidence has supported the notion that self-stigma may uniquely characterize rural populations. Research has suggested that self-stigma may affect rural individuals differently from urban individuals due to lower levels of privacy (Larson & Corrigan, 2010). A separate study showed that older adults living in isolated rural counties reported higher levels of self-stigma compared to their urban counterparts (Stewart et al., 2015). However, more recent research showed no significant differences in levels of self-stigma based on rurality (Dschaak & Juntunen, 2018). In our proposed mediation model for the current study, we specifically focused on self-stigma concerning seeking help given that past research found that this construct explained a significant amount of the variance in attitudes toward seeking help (Tucker et al., 2013).

A wealth of research substantiates the role of self-stigma as a mediator between public stigma and attitudes toward help-seeking (e.g., Corrigan, 2004; Vogel et al., 2013; Vogel et al., 2006). Whereas public stigma concerns perceptions of whether *society* stigmatizes mental healthcare, self-stigma represents the internalization of these values in the *individual* (Corrigan, 2004). In support of the timing of the development of public and self-stigma, a longitudinal study of college students showed that public stigma about seeking psychological help predicted self-stigma concerning seeking psychological help three months later, but the reverse was not true, thereby suggesting that self-stigma develops from public stigma (Vogel et al., 2013). Furthermore, research has indicated that self-stigma leads to negative attitudes toward psychologists, which is the target of these internalized stigmatizing views. For example, self-

stigma regarding seeking psychological help has been identified as a unique predictor of help-seeking attitudes (Vogel et al., 2006).

Various studies have established support for a mediation model where self-stigma explains the relationship between public stigma and attitudes toward psychologists (e.g., Bathje & Pryor, 2011; Held & Owens, 2012; Vogel et al., 2007). Research with veterans and active duty service members found that greater public stigma regarding seeking psychological help was significantly positively associated with greater self-stigma concerning professional help and that self-stigma mediated the relationship between public stigma and attitudes toward seeking psychological help (Held & Owens, 2012). Research has also demonstrated the mediation of public stigma and willingness to seek counseling by self-stigma and attitudes toward counseling, in serial (e.g., Bathje & Pryor, 2011; Vogel et al., 2007).

Mental Health Self-Reliance

General self-reliance is likely to be both directly and indirectly (through self-stigma) related to self-reliance about coping with mental health problems. This mental health self-reliance is defined as a preference for dealing with mental health problems independently rather than seeking out professional sources of support (Fischer et al., 2016; Jennings et al. 2015). The initial predictor in our proposed serial mediation model, general self-reliance, has been identified as a characteristic that may especially define rural populations (e.g., Mohatt et al., 2006). Therefore, this more specific type of self-reliance that focuses on preferences for managing mental health concerns may be particularly important in explaining the relationship between self-stigma and attitudes concerning psychotherapy in rural areas.

Despite its potential significance, a direct link between mental health self-reliance and self-stigma has not been thoroughly examined. However, one study found that higher levels of personal stigma, which appears to be similar to self-stigma concerning mental illnesses, were associated with a belief in the helpfulness of dealing with depression alone (Griffiths et al., 2011), therefore implying a potential connection between the two variables in the current study. As previously described, Jennings and colleagues (2015) established support for a three-path serial mediation model indirectly linking perceived stigma to treatment-seeking behavior through self-stigma and mental health self-reliance (Jennings et al., 2015).

The direct relationship between mental health self-reliance and help-seeking attitudes has been more firmly documented (e.g., Adler et al., 2015; Brenes et al., 2015; Pumpa & Martin, 2015; Czyz et al., 2013). A study of older rural adults found that over 80% identified a personal belief that they should not need help from mental health care providers as a barrier to treatment seeking (Brenes et al., 2015). One longitudinal study with members of the armed forces determined that a preference for self-management when experiencing mental health problems at four months post-deployment predicted a decreased likelihood for seeking mental health treatment eight months later (Adler et al., 2015). In addition to showing that the two variables are related, this research provides evidence for the notion that mental health self-reliance leads to treatment-seeking attitudes. Using a sample of adolescents who engaged in self-injury, other research found that autonomy need, which appears to be similar to mental health self-reliance, led to negative attitudes toward seeking professional psychological help (Pumpa & Martin, 2015). Among college students at an elevated risk for suicide, a qualitative study established that 18% of undergraduates identified a preference for self-management of their symptoms as a

barrier to seeking out professional help (Czyz et al., 2013). Overall, this specific form of self-reliance appeared to have been linked to negative attitudes toward or decreased usage of professional psychological help.

Purpose of the Current Study

The current study sought to replicate and extend the model proposed by Jennings and colleagues (2015). According to their three-path model, the relationship between perceived stigma about seeking out help and attitudes toward psychological treatment was fully mediated by a serial pathway through self-stigma about seeking out help and mental health self-reliance. The researchers conceptualized this particular facet of self-reliance as developing from self-stigmatizing beliefs about mental health treatment and leading to more negative attitudes about pursuing psychological help. More specifically, individuals who experience high levels of self-stigma may feel that they would rather cope on their own instead of seeking out help, leading to more negative attitudes toward psychological help (Jennings et al., 2015). To our knowledge, this model has never been tested using a rural sample despite the significance of self-reliance in the rural United States (Mohatt et al., 2006). Furthermore, while it appears as though the relationship between general self-reliance and mental health self-reliance has never been studied, a general value of independence should lead to a more specifically self-reliant attitude when dealing with mental health problems. Since mental health self-reliance has already been identified as a serial mediator in the three-path model proposed by Jennings and colleagues (2015), the possibility that it could play a similar role with the addition of our exploratory predictor of general self-reliance seemed plausible. Therefore, the current study sought to expand

this three-path model by conceptualizing the societal value of general self-reliance as the preliminary predictor.

We hypothesized that general self-reliance would be directly negatively related to attitudes toward seeking professional psychological help in a rural Appalachian sample. In addition, we proposed a four-stage chain of serial mediation based on theory leading from general self-reliance to attitudes toward seeking professional psychological help through two types of stigma and a more specific form of self-reliance (see Figure 1). More specifically, we posited that higher levels of general self-reliance would be related to greater levels of public stigma, which would, in turn, be related to greater levels of self-stigma, followed by higher mental health self-reliance, and finally, more negative attitudes toward seeking out help from psychologists. Above and beyond these mediating connections, we proposed that there will be direct links between general self-reliance and self-stigma, general self-reliance and mental health self-reliance, public stigma and attitudes toward seeking help, and self-stigma and attitudes toward treatment seeking. Based on previous literature (Jennings et al., 2015), we expected that self-stigma would mediate the relationship between public stigma and mental health self-reliance; therefore, we did not anticipate a direct link between these variables in our model.

CHAPTER TWO

MATERIALS AND METHODS

Participants

In order to be eligible for the study, participants had to be at least 18 years of age, claim permanent residency in selected southern Appalachian states, assert permanent residency in a rural county, and identify themselves as subjectively residing in a rural area. Since specific rural regions in the United States may be subject to different cultural values and healthcare availability (Mohatt et al., 2006; Wagenfeld, 2003), participants were recruited from southern, rural, and largely Appalachian communities in the states of Alabama, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, and West Virginia as defined by the Rural-Urban Continuum Codes (USDA ERS, 2016). No other exclusion criteria were used.

The final sample included 783 individuals who were at least 18 years or older. Of the 783 participants, 88% identified as female, while 12% identified as male. In terms of race, the vast majority (96%) of participants identified as Caucasian/White, nearly 2% as African American, and Asian-Americans, Hispanic-Americans/Latinos, Native Americans, and those who identified as multi-racial each comprised less than 1% of the sample. Age of participants ranged from 18 to 86 years ($M = 52.39$, $SD = 13.84$). In terms of education, approximately 2% of participants had attained less than a high school diploma, 7% a high school diploma, 20% some college with no degree, 7% trade/technical/vocational training, 12% an associate's degree, 25% a bachelor's degree, 21% a master's degree, 2% a professional degree, and 4% a doctoral degree. In terms of state residency, almost a quarter of participants resided in Tennessee (24%), followed by

Kentucky (18%), North Carolina (16%), Georgia (10%), Virginia (9%), Mississippi (7%), Alabama (7%) West Virginia (6%), and South Carolina (4%).

Using the Rural-Urban Continuum Codes (USDA ERS, 2016), we determined that 21% of the sample resided in a non-metro county that contained an urban population of 20,000 people or more and was adjacent to a metro area (Category 4), while 6% came from a non-metro county that contained an urban population of 20,000 people or more that was not adjacent to a metro area (Category 5). Just over a quarter (26%) of participants lived in a non-metro county with an urban population of 2,500 to 19,999 that was adjacent to a metro area (Category 6), and 12% resided in a non-metro county with an urban population of 2,500 to 19,999 that was not adjacent to a metro area (Category 7). Finally, approximately 18% came from a non-metro county considered to be either completely rural or consisting of an urban population of less than 2,500 that was adjacent to a metro area (Category 8), while 17% lived in a non-metro county with either a completely rural population or with an urban population of less than 2,500 that was not adjacent to a metro area (Category 9).

Measures

Demographics

The demographic portion of the survey included questions about age, sex, race/ethnicity, level of education, marital status, employment, permanent residency status and location, mental health diagnoses, and past help-seeking behavior. Using the USDA ERS (2018) definition, rural status was measured using several different strategies. First, participants specified if they subjectively believed that they permanently resided in a rural area. If a participant answered that they came from a rural area, they were asked to identify the county of their permanent residence,

which was categorized by the researcher according to the degree of rurality as defined by the Rural-Urban Continuum Codes (USDA ERS, 2016). This scoring system ranges from 1 to 9, where 1 indicates that a county is metro, meaning that it contains an urban population of over 1 million, and 9 designates a non-metro county that is completely rural, comprises less than 2,500 people, and is not adjacent to a metro area. As a further check, participants were asked to designate the zip code of their permanent residence.

Depression Anxiety Stress Scales-21 (DASS-21; Lovibond & Lovibond, 1995)

The DASS-21 is a 21-item self-report measure of depression, anxiety, and stress designed as a short form of the 42-item version. Items are rated on a four-point Likert scale according to how much a statement has applied to a respondent over the past week from 0 (Did not apply to me at all) to 3 (Applied to me very much or most of the time). Total scores for each subscale are calculated by summing the responses for each of the seven questions corresponding to each scale and multiplying this score by two. These total subscale scores can range from 0 to 42 with low scores indicating a normal or mild representation of symptoms and higher scores denoting more severe pathology. An example depression question is, “I felt down-hearted and blue,” and an example anxiety question is, “I felt I was close to panic.” For brevity, only the questions from the anxiety and depression subscales were used in the current study to determine mental health symptoms in the sample. Prior research (Antony et al., 1998) has found the DASS-21 to have high internal consistency in samples of outpatients diagnosed with certain types of anxiety disorders or major depression with $\alpha = 0.94$ for the depression subscale and $\alpha = 0.87$ for the anxiety subscale. Convergent validity with other measures of anxiety and depression and discriminant validity of scales not designed to measure these constructs also have been supported

with both outpatient and general population samples (Antony et al., 1998; Henry & Crawford, 2005). Internal consistency reliability for the anxiety and depression subscales in the current study was 0.86 and 0.94, respectively.

General Help-Seeking Questionnaire (GHSQ; Wilson et al, 2005)

The GHSQ is a 9-item self-report measure that was used to assess which formal and informal sources of help participants would prefer to seek if they were experiencing a personal or emotional problem. Items are rated according to a 7-point Likert scale ranging from 1 (Extremely unlikely) to 7 (Extremely likely). In the original study assessing psychometric properties of the GHSQ, the total score was computed, and internal consistency was $\alpha = 0.85$. The total score ranges from 9 to 63 with higher scores indicating a higher intention to seek help. The measure was positively correlated with perceived quality of past counseling experiences and negatively correlated with barriers to seeking help in the original study that used a sample of high school students, supporting convergent and discriminant validity.

Self-Reliance Scale (Parent & Moradi, 2009)

The five-item Self-Reliance Scale is designed to measure participants' general level of reluctance for pursuing assistance from others. This subscale is part of the Conformity to Masculine Norms Inventory-46, which is a shortened adaptation of the Conformity to Masculine Norms Inventory (Mahalik et al., 2003). Items are scored using a four-point Likert scale from 0 (Strongly disagree) to 3 (Strongly agree) with the total score ranging from 0 to 15. Higher scores indicate higher levels of self-reliance. An example item includes, "It bothers me when I have to ask for help." The self-reliance subscale has good internal reliability based on a sample of

undergraduate men with $\alpha = 0.85$ (Parent & Moradi, 2009) and good convergent validity based on associations with a comparable measure of self-reliance. Internal consistency reliability in the current study was 0.82.

Stigma Scale for Receiving Psychological Help (SSRPH; Komiya, Good, & Sherrod, 2000)

The SSRPH is a 5-item measure designed to assess perceptions about public stigma associated with seeking professional psychological help. Items are rated on a four-point Likert scale from 0 (Strongly disagree) to 3 (Strongly agree), according to how much a respondent agrees with each statement. Total scores can range from 0 to 15 with higher scores indicating greater perceptions of public stigma regarding formal scores of psychological care. A sample question is, “People tend to like less those who are receiving professional psychological help.” The internal consistency for the original measure using college students was acceptable with $\alpha = 0.73$, and other studies have found similar internal consistency with undergraduates (e.g., Vogel et al., 2006). The SSRPH has been negatively correlated with attitudes toward seeking professional help (Komiya et al., 2000; Pinto et al., 2015), supporting discriminant validity. Internal consistency reliability in the current study was 0.85.

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

The SSOSH is a 10-item measure intended to assess self-stigma associated with seeking professional psychological help. Respondents are directed to indicate the degree to which they would react in a certain way with items rated using a 5-point Likert scale ranging from 1 (Strongly disagree) to 5 (Strongly agree). After summing the items, total scores range from 10 to 50 with higher scores representing a greater degree of self-stigma. Example items include, “I

would feel inadequate if I went to a therapist for psychological help” and “If I went to a therapist, I would be less satisfied with myself.” Internal consistency using undergraduates in the initial development of the measure was high with $\alpha = 0.91$. In addition, the SSOSH showed good convergent validity with similar constructs, such as perceptions of public stigma, and good discriminant validity with general self-esteem and overall psychological distress. Internal consistency reliability in the current study was 0.88.

Barriers of Help Seeking Scale (BHSS; Mansfield et al., 2005)

The BHSS is a 31-item measure designed to assess the degree to which certain factors may impede help-seeking behavior. The BHSS includes five subscales, including: Need for Control and Self-Reliance, Minimizing Problem and Resignation, Concrete Barriers and Distrust of Caregivers, Privacy, and Emotional Control (Mansfield et al, 2005). Respondents are directed to imagine that they are experiencing pain which causes them to consider seeking help from healthcare professionals. Directions were modified to ask participants to “consider your mental health symptoms and imagine that you are contemplating seeking help from a medical doctor, counselor, or other mental health professional.” Items are typically scored using a 5-point Likert scale from 0 (Not at all) to 4 (Very much) and participants rate the degree to which each item would keep them from seeking help. For clarity, anchors were modified slightly in our study to 0 (Not at all important) and 4 (Extremely important). For the purposes of the current study, only the 10-item Need for Control and Self-Reliance subscale was used. Total scores for the subscale range from 0 to 40 with higher scores indicating that the item represents more of a barrier to seeking formal sources of help. Example items include, “I would think less of myself for needing help” and “It would seem weak to ask for help.” Although this measure was created in order to

evaluate barriers to help-seeking in men, items are phrased so that they can apply to people regardless of gender. Internal consistency for the Need for Control and Self-Reliance subscale was high in the initial development of the scale using male undergraduates with $\alpha = 0.93$. Construct validity for the Need for Control and Self-Reliance subscale was demonstrated by a negative correlation with a measure of attitudes toward seeking professional help in the original study. Internal consistency reliability in the current study was 0.90.

Attitudes Toward Seeking Professional Psychological Help-Short Form (ATSPPH-SF; Fischer & Farina, 1995)

The ATSPPH-SF is a 10-item scale that measures an individual's attitude towards seeking professional help when psychological problems arise. Items are rated on a four-point Likert scale ranging from 0 (Disagree) to 3 (Agree). Total scores can range from 0 to 30, with higher scores indicating more positive attitudes toward seeking professional help in the event of a psychological issue. Example items include, "if I believed I was having a mental breakdown, my first inclination would be to get professional attention" and "considering the time and expense involved in psychotherapy, it would have doubtful value for a person like me." Test-retest reliability for the total score was 0.80 and the correlation of the scale with the original, longer version of the measure was 0.87 in one study (Fischer & Farina, 1995). Adequate internal consistency reliability for the measure has been reported ($\alpha = 0.77$ and 0.78) (Elhai et al., 2008). Construct validity of the ATSPPH-SF also was supported by a moderately negative correlation between the scale and stigma concerning mental health treatment (Elhai et al., 2008). Internal consistency reliability for the current study was 0.86.

Procedure

The university Institutional Review Board approved this study and its associated procedures. Participants were recruited through a variety of methods. Most participants were recruited through Facebook advertisements (83%) and library flyers (10%). Due to the comparative lack of smartphones and broadband internet in rural areas, libraries can serve as an important source of general knowledge as well as healthcare information (Real & Rose, 2017). We also attempted to recruit participants through local newspapers (1%) since they are often valued by rural residents who want to keep up with community news (Brown, 2017). However, newspaper advertisements were deemed too expensive after initial recruitment attempts yielded few participants. Lastly, some participants (6%) indicated that they had been recruited through other means, (e.g., a friend posted the survey link on Facebook). Flyers and research announcements included a link to the online survey. After accessing the survey, individuals first viewed an informed consent document and indicated their consent to participate by selecting “yes” to proceed to the online survey. Participants first completed demographic items and the DASS-21, followed by other study measures administered in the order of our model. After completing the survey, participants were directed to a thank you page which allowed them an opportunity to enter a drawing to receive one of 60 \$10 electronic gift cards.

Data Analysis

All data analyses were conducted using SPSS software (version 26.0; IBM Corp., 2019). Through our combined recruitment methods, 1,217 potential participants began the survey. Five dropped out after reviewing the informed consent, 314 consented to participate but did not complete the survey in its entirety, 48 identified themselves with a current subjective residence

status other than rural, 58 failed at least one validity check item, one resided in a non-eligible state, two were excluded from analysis due to having more than 20% of items missing on a single measure, and three participants were removed from analysis because they completed the survey after March 8th (which was our cutoff date due to COVID-19). Due to the low number of participants who endorsed an alternative gender identity, we also removed three participants from analyses who identified their gender as non-binary, bringing our total number of participants to 783. Among the final dataset, missing data analysis indicated that less than 1% (.04%) of items were missing. Since guidelines suggest that most methods of handling missing data are appropriate when less than 5% of the data are missing (Tabachnick & Fidell, 2013), the mean substitution method was used to replace these missing items for the rest of the sample.

Means, standard deviations, correlations, and internal consistency reliability of scales were calculated. Independent variables were checked for their appropriateness for multivariate analyses by ensuring that skewness, kurtosis, and multicollinearity were in acceptable ranges. Examination of absolute values for skewness (range = 0.07 to 0.50) and kurtosis (range = 0.09 to 0.64) for each variable indicated acceptable normality (Weston & Gore, 2006). Our sample size of 783 met Weston and Gore's (2006) recommendation for a minimum of 200 participants for path/mediation analysis and 10-20 observations per estimated parameter.

Our hypothesis was examined using Hayes' (2012) PROCESS macro (Model 6) to create a series of regression lines connecting our initial predictor, general self-reliance, to our outcome variable, attitudes toward seeking psychological help, through public stigma, followed by self-stigma, and then mental health self-reliance. PROCESS allows testing of both direct and indirect effects between variables. Therefore, we were able to examine whether and how each of our

variables were connected to the others. In addition, we were able to determine whether our mediator variables, in serial, explained the direct, inverse relationship between general self-reliance and attitudes toward mental health professionals. Age and gender were entered as control variables in the model.

CHAPTER THREE

RESULTS

Preliminary Analyses

Preliminary analyses revealed that mental health symptomology and the utilization of sources of psychological help were salient concerns in our sample. Regarding mental health characteristics, the average total score for anxiety symptoms was 11.31 ($SD = 8.78$) and for depression was 15.44 ($SD = 10.92$) in the sample. Fifty-nine percent of participants reported that they had ever received a mental health diagnosis from a family physician, doctor, or mental health professional. Nearly half of participants (49%) reported that their mental health diagnosis had affected them in the past, while 42% reported that a mental health diagnosis currently affected them.

In terms of past experiences with seeking help, 54% of participants reported that they had “never” or “not often” sought help from a family physician or doctor for a mental health concern, while 15% selected “frequently” or “very often.” For seeking help from a mental health professional, 56% indicated that they had “never” or “not often” sought this type of care, and 18% selected “frequently” or “very often.” Regarding seeking help from family members, 64% had “never” or “not often” used this source of assistance, while 12% indicated “frequently” or “very often.” Concerning help-seeking behaviors from friends, 58% indicated that they had “never” or “not often” sought this source, while 13% selected “frequently” or “very often.” In terms of church officials, 88% of participants had “never” or “not often” pursued this source of help, and around 1% had “frequently” or “very often” used this source. Lastly, 95% of

participants indicated that they had “never” or “not often” used a phone helpline, and only one participant indicated “frequently.”

Participants also rated their intentions to seek help for mental health concerns in the future. The source of help that participants were most likely to seek was an intimate partner ($M = 4.21$, $SD = 2.09$), followed by a doctor or general practitioner ($M = 4.07$, $SD = 1.69$), a mental health professional ($M = 4.03$, $SD = 1.92$), and a friend ($M = 3.95$, $SD = 1.77$). Less popular sources of help included other relatives/family members ($M = 2.88$, $SD = 1.75$), a parent ($M = 2.38$, $SD = 1.79$), a minister or religious leader ($M = 2.29$, $SD = 1.67$), and a phone helpline ($M = 2.04$, $SD = 1.39$). There was also some indication that some participants might not be likely to seek help at all ($M = 3.25$, $SD = 1.90$).

Descriptive statistics and bivariate correlations for all main study variables are presented in Table 1. At the bivariate level, we found a significant inverse correlation between general self-reliance and attitudes toward seeking professional psychological help ($r = -.40$). According to Cohen’s (1992) guidelines, where 0.10 indicates a small effect size, 0.30 a medium effect size, and 0.50 a large effect size, this relationship represents a medium effect size. As predicted, all correlations between our other major variables and attitudes toward seeking professional psychological help were negative, and the relationships amongst predictors (i.e., general self-reliance, public stigma, self-stigma, and mental health self-reliance) were positive. We found a mixture of medium and large effect sizes between all our variables. Large effect sizes included the relationships between public stigma and self-stigma, self-stigma and self-reliance about coping with mental health issues, self-stigma and attitudes toward seeking professional

psychological help, and mental health self-reliance and attitudes toward seeking professional psychological help.

Test of Hypothesized Model

A mediation analysis was conducted using Hayes' PROCESS macro (2017) to explore the possible serial mediating roles of public stigma, self-stigma, and mental health self-reliance in the association between general self-reliance and help-seeking attitudes. To test significance, we applied a bootstrapping analysis with 10,000 bootstrapping resamples to acquire 95% bias-corrected confidence intervals (CIs) for indirect effects (Preacher & Hayes, 2008; Shrout & Bolger, 2002). According to these guidelines, the indirect effects are considered significant if the CI does not contain zero (Preacher & Hayes, 2008). Since age and gender (female = 0, male = 1) were correlated with variables in our proposed model, we entered them as control variables in the model.

The results of our serial mediation model are shown in Figure 2. Our first control variable, age, was significantly related to public stigma ($p < .05$; $\beta = -.07$) and self-stigma ($p < .05$; $\beta = -.07$). Gender was significantly related to all but one of our variables of interest. Specifically, males scored higher than females in terms of public stigma ($p < .05$; $\beta = .07$), self-stigma ($p < .01$; $\beta = .08$), and mental health self-reliance ($p < .05$; $\beta = .06$). However, males scored lower than females for attitudes toward seeking professional psychological help ($p < .05$; $\beta = -.06$).

Consistent with our hypothesis, general self-reliance had a positive direct link to public stigma ($p < .001$; $\beta = .43$), self-stigma ($p < .001$; $\beta = .27$), and mental health self-reliance ($p < .001$; $\beta = .16$), along with a negative direct link to attitudes toward seeking professional

psychological help ($p < .05$; $\beta = -.07$). Public stigma had a direct link to self-stigma ($p < .001$; $\beta = .42$). However, contrary to our hypothesis, public stigma had a direct positive link to mental health self-reliance ($p < .01$; $\beta = .11$) and displayed no direct link with attitudes toward seeking professional psychological help. In support of our hypothesis, self-stigma had a positive direct link to mental health self-reliance ($p < .001$; $\beta = .42$) and a negative direct link to attitudes toward seeking professional psychological help ($p < .001$; $\beta = -.49$). Lastly, as predicted, mental health self-reliance had a negative direct link to attitudes toward seeking professional psychological help ($p < .001$; $\beta = -.22$).

Also consistent with our hypothesis, our four-stage chain of mediation from general self-reliance to attitudes toward seeking professional psychological help via higher public stigma, self-stigma, and self-reliance about coping with mental health problems in serial was significant ($p < .05$). The mean indirect (unstandardized) effect was $-.04$, the standard error of the mean indirect effect was $.01$, and the 95% confidence interval for the mean indirect effect was $[-.05, -.02]$. In addition, the model explained nearly half ($R^2 = .48$) of the variance in attitudes toward seeking psychological help.

CHAPTER FOUR

DISCUSSION

Our study extended models conceptualized by Jennings et al. (2015) and Vogel et al. (2007) that used serial mediation to predict help-seeking attitudes. These models were based upon Ajzen and Fishbein's (1980) theory of reasoned where the best predictors of whether a person intends to engage in a certain behavior concerns personal attitudes toward that behavior and perceptions of norms regarding that behavior. We also sought to incorporate cultural values (i.e., general self-reliance into our model) based on prior evidence (Abdullah & Brown, 2011; Kim & Omizo, 2003; Omizo et al., 2008) that has connected mental illness stigma and the utilization of mental health services to contextual variables. Therefore, we predicted that adherence to an important cultural value in rural Appalachia (general self-reliance) would serve as a critical factor in seeking psychological help from providers. Our findings reveal the importance that this cultural value may have on stigma, mental health self-reliance, and attitudes toward seeking professional psychological help. More specifically, our findings support a four-chain mediation model in which general self-reliance is related to attitudes toward seeking help from a mental health professional directly and indirectly via a serial path of higher levels of public stigma, higher levels of self-stigma, and more mental health self-reliance. Furthermore, general self-reliance had unique, direct links to self-stigma and mental health self-reliance. Public stigma was uniquely and directly related to mental health self-reliance but not to attitudes toward seeking professional psychological help. Lastly, self-stigma displayed a unique and direct link to attitudes toward seeking professional psychological help.

While our findings largely support the models proposed by Jennings et al. (2015) and Vogel et al. (2007) that conceptualize our mediators as acting both directly and in serial upon attitudes toward seeking professional psychological help, our study extended this research to consider an important but related cultural factor of general self-reliance in rural Appalachia as the initial predictor. Although other studies have indicated that cultural factors can act as an impediment to seeking help for mental health issues (e.g., Abdullah & Brown, 2011; Kim & Omizo et al., 2003; Omizo et al., 2008), this research had not specifically investigated rural Appalachian cultural values or this specific population. As rural areas are characterized by concerns about the acceptability, accessibility, and availability of healthcare (Mohatt et al., 2006), our study provides a basis for understanding why cultural standards and stigma may prevent rural Appalachians from reaching out for professional help with mental health issues.

One surprising finding concerns the significant direct relationship between public stigma and mental health self-reliance and the non-significant relationship between public stigma and attitudes toward seeking professional psychological help within our model. Jennings et al. (2015) had found a non-significant relationship between public stigma and mental health self-reliance once these factors were entered into their mediation model that we predicted would be replicated in our study. Although prior research supported a non-significant direct relationship between the variables once the other factors were entered into the model, it makes conceptual sense that a perception that the community stigmatizes mental health care would thus lead to a preference to rely on oneself for mental health issues. As an individualistic cultural value, self-reliance would discourage dependence on others, including psychological professionals.

Despite literature that supported a direct link between public stigma and attitudes toward seeking professional psychological help (e.g., Bathje & Prior, 2011; Corrigan, 2004; Tucker et al., 2013), Vogel et al. (2007) and Jennings et al. (2015) found that, when mediators, including self-stigma and mental health self-reliance, were added into their models, the relationship between public stigma and attitudes toward counseling became non-significant. Therefore, our finding that the relationship between public stigma and attitudes toward seeking professional psychological help became non-significant once our mediators were added to the model is consistent with research that has tested specific elements of our mediation model.

Aside from self-reliance, stigma emerged as a potential barrier for seeking out professional psychological help in rural Appalachia. Public stigma indirectly mediated the relationship between general self-reliance and attitudes toward counseling through self-stigma and mental health self-reliance, and the variable also showed direct links to our initial predictor and our two other mediators. Self-stigma was additionally directly related to general self-reliance, mental health self-reliance, and attitudes toward seeking professional psychological help. Therefore, both the perception that the community stigmatizes counseling and an internalized version of this notion contributed to attitudes toward seeking professional psychological help.

Clinical Implications

These findings have important treatment considerations for clinicians who provide mental health treatment in rural Appalachia and for providers in suburban and urban areas who might also service this population. First, as self-reliance is a strong rural value that may be present early in life, interventions should begin outside of the therapy. For example, one way to combat an

inclination to rely on oneself is for treatment providers to become more trusted in rural communities. Potential clients may be more likely to reach out to providers who are seen as a part of the community rather than separate since rural communities are often experienced as close-knit and akin to living in a “fishbowl” (Werth et al., 2010). Therefore, treatment providers with practices in rural Appalachia might consider increasing their connections to and visibility in the community.

Relatedly, our study showed that cultural values that typify rural Appalachia can serve as barriers to seeking out treatment for mental health concerns. Providers who treat rural Appalachian clients should be careful to educate themselves on the distinct values of rural culture and incorporate these factors in therapy. For example, reinforcing a client’s decision to pursue therapy and assessing potential barriers may be a relevant consideration of early treatment to increase buy-in and encourage clients to return for future sessions. Direct conversations about how self-reliance has impacted a client’s decisions and mental health may be meaningful discussion to have throughout therapy. This intervention might be particularly important because common coping strategies that rely on assistance from others, such as seeking social support, may be less likely to be pursued or welcomed when clients present with a strong value of self-reliance. At the same time, the ability to be self-reliant could represent a source of inner strength, pride, and resilience in clients, so while its potential to act as a barrier for treatment should be considered, the cultural value itself should not be pathologized.

The importance of stigma in our model suggests that measures should be taken to ensure privacy and confidentiality of clients. Increasing provider visibility in the community along with efforts at publicly demystifying the therapeutic process may contribute to decreased

stigmatization of mental health treatment. However, it is also imperative that providers maintain confidentiality in these circumstances. Mental health practices in rural areas might also furnish parking that allows clients to preserve their privacy, take special care to emphasize confidentiality during the informed consent process, and provide training to staff members about the importance of confidentiality.

Limitations and Future Directions

Certain limitations in our study should be noted. Our data were collected cross-sectionally between the dates of June 19, 2019 and March 8, 2020. In addition to our data not supporting causal inferences due to its cross-sectional nature, our conclusions could have been affected by rising fears about COVID-19 at the time of data collection. Although we ceased data collection before closings and lockdowns commenced in rural Appalachian states, our data could still have been affected by concerns about the global pandemic. In addition, participants self-selected to be included in our study. It is possible that individuals who were more likely to experience mental health problems, who had involvement with the mental healthcare field personally or professionally, or who harbored more favorable attitudes toward seeking out counseling were more likely to complete our survey. Another potential limitation relates to the fact that internet access was required to participate in the study. Although some participants (10%) may have completed the survey on library computers that did not require personal internet access, the vast majority (83%) discovered the survey via Facebook, meaning that most of these participants likely had personal access to the internet. Finally, although attitudes toward counseling and actual treatment seeking behaviors have been shown to be positively correlated (e.g., Jennings et al., 2015), attitudes do not necessarily equate to actual behaviors.

Future research might consider testing our model with other populations, such as men, who are known to also generally value self-reliance (e.g., Mahalik et al., 2003). Our sample lacked demographic diversity as the majority of participants were White and women. In addition, while we focused on the rural South, and many of our participants were regarded as Appalachian, future research might consider testing our sample in other rural regions, such as the Midwest. Although the majority of our sample (59%) reported official mental health diagnoses, and many of our participants experienced symptoms of anxiety and depression, replication efforts might focus on populations with other mental health diagnoses, such as substance abuse issues or serious mental illnesses.

Aside from our quantitative results, we included a question in our study where participants could provide additional comments. Although most individuals did not respond to this open-ended question, a few themes emerged from the responses that were collected. Many concerns of participants focused on the accessibility and availability of treatment providers. For example, lack of providers in local areas was a common complaint, and many participants discussed driving long distances to see counselors. In addition, cost emerged as a frequently described barrier to healthcare as many participants described financial factors in general along with insurance concerns. Others discussed past negative experiences with counselors or not being able to find a counselor with whom they enjoyed working. Another common concern was lack of privacy. Some participants worried about counselors breaking confidentiality or others knowing that they were seeing a counselor. Worries about safety of children, observations that older generations may be less likely to seek help, and discussions of frequent turnover of

providers were also discussed. Future studies might take these barriers more explicitly into account.

CHAPTER FIVE

CONCLUSION

Our study extends and supports existing help-seeking models by demonstrating that a cultural value of general self-reliance is linked to less favorable attitudes toward seeking professional psychological help in rural, Southern counties in the United States. Furthermore, it offers support for the roles of public stigma, self-stigma, and mental health self-reliance in explaining this link. These findings underscore the need to pay special attention to cultural factors in providing mental health treatment in rural areas. In addition, cultural concerns about privacy and confidentiality that may contribute to stigma should be addressed by treatment providers.

REFERENCES

- Abdullah, T., & Brown, T. L. (2011). Mental illness stigma and ethnocultural beliefs, values, and norms: An integrative review. *Clinical Psychology Review, 31*(6), 934–948.
<https://doi.org/10.1016/j.cpr.2011.05.003>
- Adler, A. B., Britt, T. W., Riviere, L. A., Kim, P. Y., & Thomas, J. L. (2015). Longitudinal determinants of mental health treatment-seeking by US soldiers. *British Journal of Psychiatry, 207*(4), 346–350. <https://doi.org/10.1192/bjp.bp.114.146506>
- Ajzen, I., & Fishbein, M. (1980). *Understanding attitudes and predicting social behavior*. Prentice-Hall.
- Antony, M. M., & Bieling, P. J., Cox, B. J., Enns, M. W., & Swinson, R. P. (1998). Psychometric properties of the 42-item and 21-item versions of the Depression Anxiety Stress Scales in clinical groups and a community sample. *Psychological Assessment, 10*(2), 176-181. <https://doi.org/10.1037/1040-3590.10.2.176>
- Bathje, G., & Pryor, J. (2011). The relationships of public and self-stigma to seeking mental health services. *Journal of Mental Health Counseling, 33*(2), 161–176.
<https://doi.org/10.17744/mehc.33.2.g632039274160411>
- Blank, M. B., Mahmood, M., Fox, J. C., & Guterbock, T. (2002). Alternative mental health services: The role of the Black church in the South. *American Journal of Public Health, 92*(10), 1668–1672. <https://doi.org/10.2105/AJPH.92.10.1668>
- Brenes, G. A., Danhauer, S. C., Lyles, M. F., Hogan, P. E., & Miller, M. E. (2015). Barriers to mental health treatment in rural older adults. *The American Journal of Geriatric Psychiatry, 23*(11), 1172–1178. <https://doi.org/10.1016/j.jagp.2015.06.002>

- Brown, R. (2017). Why America's rural newspapers still matter. *Public News Service*. Retrieved from <https://www.publicnewsservice.org/2017-12-29/consumer-issues/why-americas-rural-newspapers-still-matter/a60822-1>
- Cohen, J. (1992). A power primer. *Psychological Bulletin*, *112*(1), 155-159. Retrieved from <https://www.apa.org/pubs/journals/bul/>
- Corrigan, P. (2004). How stigma interferes with mental health care. *American Psychologist*, *59*(7), 614–625. <https://doi.org/10.1037/0003-066X.59.7.614>
- Czyz, E. K., Horwitz, A. G., Eisenberg, D., Kramer, A., & King, C. A. (2013). Self-reported barriers to professional help seeking among college students at elevated risk for suicide. *Journal of American College Health*, *61*(7), 398–406. <https://doi.org/10.1080/07448481.2013.820731>
- Dschaak, Z. A., & Juntunen, C. L. (2018). Stigma, substance use, and help-seeking attitudes among rural and urban individuals. *Journal of Rural Mental Health*, *42*(3-4), 184-195. <https://doi.org/10.1037/rmh0000097>
- Elhai, J. D., Schweinle, W., & Anderson, S. M. (2008). Reliability and validity of the Attitudes Toward Seeking Professional Psychological Help Scale-Short Form. *Psychiatry Research*, *159*(3), 320–329. <https://doi.org/10.1016/j.psychres.2007.04.020>
- Eller, R. D. (2008). *Uneven ground: Appalachia since 1945*. The University of Kentucky Press.
- Fischer, E. H., & Farina, A. (1995). Attitudes toward Seeking Professional Psychological Help: A shortened form and considerations for research. *Journal of College Student Development*, *36*(4), 368-373. Retrieved from <https://muse.jhu.edu/journal/238>

- Fischer, E. P., McSweeney, J. C., Wright, P., Cheney, A., Curran, G. M., Henderson, K., & Fortney, J. C. (2016). Overcoming barriers to sustained engagement in mental health care: Perspectives of rural veterans and providers. *The Journal of Rural Health, 32*(4), 429–438. <https://doi.org/10.1111/jrh.12203>
- Fox, J. C., Blank, M., Berman, J., & Rovnyak, V. G. (1999). Mental disorders and help seeking in a rural impoverished population. *The International Journal of Psychiatry in Medicine, 29*(2), 181–195. <https://doi.org/10.2190/Y4KA-8XYC-KQWH-DUXN>
- Fox, J., Merwin, E., & Blank, M. (1995). De facto mental health services in the rural South. *Journal of Health Care for the Poor and Underserved, 6*(4), 434–468. <https://doi.org/10.1353/hpu.2010.0003>
- Griffiths, K. M., Crisp, D. A., Jorm, A. F., & Christensen, H. (2011). Does stigma predict a belief in dealing with depression alone? *Journal of Affective Disorders, 132*(3), 413–417. <https://doi.org/10.1016/j.jad.2011.03.012>
- Gulliver, A., Griffiths, K. M., & Christensen, H. (2010). Perceived barriers and facilitators to mental health help-seeking in young people: A systematic review. *BMC Psychiatry, 10*. <https://doi.org/10.1186/1471-244X-10-113>
- Hamby, S., Taylor, E., Smith, A., Mitchell, K., & Jones, L. (2018). Technology in rural Appalachia: Cultural strategies of resistance and navigation. *International Journal of Communication, 12*, 1248-1268. Retrieved from <https://ijoc.org/index.php/ijoc>
- Hayes, A. F. (2017). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach* (2nd ed., Methodology in the Social Sciences). Guilford Press.

- Heath, P. J., Brenner, R. E., Vogel, D. L., Lannin, D. G., & Strass, H. A. (2017). Masculinity and barriers to seeking counseling: The buffering role of self-compassion. *Journal of Counseling Psychology, 64*(1), 94–103. <https://doi.org/10.1037/cou0000185>
- Held, P., & Owens, G. P. (2012). Stigmas and attitudes toward seeking mental health treatment in a sample of veterans and active duty service members. *Traumatology, 19*(2), 136-143. <https://doi.org/10.1177/1534765612455227>
- Henry, J. D., & Crawford, J. R. (2005). The short-form version of the Depression Anxiety Stress Scales (DASS-21): Construct validity and normative data in a large non-clinical sample. *British Journal of Clinical Psychology, 44*(2), 227–239. <https://doi.org/10.1348/014466505X29657>
- Hoyt, D. R., Conger, R. D., Valde, J. G., & Weihs, K. (1997). Psychological distress and help seeking in rural America. *American Journal of Community Psychology, 25*(4), 449–470. <https://doi.org/10.1023/A:1024655521619>
- IBM Corp. (2019). IBM SPSS Statistics for Windows, Version 26.0. IBM Corp.
- Jennings, K. S., Cheung, J. H., Britt, T. W., Goguen, K. N., Jeffirs, S. M., Peasley, A. L., & Lee, A. C. (2015). How are perceived stigma, self-stigma, and self-reliance related to treatment-seeking? A three-path model. *Psychiatric Rehabilitation Journal, 38*(2), 109–116. <https://doi.org/10.1037/prj0000138>
- Jones, L. (1991). Appalachian values. In B. Ergood & B. E. Kuhre (Eds.), *Appalachia: Social context, past and present* (3rd edition; pp. 169-173). Kendall/Hunt Publishing Company.

- Kim, B. S. K., & Omizo, M. M. (2003). Asian cultural values, attitudes toward seeking professional psychological help, and willingness to see a counselor. *The Counseling Psychologist, 31*(3), 343–361. <https://doi.org/10.1177/0011000003031003008>
- Komiya, N., Good, G. E., & Sherrod, N. B. (2000). Emotional openness as a predictor of college students' attitudes toward seeking psychological help. *Journal of Counseling Psychology, 47*(1), 138-143. <https://doi.org/10.1037/0022-0167.47.1.138>
- Larson, J. E., & Corrigan, P. W. (2010). Psychotherapy for self-stigma among rural clients. *Journal of Clinical Psychology, 66*(5), 524-536. <https://doi.org/10.1002/jclp.20679>
- Lovibond, S. H., & Lovibond, P. F. (1995). Manual for the depression anxiety stress scales. Psychology Foundation
- Mahalik, J. R., Locke, B., Ludlow, L., Diemer, M., Scott, R. P. J., Gottfried, M., & Freitas, G. (2003). Development of the Conformity to Masculine Norms Inventory. *Psychology of Men and Masculinity, 4*(1), 3-25. <https://doi.org/10.1037/1524-9220.4.1.3>
- Mansfield, A. K., Addis, M. E., & Courtenay, W. (2005). Measurement of men's help seeking: Development and evaluation of the Barriers to Help Seeking Scale. *Psychology of Men & Masculinity, 6*(2), 95–108. <https://doi.org/10.1037/1524-9220.6.2.95>
- Marshall, J. L., Thomas, L., Lane, N. M., Holmes, G. M., Arcury, T. A., Randolph, R., Silberman, P., Holding, W., Villamil, L., Thomas, S., Lane, M., Latus, J., Rodger, J., & Ivey, K. (2017). *Health disparities in Appalachia*. Robert Wood Johnson Foundation.
- Mohatt, D. F., Adams, S. J., Bradley, M. M., & Morris, C. D. (Eds.). (2006). *Mental health and rural America, 1994-2005: An overview and annotated bibliography* (3rd ed.). Health Resources and Services Administration, Office of Rural Health Policy.

- Morgan, E. H., Graham, M. L., Folta, S. C., & Seguin, R. A. (2016). A qualitative study of factors related to cardiometabolic risk in rural men. *BMC Public Health, 16*.
<https://doi.org/10.1186/s12889-016-2977-1>
- National Institute of Mental Health. (2019). *Mental illness*. Retrieved from
<https://www.nimh.nih.gov/health/statistics/mental-illness.shtml>
- Omizo, M. M., Kim, B. S. K., & Abel, N. R. (2008). Asian and European American cultural values, bicultural competence, and attitudes toward seeking professional psychological help among Asian American adolescents. *Journal of Multicultural Counseling and Development, 36*(1), 15–28. <https://doi.org/10.1002/j.2161-1912.2008.tb00066.x>
- Parent, M. C., & Moradi, B. (2009). Confirmatory factor analysis of the Conformity to Masculine Norms Inventory and development of the Conformity to Masculine Norms Inventory-46. *Psychology of Men & Masculinity, 10*(3), 175–189.
<https://doi.org/10.1037/a0015481>
- Pattyn, E., Verhaeghe, M., Sercu, C., & Bracke, P. (2014). Public stigma and self-stigma: Differential association with attitudes toward formal and informal help seeking. *Psychiatric Services, 65*(2), 232–238. <https://doi.org/10.1176/appi.ps.201200561>
- Peen, J., Schoevers, R. A., Beekman, A. T., & Dekker, J. (2010). The current status of urban-rural differences in psychiatric disorders. *Acta Psychiatrica Scandinavica, 121*(2), 84–93.
<https://doi.org/10.1111/j.1600-0447.2009.01438.x>
- Pinto, M. D., Hickman, R. L., & Thomas, T. L. (2015). Stigma Scale for Receiving Psychological Help (SSRPH): An examination among adolescent girls. *Western Journal of Nursing Research, 37*(12), 1644–1661. <https://doi.org/10.1177/0193945914543954>

- Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods*, *40*, 879–891. doi:10.3758/BRM.40.3.879
- Probst, J. C., Laditka, S. B., Moore, C. G., Harun, N., Powell, M. P., & Baxley, E. G. (2006). Rural-urban differences in depression prevalence: Implications for family medicine. *Family Medicine*, *38*(9), 653-660. Retrieved from <https://journals.stfm.org/familymedicine>
- Pumpa, M., & Martin, G. (2015). The impact of attitudes as a mediator between sense of autonomy and help-seeking intentions for self-injury. *Child and Adolescent Psychiatry and Mental Health*, *9*(27). <https://doi.org/10.1186/s13034-015-0058-3>
- Real, B., & Rose, R. N. (2017). *Rural libraries in the United States: Recent strides, future possibilities, and meeting community needs*. American Library Association Office for Information Technology Policy.
- Shrout, P. E., & Bolger, N. (2002). Mediation in experimental and nonexperimental studies: New procedures and recommendations. *Psychological Methods*, *7*(4), 422–445. doi:10.1037//1082-989X.7.4.422
- Smith, S. L., & Tessaro, I. A. (2005). Cultural perspectives on diabetes in an Appalachian population. *American Journal of Health Behavior*, *29*(4), 291–301. <https://doi.org/10.5993/AJHB.29.4.1>
- Snell-Rood, C., Hauenstein, E., Leukefeld, C., Feltner, F., Marcum, A., & Schoenberg, N. (2017). Mental health treatment seeking patterns and preferences of Appalachian women

- with depression. *American Journal of Orthopsychiatry*, 87(3), 233–241.
<https://doi.org/10.1037/ort0000193>
- Starcher, R. W., Geurin, L., Shannon, L., & Whitley, A. (2017). Assessing the likelihood of seeking health care in rural Kentucky: Applying the Barriers to Help Seeking Scale to Appalachian and non-Appalachian undergraduates. *Journal of Appalachian Studies*, 23(2), 239-258. Retrieved from <http://www.jstor.org/stable/10.5406/jappastud.23.2.0239>
- Stewart, H., Jameson, J. P., & Curtin, L. (2015). The relationship between stigma and self-reported willingness to use mental health services among rural and urban older adults. *Psychological Services*, 12(2), 141–148. <https://doi.org/10.1037/a0038651>
- Tabachnick, B. G., & Fidell, L. S. (2013). *Using multivariate statistics* (6th ed.). Pearson Education.
- Tucker, J. R., Hammer, J. H., Vogel, D. L., Bitman, R. L., Wade, N. G., & Maier, E. J. (2013). Disentangling self-stigma: Are mental illness and help-seeking self-stigmas different? *Journal of Counseling Psychology*, 60(4), 520–531. <https://doi.org/10.1037/a0033555>
- United States Department of Agriculture. (2016). *Rural America at a Glance*. Retrieved from <https://www.ers.usda.gov/webdocs/publications/80894/eib-162.pdf?v=0>
- United States Department of Agriculture Economic Research Services. (2018). *Overview*. Retrieved from <https://www.ers.usda.gov/topics/rural-economy-population/rural-classifications/>
- United States Department of Agriculture Economic Research Services. (2016). *Rural-Urban Continuum Codes*. Retrieved from <https://www.ers.usda.gov/data-products/rural-urban-continuum-codes.aspx>

- Vogel, D. L., Bitman, R. L., Hammer, J. H., & Wade, N. G. (2013). Is stigma internalized? The longitudinal impact of public stigma on self-stigma. *Journal of Counseling Psychology, 60*(2), 311–316. <https://doi.org/10.1037/a0031889>
- Vogel, D. L., Heimerdinger-Edwards, S. R., Hammer, J. H., & Hubbard, A. (2011). “Boys don’t cry”: Examination of the links between endorsement of masculine norms, self-stigma, and help-seeking attitudes for men from diverse backgrounds. *Journal of Counseling Psychology, 58*(3), 368–382. <https://doi.org/10.1037/a0023688>
- Vogel, D. L., Wade, N. G., & Haake, S. (2006). Measuring the self-stigma associated with seeking psychological help. *Journal of Counseling Psychology, 53*(3), 325–337. <https://doi.org/10.1037/0022-0167.53.3.325>
- Vogel, D. L., Wade, N. G., & Hackler, A. H. (2007). Perceived public stigma and the willingness to seek counseling: The mediating roles of self-stigma and attitudes toward counseling. *Journal of Counseling Psychology, 54*(1), 40–50. <https://doi.org/10.1037/0022-0167.54.1.40>
- Wagenfeld, M. O. (2003). A snapshot of rural and frontier America. In B. H. Stamm (Ed.), *Rural behavioral health care: An interdisciplinary guide* (pp. 33-40). American Psychological Association.
- Wang, P. S., Lane, M., Olfson, M., Pincus, H. A., Wells, K. B., & Kessler, R. C. (2005). Twelve-month use of mental health services in the United States: Results from the National Comorbidity Survey Replication. *Archives of General Psychiatry, 62*(6), 629-640. <https://doi.org/10.1001/archpsyc.62.6.629>

- Werth, J. L., Hastings, S. L., & Riding-Malon, R. (2010). Ethical challenges of practicing in rural areas. *Journal of Clinical Psychology, 66*(5), 537-548. <https://doi.org/10.1002/jclp.20681>
- Weston, R., & Gore, P. A. (2006). A brief guide to Structural Equation Modeling. *The Counseling Psychologist, 34*(5), 719–751. <https://doi.org/10.1177/0011000006286345>
- Wilson, C. J., Deane, F. P., Ciarrochi, J. V., & Rickwood, D. (2005). Measuring help seeking intentions: Properties of the General Help Seeking Questionnaire. *Canadian Journal of Counselling and Psychotherapy, 39*(1), 15-28. Retrieved from <https://cjc-rcc.ucalgary.ca/index>

APPENDIX

TABLE 1
MEANS, STANDARD DEVIATIONS, AND CORRELATIONS AMONG
VARIABLES FOR TOTAL SAMPLE (N = 783)

Variables	M	SD	1	2	3	4	5
1. General Self-Reliance	8.01	2.88	-	.44***	.46***	.41***	-.40***
2. Public Stigma	6.58	3.21		-	.55***	.42***	-.41***
3. Self-Stigma	23.90	6.71			-	.57***	-.66***
4. Mental Health Self-Reliance	14.30	9.01				-	-.54***
5. Attitudes toward Seeking Help	20.12	6.22					-

Note. *** $p < .001$

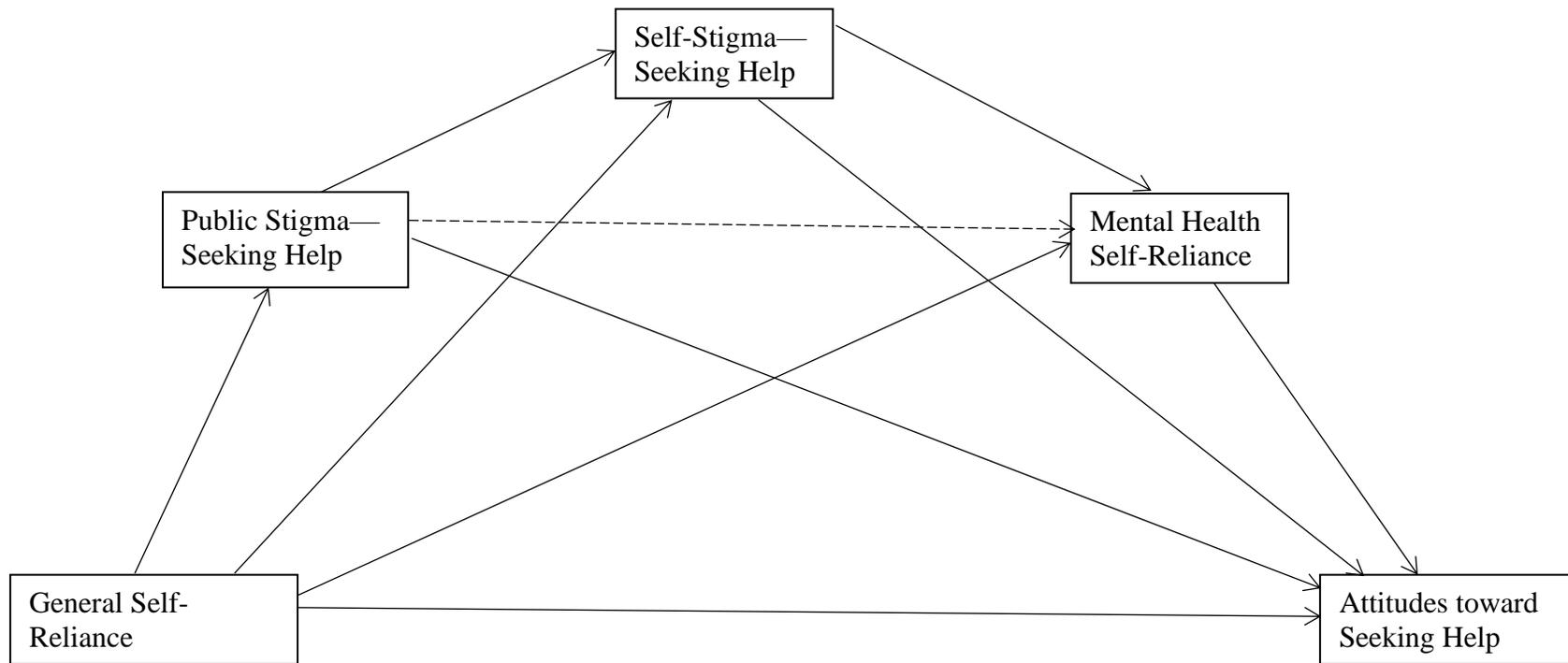
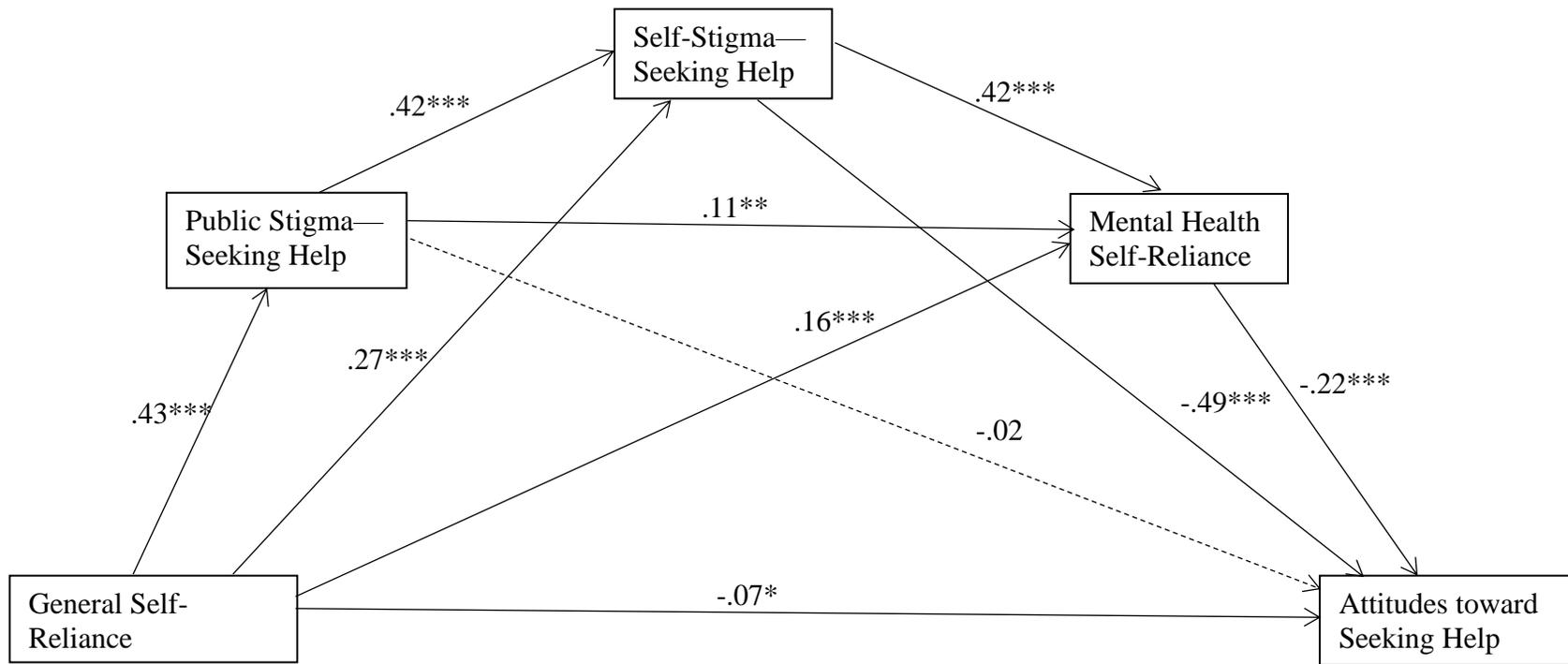


FIGURE 1
CONCEPTUAL MODEL OF HYPOTHESIZED RELATIONS



Note. Gender and age are not shown but were entered into the model as control variables. Values reflect standardized coefficients.

* $p < .05$, ** $p < .01$, *** $p < .001$

Figure 2

Serial Path Model of Direct and Indirect Relations between General Self-Reliance and Attitudes toward Seeking Professional Psychological Help

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