2010

Individual Contributions to Stigma and Attitudes Toward Help-Seeking among Rural Emerging Adult College Students

Margaret Gsell
Virginia Commonwealth University

INDIVIDUAL CONTRIBUTIONS TO STIGMA AND ATTITUDES TOWARDS HELP-SEEKING AMONG RURAL EMERGING ADULT COLLEGE STUDENTS

A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy at Virginia Commonwealth University.

By

MARGARET RAY GSELL

Master of Science, Virginia Commonwealth University, 2008
Bachelor of Science, Virginia Commonwealth University, 2006

Director of Dissertation: Wendy Kliewer, PhD
Professor, Department of Psychology

Virginia Commonwealth University
Richmond, Virginia
August 2011

Acknowledgments

I would like to thank members of my dissertation committee, Dr. Wendy Kliewer, Dr. Steven Danish, Dr. Everett Worthington, Dr. Natalie Shook and Dr. Kathy Wibberly for their support, expertise, and patience in serving as advisors to this project. I would like to particularly thank my research advisor, committee chair and mentor Dr. Wendy Kliewer for her invaluable dedication and support during my undergraduate and graduate career. Wendy, you saw something in me before I saw it for myself, thank you. Thanks go as well to my wonderful husband, Christopher Gsell, who brightens each day with laughter and encourages me to pursue my dreams. Also I would like to thank my amazing parents, Joseph and Lee Ray for their investment in me as a daughter and continuing support. To my sister for her passion for life and tender heart which inspire me to be a better person. Finally, thanks go to my friends and colleagues for understanding and encouragement when the hurdles of life seem too overwhelming.

Table of Contents

List of Tables

Page

List of Figures

Page

Abstract

INDIVIDUAL CONTRIBUTIONS TO STIGMA AND ATTITUDES TOWARD HELP-SEEKING AMONG RURAL EMERGING ADULT COLLEGE STUDENTS

By Margaret Ray Gsell, M.S.

A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy at Virginia Commonwealth University

Virginia Commonwealth University, 2010

Major Director: Wendy L. Kliewer, Ph.D.
Professor, Department of Psychology

Rural communities are by definition less densely populated and more geographically isolated than non-rural communities, which often translates into higher rates of poverty and poor access to health care, especially mental health care. Previous research has found that persons residing in rural communities endorse higher rates of stigmatized beliefs towards individuals with mental illness and subsequently lower rates of professional help-seeking when compared to persons residing in non-rural communities. This study evaluated whether these attitudes were also present among emerging adults (18-24 years old) who had lived in a rural community for at least 10 years and were currently enrolled in a Virginia university. Further, this study extended prior work relating individual values linked to rural residence, stigma and professional (primary care provider and mental health specialist) help-seeking by also evaluating non-professional (spiritual leaders, family and friends) sources of help, a

particularly salient source of help in rural communities. Three colleges were sites for recruitment (*N*=225) and surveys were completed online. Contrary to prediction, no rural cultural variable emerged within the data. Structural equation modeling was used to examine the relation among each of the hypothesized rural cultural variables (religious commitment, internal health locus of control, low emotional openness and family cohesion), stigma towards mental illness and both professional and non-professional help-seeking attitudes and behaviors. Values were entered into models as unique contributors of stigma and help-seeking attitudes. Religious commitment, internal health locus of control and low emotional openness were positively related to stigmatized beliefs towards persons with mental illness. As hypothesized, participants with stigmatized beliefs towards those with mental health concerns also endorsed low levels of professional help-seeking attitudes. However, there were no significant relations for non-professional help-seeking attitudes. Stigma reduced help-seeking behaviors from professional providers and increased help-seeking from religious providers. However, contrary to predictions, persons who endorsed stigma also endorsed prior help-seeking from family members and friends for mental health concerns. Future research can expand these findings by using longitudinal methodology with both rural emerging adults seeking higher education as well as their rural community dwelling counterparts.

Key words: rural culture, religious commitment, internal health locus of control, family cohesion, emotional openness, mental illness stigma, help-seeking, professional and non-professional

Individual Contributions to Stigma and Attitudes toward Help-Seeking among Rural Emerging Adult College Students

Review of the Literature

Americans have extolled the beauty in rural parts of our nation. Songs describe the majesty of our mountains and fruitfulness of our fields, literature describes exploring the wild frontier, and artists depict wide open spaces and the simplicity of country living. Despite these depictions, reality doesn't necessarily reflect these iconic images. In reality, rural residents are more likely to live in poverty, lack health insurance, report poorer health, have a chronic health condition and be unemployed as compared to urban residents (Wagenfeld, 2003). Rural America comprises 90% of the landmass and yet has approximately 25% of the U.S. population (Bureau of the Census, 2001). As a population, rural inhabitants earn less income and include a higher proportion of the elderly (Wagenfeld, 2003). Rural areas lack the social and health services necessary and existing services are fragmented (Jameson & Blank, 2007). Mental health care in rural communities is especially fragmented and overall there are fewer mental health providers (Wagenfeld, 2003). Although there is limited evidence to support that mental illness is more prevalent in rural communities compared to urban communities, rural community members are less likely to seek help for mental health related concerns due to a number of systemic as well as individual attitudinal reasons (Wagenfeld, 2003). The National Rural Health Association (1999) provided an excellent

example of one attitudinal barrier to help seeking for mental health concerns in rural areas in an issue paper that includes the following vignette:

> A 35 year old man from 200 miles outside of Albuquerque, New Mexico spent the night in a field near his home, repeatedly holding the gun to his head and then "losing nerve" and shooting into the sky. The man said for the past two weeks he could not rid himself of the idea of killing himself. He reported nightmares, intrusive thoughts, irritability, avoidance and anxiety. He had not sought care because he didn't want to be identified going to the rural "mental clinic" and had little money to go elsewhere. "Everyone watches who goes in there," he said. "My mom works down the street. If you go in, they think you are crazy. I didn't want them to know I was weak. I didn't want to lose my job. I didn't want the whole town to know I was nuts."

The current study examines rural residence as a "state of mind" (Wagenfeld et al., 2003) and explores how attitudes of individuals living in rural Virginia affect the utilization of mental health care. Specifically, the current study will examine psychological variables hypothesized to comprise a place-based identity or level of rural acculturation. The hypothesized rural cultural variable is based on values historically associated with agrarian living including high levels of religious commitment, internal locus of control, high family cohesion and low levels of openness to emotions as they may relate to help seeking for mental health concerns. Further, this study seeks to examine whether these cultural values are salient for current emerging adult (18-24 years old) college students. I hypothesized that high levels of rural cultural identification would be associated with low levels of professional help seeking, high levels of non-professional help seeking and high levels of stigma towards mental illness. Stigma toward mental illness is expected to negatively affect professional help

seeking for mental health problems and to explain the relation between rurality and professional and non-professional help seeking.

The current study contributes to the literature by exploring how rural place-based identity contributes to stigma towards mental illness as well as help-seeking. While there is evidence for higher rates of stigma and lower rates of help seeking among rural community samples it is unclear whether this trend remains for an emerging cohort of younger rural residents seeking higher education. Further, this study sought to evaluate whether values historically associated with agrarian living were present within this emerging rural cohort and how these values relate to stigma and help seeking.

The following literature review will summarize individual values of rural residents as they relate to help seeking for mental health concerns. First what it means to be rural will be examined by critiquing commonly held definitions of rural residence as well as agrarian based cultural values. Next, the literature on help seeking will be reviewed, including distinctions between professional versus non-professional help seeking in rural communities, and individual versus systemic predictors of help-seeking. Finally, the special role of stigma toward psychological problems as a predictor of help seeking will be evaluated.

Rurality

The commonly accepted definitions of rurality used in public policy are considered first. Next, rural cultural characteristics described within sociological and health outcomes research is examined. Finally, rural mental health care is reviewed.

Defining "rural." There is no single, universally accepted definition of rural, and currently more than 15 definitions of "rural" are being used by federal programs (Coburn et al., 2007). Rurality is often difficult to quantify due to a lack of agreement on requirements

for the designation of communities based on number of inhabitants. Therefore, Wagenfeld (2003) describes defining rural as a "surprisingly difficult task." Jameson and Blank (2007) state the task of defining rural "should not be taken lightly since the method by which rural is defined can have a far-reaching impact on the application of policy." Additionally, when there is a considerable amount of variability in rural definitions, research findings and policies may appear to conflict when the findings and policies are based on different rural definitions and populations (Hart et al., 2005). Defining rural may be difficult because the definitions are sometimes as diverse as the places and populations they are meant to classify (Stamm et al., 2001). Within the United States, just over 80% of the land and about 20% (55 million) of the population were defined as "rural" when generalizing across definitions (Stamm et al., 2001). America was once considered rural in that the majority of people resided in rural areas whereas the majority of the population is now clustered in urban areas with the majority of landmass still categorized as rural. According to Stamm and colleagues (2001), "no approach to defining rural is entirely satisfactory; such definitions are always arbitrary, and any one definition may not take into account other important variables, possibly the only thread that ties them together is their lower population densities." Rurality is certainly a continuous variable, and attempts to label it as categorical will probably always be problematic because none of the methods take into consideration the economic base, values or perceptions of inhabitants as to the rurality of their area (Jameson & Blank, 2007). Jameson and Blank (2007) state they believe it is doubtful that a consensus will "ever be reached on a definition that fully captures the demographic, cultural and economic aspects of rurality." However, future research efforts should still be undertaken to define rural due to the implications of rural definitions on public policy. The reason we should care about these

often times tedious definitions is that definitions of rural are often the basis for targeting resources to underserved rural populations (Hart et al., 2005).

Definitions of rural often vary depending on their intended purpose. As mentioned above, rural community membership will be examined within the following review as it is used to inform public policy decision making, especially in that there are significant health disparities between rural and urban dwellers. Although there is often wide variety in the definition of place as rural, most definitions have been based on population density while other definitions are based on census findings, zip code approximations, county boundaries, proximity and degree of urbanization, adjacency and relationship to a metropolitan area, principal economic activity and work commutes (Hart et al., 2005). According to Hart and colleagues (2005) an appropriate taxonomy should: "measure something explicit and meaningful, be replicable, be derived from available, high quality data, be quantifiable and not subjective and have on-the-ground validity." Furthermore, all definitions will either "under-bound or over-bound" rurality. For example, under-bounding is found is a large county contains a large city but also less densely settled area considered rural based on economic activities, landscape and service level yet considered urban due to county's large city (Hart et al., 2005). At the same time "urban" is over-bounded. While these problems are inherent to any definition of rural, "the researcher must simply be aware of this problem when evaluating data across the rural and urban dimension (Hart et al., 2005)." Due to numerous ways of defining rural and urban categories, The following will review the four definitions most often applied to public policy: Office of Management and Budget (OMB), Census Bureau, Rural Urban Commuting Area (RUCA) and USDA Economic Research Service Urban Codes (Hart et al., 2005).

The Office of Management and Budget (OMB) definition of rural is used extensively in federal policy. According to this definition, counties are assigned as metropolitan (n=1,090) or non-metropolitan (n = 2,052) according to 2000 census data (Hart et al., 2005). Metropolitan counties are designated as central with 1 or more urbanized areas (cities with a population greater than or equal to 50,000) and outlying counties that are economically tied to the core, which was measured by commuting to work (Hart et al., 2005). Non-metropolitan counties were previously designated as any counties that did not meet the criteria for metropolitan. In 2003, improvements were made to these designations such that non-metropolitan counties are now designated as micropolitan or non-core. Micropolitan counties are those nonmetropolitan counties with the presence of an urban cluster (areas with a population less than 50,000 but greater than 2,500 people) and overall with a population of 10,000 or more (Hart et al., 2005). Non-core non-metropolitan counties are those counties that do not meet the designation of micropolitan (Hart et al., 2005). The strength of this type of classification is that basing rurality, or non-metropolitan status, on counties is relatively stable over time since county boundaries do not frequently change (Hart et al., 2005). These county-based definitions are the foundation for other, more detailed definitions building on metropolitan versus non-metropolitan (Hart et al., 2005). The OMB definition also is frequently used when determining eligibility and reimbursement levels for more than 30 federal programs, including Medicare reimbursement levels and programs designed to ameliorate provider shortages in rural areas (Hart et al., 2005). However, there are obvious weaknesses to using a dichotomous designation for a county that might have been determined as rural or non-metropolitan but instead is categorized as urban due to the presence of a large urban core (Hart et al., 2005).

Although there is some overlap with the OMB definition, the Census Bureau uses slightly different definitions of rural and urban. The Census Bureau defines urban areas as either urbanized areas (with populations of 50,000 or more) and urban clusters (2,500 to 49,999) with rural as any other areas not meeting criteria as urban areas (Hart et al., 2005). In 2000, 59 million people or 21% of the nation's population was considered rural (Hart et al., 2005). The Census Bureau is used for much of the demographic and economic data of the nation's population. Often times the urban clusters and urbanized areas are aggregated as urban areas and therefore "possibly misleading rural health policy makers" (Hart et al., 2005).

There is considerable overlap between OMB and Census definitions such that in 1990, 37.3% of individuals living in OMB-defined non-metropolitan (rural) areas were categorized as urban dwellers by the U.S. Census Bureau and 13.8% of individuals in OMB-defined metropolitan areas were defined as rural dwellers by the census (Jameson & Blank, 2007). Again in 2000, 11% of the population was considered metropolitan (OMB-definition) but also rural (Census Bureau) and 7% were non-metropolitan but also urban (Hart et al, 2005). More concretely in 2000, 30 million rural people as defined by the Census Bureau live in OMB-defined metropolitan areas (Coburn et al., 2007).

The Rural Urban Commuting Area (RUCA) Taxonomy developed by University of Washington and the Economic Research Service, with funding from the Federal Office of Rural Health Policy and the Economic Research Service (Hart et al., 2005), is the third major group to use a definition of rurality. The RUCA uses census commuting data to classily census tracts on the basis of geography and work commuting flows between places (Hart et al., 2005). The RUCA taxonomy differentiates between rural areas based on their level of

integration with urban areas and other rural areas (Hart et al., 2005). The RUCA codes allow for many levels up to 33 categories with different combinations of work commuting areas as well as the population size of towns or settlements (Hart et al., 2005). For example, a small town where the majority of citizens are commuting is to a large city is distinguished from a similarly sized town where there is commuting connectivity primarily to other small towns (Hart et al., 2005). RUCA codes range from the core urbanized areas to remote rural areas where the population is less than 2,500 and there is no meaningful community pattern to urbanized areas (Hart et al., 2005). The RUCA also has an alternative determination of population based on zip codes versus counties which is advantageous for using zip code based health data (Hart et al., 2005). The RUCAs are widely used for policy such as the Centers for Medicare and Medicaid Services (Hart et al., 2005). RUCAs can identify the rural portions of metropolitan counties and the urban portions of non-metropolitan counties versus making dichotomous decisions based on two categories as rural versus urban (Hart et al., 2005).

Finally, the United States Department of Agriculture's Economic Research Service (ERS) Urban Influence Codes is "the most popular definition used for policy decisions" (Jameson & Blank, 2007). This definition is similar to the RUCA code in that there is a continuum in which urban-rural are classified but it is based off the OMB codes (Hart et al., 2005). This coding scale assigns a code on a scale of 1 (most urban) to 9 (most rural). Counties coded 1-3 are considered metropolitan, whereas counties coded 4-9 are considered non-metropolitan (Jameson & Blank, 2007). The nonmetropolitan counties are grouped according to their adjacency and non-adjacency to metropolitan counties and the size of the largest urban settlement within the county (Hart et al., 2005). The use of the largest urban

settlement or town is associated with the likelihood of local availability of hospitals, clinics and specialty services as an indicator of health care availability (Hart et al., 2005). This coding system is used often in research but rarely used in state and federal policies (Hart et al., 2005).

The 2008 Virginia State Rural Health Plan Data and Rural Definitions Council reviewed many of the most common rural definitions that currently are utilized throughout the country and considered how well each definition incorporates Virginia's unique governmental entity structure of counties and cities (Virginia Department of Health, 2008). The Isserman definition was chosen for the development of the Virginia Rural Health Plan; this definition also is favored by the Center and Council for Rural Virginia, an organization that deals primarily with rural economic development in the state (Virginia Department of Health, 2008). The Isserman definition was developed in 2005 through funding by the U.S. Department of Agriculture to identify rural and urban health related disparities (Isserman, 2005). It combines elements of the two existing federal systems (U.S. Census Bureau & OMB definitions) to create a rural-urban density typology that differentiates urban and rural on the county level (Isserman, 2005). The Isserman definition uses four county geographical classifications: (1) rural, (2) mixed rural, (3) mixed urban, and (4) urban (Isserman, 2005). A rural county is one in which the county's population density is less than 500 people/square mile, and 90 percent of the county population is in a rural area or the county has no urban area with population of 10,000 or more (Isserman, 2005). An urban county is one in which the county's population density is at least 500 people per square mile, 90 percent of the county population lives in urban areas, the county's population in urbanized areas is a least 50,000 or 90 percent of the county population (Isserman, 2005). A mixed rural county is one

which meets neither the urban nor the rural county criteria, and its population density is less than 320 people per square mile (Isserman, 2005). A mixed urban county is one which meets neither the urban nor the rural county criteria, and its population density is at least 320 people per square mile (Isserman, 2005). The Isserman definition will be used in the current study to describe the counties of residence for the participants. See Table 1 and Figure 1 for rural Virginia as categorized by Isserman (2005).

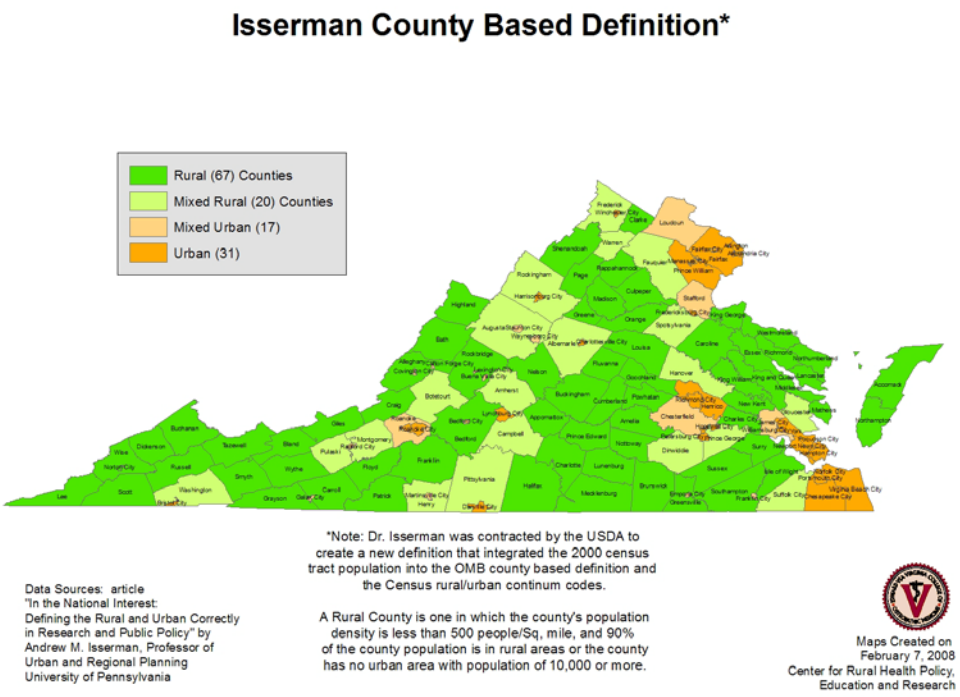

Figure 1. Isserman County Based Definition of Virginia.

Table 1

Isserman Rural and Urban Geographical Classification Summary

Rural Geographical Classification			
Accomack County	Cumberland County	Lancaster County	Prince Edward County
Alleghany County	Dickenson County	Lee County	Rappahannock County
Amelia County	Essex County	Louisa County	Richmond County
Appomattox County	Floyd County	Lunenburg County	Rockbridge County
Bath County	Fluvanna County	Madison County	Russell County
Bedford County	Franklin County	Mathews County	Scott County
Bland County	Giles County	Mecklenburg County	Shenandoah County
Brunswick County	Goochland County	Middlesex County	Smyth County
Buchanan County	Grayson County	Nelson County	Southampton County
Buckingham County	Greene County	New Kent County	Surry County
Caroline County	Greensville County	Northampton County	Sussex County
Carroll County	Halifax County	Northumberland County	Tazewell County
Charles City County	Highland County	Nottoway County	Westmoreland County
Charlotte County	Isle of Wight County	Orange County	Wise County
Clarke County	King and Queen County	Page County	Wythe County
Craig County	King George County	Patrick County	Norton city
Culpeper County	King William County	Powhatan County	
Mixed Rural Geographical Classification			
Albemarle County	Dinwiddie County	Henry County	Rockingham County
Amherst County	Fauquier County	Montgomery County	Spotsylvania County
Augusta County	Frederick County	Pittsylvania County	Warren County
Botetourt County	Gloucester County	Prince George County	Washington County
Campbell County	Hanover County	Pulaski County	Suffolk city
Mixed Urban Geographical Classification			
Chesterfield County	Stafford County	Covington City	Lexington City
James City County	Bedford City	Emporia City	Martinsville City
Loudoun County	Buena Vista City	Franklin City	Radford City
Roanoke County	Clifton Forge City	Galax City	Staunton City
			Waynesboro City
Urban Geographical Classification			
Arlington County	Charlottesville City	Harrisonburg City	Poquoson City
Fairfax County	Chesapeake City	Hopewell City	Portsmouth City
Henrico County	Colonial Heights City	Lynchburg City	Richmond City
Prince William County	Danville City	Manassas City	Roanoke City
York County	Fairfax City	Manassas Park City	Salem City
Alexandria City	Falls Church City	Newport News City	Virginia Beach City
Bristol City	Fredericksburg City	Norfolk City	Williamsburg City
	Hampton City	Petersburg City	Winchester City

Rural cultural characteristics. Definitions of rurality often are based on demographic variables while cultural values often are neglected. People living in rural areas have been known to have a strong sense of community and extended social networks in which word travels fast and everybody knows everybody (Wagenfeld, 2003). According to Wagenfeld (2003) "a pervasive view, firmly entrenched in the literature and the mass media "is that rural persons have values different from those of persons from urban areas." However, there is considerable debate in the literature regarding the specific values of rural people. A number of researchers have suggested that rural values in contrast to urban ones stress "self reliance, conservatism, a distrust of outsiders, religion, work orientation, emphasis on family, individualism and fatalism (Wagenfeld, 2003)." According to a doctoral level psychologist working in a primary care clinic for 12 years with central and southern Appalachian rural residents, it is clear that internal characteristics play a role in not accessing psychological care (Elder, 2007). Elder discussed in an invited commentary on rural Appalachian help seeking that these residents often wish to "take care of the problem themselves which is based on an ethos of self-reliance that has long roots in this geographically isolated and economically disadvantaged community." On the other hand it has also been argued that the gap between rural and urban values "if it exists, is shrinking (Wagenfeld, 2003)." This may be the case because of the widespread available of media, including internet access.

Rural culture is influenced by the impact of the rural economy as well as the normative level of educational attainment. Socio-economic factors play an important role in accessibility of services, and often these factors are not taken into account in formulating either policies or initiatives relating to rural mental health (New Freedom Commission on

Mental Health, 2004). Agriculture is important, but no longer central to rural economies. Just 6.3% of rural Americans live on farms, and 50% of these farm families have significant off-farm income (New Freedom Commission on Mental Health, 2004). Farming accounts for only 7.6% of rural employment and 90% of rural workers have non-farm jobs (U.S. Congress, 2002). Compared to urban workers, rural workers are more likely to be unemployed and less likely to move out of low wage jobs (New Freedom Commission on Mental Health, 2004). More than 25% of rural workers over age 25 earn less than the Federal poverty rate, and 600 rural counties (23%) are classified as persistent poverty counties by the U.S. Government (New Freedom Commission on Mental Health, 2004). Child poverty is higher in rural areas than in urban ones, and more than half of all rural children in female-head-of-households are in poverty (3.2 million children) (New Freedom Commission on Mental Health, 2004). Children of color are at particular risk, with 46.2% of rural African American children, 43% of rural Native American, and 41.2% of rural Hispanic children living in poverty (U.S. Congress, 2002). Rural educational levels continue be less than those in urban environments. Fewer rural adults have a college education than do urban adults (15% versus 28%), and the number of rural adults without a high school diploma is greater than in urban areas (20% versus 15%) (New Freedom Commission on Mental Health, 2004). Fewer young adults in rural areas seek higher education. These demographic differences ultimately set the scene for the cultural development of rural residents.

"Rural" is also a state of mind. Beyond residence in counties described as rural there are likely to be residents who identify culturally with rural residence. People live out cultural differences between the country (rural residence) and the city (areas categorized as urban). Often times identities based in rural communities can be considered "rustic" while those

associated with urban areas are “urbane, or sophisticated” (Creed & Ching, 1997). As presented by Creed and Ching (1997), the rural-urban distinction is a source of power differences among people. The distinction between rural and urban generates not only political and economic differences but also social identification based on personal choices by residents (Creed & Ching, 1997). People make their distinction as rural or urban through “mundane cultural activities such as music (country versus rap) and their choice of clothing (cowboy boots versus tennis shoes)” by which their identity is commonly expressed (Creed & Ching, 1997). Place identification has yet to be explored on a rural and urban continuum similar to acculturation research in terms of race, class and gender (Creed & Ching, 1997). Without examining rural identity acculturation, the social distinctions based on race, class and gender then mask the extent to which these categories are also affected by place identification (Creed & Ching, 1997). For example, the experience of a rural woman’s experience of gender inequality may be quite different from that of an urban woman and that racial oppression in the city can take a different form from that of the countryside (Creed & Ching, 1997). Social theorists compare rural identification with that of gender and class. While terms such as gender have particulars such as masculine and feminine, the over-arching term “gender” allows us to see that both are socially constructed and flexible terms (Creed & Ching, 1997). Likewise, people who describe themselves as middle class make reference to the class system “which conveys the meanings of their own situations” (Creed & Ching, 1997). However without an overarching term to talk about “place-based identity” the dialectical construction of rural and urban is all that is available (Creed & Ching, 1997). Therefore, Wagenfeld (2003) calls for discussion of the values of persons based on place just as other demographic variables affect a person’s sense of identity. A person residing in a

rural community may not identify with the rustic values historically related to a person living in a rural community (Wagenfeld, 2003). Additionally patterns of migration have brought urban persons to rural areas and to call them rural "simply because they reside there may obscure a very important difference, although their mailing address is rural, their values may remain firmly urban" (Wagenfeld, 2003). Wagenfeld (2003) goes even further urging researchers that a scale to measure dimensions of "rurality" is needed. Similar to the above mentioned rural values, according to Slama (2003), the three concepts which are inherent to rural communities are: conventional and conservative attitudes, isolation and poverty. Slama (2003) also found that persons that hold characteristically rural values, and act in ways more consistent with those values, if they: (a) are older, (b) have less higher education, (c) live on a farm or in a smaller town or have never lived in an urban area for any significant length of time, (d) have parents and grandparents living in rural areas, and (e) have not traveled often or far (Slama, 2003). Rustic attitudes of rural residents should be identified as a possible basis for help-seeking behavior, attitudes toward and conceptualization of mental health problems (Wagenfeld, 2003).

The following discussion will focus on four variables hypothesized within the current study to comprise a rural cultural variable with roots in agrarian living that then will be related to stigma towards mental illness and help seeking: religious commitment, family cohesion, openness to emotions and health internal locus of control.

First, religion for rural community members may be more important to personal identity than residents from urban communities. Fischer's (1982) extensive study of rural-urban variations found that urban residents were less likely than rural adults to claim a religion, to attend church services, and to say that religion was important to them. Residents

in small communities were most likely to form and expand network relations within a church or church-based setting (Fischer, 1982). According to Fischer (1982), "religious subcultures in rural communities are part of the family-neighborhood-church complex that lies at the heart of a traditional way of life" (Fischer, 1982). Religion may be especially important in rural communities because there has historically been a greater dependency on nature for survival and nature's forces are more intense and real (Meystedt, 1984). As mentioned early, the majority of rural residents no longer rely on farming as a primary source of income which may mean less reliance on the environment for sustainability. Regardless, religious attendance in rural communities has not followed the pattern of decline that has occurred in urban areas (Meystedt, 1984).

Larger families and a high value placed on the family are other common characteristics of rural populations (Meystedt, 1984). Familistic themes are embedded in, and reinforced by, the imagery and sentiments of traditional agrarian and conservative religious beliefs and practices (Meystedt, 1984). Rural values have emphasized a reliance on family for livelihood as well as personal wellness. Within a historically agrarian society, family was necessary for the livelihood of the family with more family members meaning more hands to help. However, this reliance on family also has meant personal problems are kept within informal networks of family and friends rather than health professionals (Judd et al., 2006).

A group of researchers within rural Australia has examined the link between rural communities and a lack of emotional involvement, dislike of free emotional expression, and ability to endure emotion, namely stoicism (Murray et al., 2008). This finding is consistent with stereotypes of rural residents as emotionally withdrawn and self-reliant in terms of coping with their problems on their own and suffering in silence (Judd et al., 2006).

Therefore it's not surprising that stoicism is negatively associated with quality of life and lower likelihood of seeking help for mental health problems (Murray et al., 2008). However, the relationship between stoicism and lower quality of life is mediated by negative attitudes to seeking psychological help (Murray et al., 2008). Stoicism is inversely related to openness to experience (Murray et al., 2008). Additionally, stoicism also was reported more frequently by older adults and by males, with both groups significantly represented within rural communities (Judd et al., 2006). Openness to experience was measured by the NEO personality inventory of Costa and McCrae (Costa & McCrae, 1992). Therefore, stoicism has been conceptualized as an "agrarian value" which has developed over generations within rural agricultural communities (Judd et al., 2006). For these reasons, low openness to emotional experience is being included within the current study as a component of rural identification.

In addition to stoicism, or low openness to experience, Judd et al. (2006) included general self-efficacy or self-reliance as an "agrarian value" which also was negatively associated with help seeking for mental health concerns. Judd et al. (2006) included this variable in order to assess for a general trait-like self-efficacy or the tendency to view oneself as capable of meeting demands in a variety of situations. Judd et al. (2006) found that general self-efficacy predicted less help seeking for mental health concerns. Judd et al. (2006) discusses potential reasons for low help seeking and higher self efficacy including the fact that rural residents assume greater self-responsibility for health problems than urban residents. For these reasons, the current study will include a health locus of control measure which assesses the amount the respondents believe they are in control of their overall health. The variables of religious commitment, family cohesion, internal health locus of control and

low openness to emotional experience were selected in the current study to represent an agrarian rooted rural cultural variable.

Rural mental health care disparities. Before examining the disparities within rural communities related to mental health care, it is important to make some important distinctions between several related terms: mental health, behavioral health, mental disorders, and mental illness. Mental health has been defined as a "state of successful performance of mental function, resulting in productive activities, fulfilling relationships with other people and the ability to adapt to change and to cope with adversity (Gamm, Stone, & Pittman, 2003)." Therefore, mental disorders are health conditions that are characterized by alterations in thinking, mood or behavior (or some combination thereof) which are associated with distress and/or impaired functioning and result in a series of other problems including disability, pain or death (Gamm et al., 2003). Mental illness is characterized by a term that refers collectively to all diagnosable mental disorders (Gamm et al., 2003). The Surgeon General's Report on Mental Health (U.S. Department of Health and Human Services, 1999) suggests that "mental health and mental illness are not polar opposites but may be thought of as points on a continuum." According to the Surgeon General's Report on Mental Health, mental health is culturally based and therefore grounded in the values of the individual's culture and varies among individuals (U.S. Department of Health and Human Services, 1999). Furthermore, a distinction often is made between mental health and behavioral health. According to Sears et al. (2003), mental health encompasses the "diagnosis and treatment of psychological difficulties manifested in affective, behavioral, and cognitive domains of functioning," whereas, behavioral health is referred to as the recognition and modification of

risk factors and high risk behaviors (smoking, obesity and sedentary lifestyles) and maintenance of behaviors that promote health or prevent disease (Sears et al., 2003).

Mental disorders affect approximately 20 percent of the population of urban and rural areas in a given year (Gamm et al., 2003). As mentioned earlier, the prevalence of lifetime and recent mental disorders appear to be similar in rural and urban areas (Gamm et al., 2003; Wagenfeld, Murray, Mohatt, & DeBruyn, 1994; Gale & Deprez, 2003). One research study which demonstrated this fact was the Epidemiological Catchment Area Study, which compared rural and urban prevalence rates for a large variety of psychiatric disorders, the urban lifetime prevalence rate was 34%, which was only slightly higher than the 32% rate in rural areas (Robins & Regier, 1991). However, there is evidence of higher suicide rates, a standard indicator of mental illness, in rural areas particularly among adult males and children (Gamm et al., 2003). There are also more suicide attempts made among depressed adults in rural areas when compared to urban areas (Gamm et al., 2003). Children with severe mental illness are particularly underserved in rural communities with significantly less child psychiatrists than in urban communities (Gamm et al., 2003). According to the Rural Healthy People 2010 survey, mental health and mental disorders were identified as the fourth highest ranking rural health concern among 28 functional area options (Gamm et al., 2003). In this nationwide survey, 37% of the state and local rural health leaders (state health leaders, leaders of rural community health centers and clinics) responded that mental health was one of their top priorities after access to health care, oral health and diabetes (Gamm et al., 2003).

Rural residents with mental illness may be less likely than their urban counterparts to define themselves as needing care (Gamm et al., 2003). Furthermore, Rost et al. (2002) discusses the difference of “perceived need” for care between metropolitan and

nonmetropolitan individuals. While there is comparable severity of disorders between metropolitan and nonmetropolitan individuals, nonmetropolitan individuals may have to reach a higher need-for-care threshold before seeking care (Rost et al., 2002). In a large study of rural Southerners, 90% of individuals who screened positive for a mental disorder had not sought treatment one month after receiving the diagnosis and educational intervention (Fox, Blank, Berman, & Rovnyak, 1999). However, this was not due to the lack of knowledge of treatment availability because the study participants were provided with referrals to nearby services (Fox et al., 1999). Of the individuals who screened positive for a disorder and did not seek treatment, 81% reported that they did not feel the need for treatment (Fox et al., 1999). Furthermore, of the individuals who screened positive for having a mental disorder and discussed it with a family member or friend, only 13% reported receiving encouragement to seek treatment from a significant other (Fox et al., 1999). This finding suggests the denial of the need to seek treatment may be reinforced by social contacts in rural areas. The perceived need for services may also be overshadowed by the accumulation of multiple stressors within rural populations due to a higher rate of poverty. This disparity based on poverty is evidenced by a nurse's experience while working in a rural community center serving nine counties, all with a substantial proportion of people living below poverty level,

> It's just as hard to get a man who is not able to get a job and is hungry every day to come in and talk about feeling depressed or angry, or even seeing things that are not there. That's just part of life when you can't work and provide for your family. Talking about your problems is a luxury (Campbell, Richie & Hargrove, 2003, p. 41)

Awareness of the disparity between help for mental health issues among rural versus urban citizen has increased significantly since the 1990s (Slama, 2004a). There are a number

of recent publications addressing mental health in rural communities, including the American Psychological Association's (APA) Committee on Rural Health's report (Mulder et al., 2000) and the recent APA book, *Rural Behavioral Health Care: an Interdisciplinary Guide*, edited by Stamm (2003). A comprehensive review of 150 empirical studies during the 1990s examined rural mental health care and differences between non-metropolitan (rural) and metropolitan areas on outcomes relating to mental health (Rost et al., 2002). This review of the literature also found no significant differences in prevalence of psychiatric disorders among non-metropolitan and metropolitan adults (Rost et al., 2002). However, non-metropolitan (rural) adults who live in remote regions fail to stay engaged in treatment and receive poorer quality of care as a result (Rost et al., 2002). Non-metropolitan individuals with more severe psychiatric disorders achieve worse outcomes over time than their metropolitan counterparts although it is not clear whether this difference is attributable to the clinician (less provision of evidence-based care) or to the patient (less sustained engagement in care) (Rost et al., 2002). Also health plans and service systems differ in non-metropolitan areas such that they are less likely to have their health care heavily managed and a lack of local mental health specialists available to support primary care physicians in their delivery of mental health services than their metropolitan counterparts (Rost et al., 2002).

Mental disorders are important co-morbidities of physical illness and contributors to suicide-- and they affect the financial capacity to effectively address other health problems (Rost et al., 2002). Studies of depression treatment impact on costs for treating physical problems underscore important medical and cost effects for rural areas (Rost et al., 2002). Among persons in non-metropolitan areas, a $1.00 increase in the costs of depression treatment is associated with a $1.42 reduction in the costs of treating physical problems (Rost

et al., 2002), while no cost-offset effects can be observed in depressed metropolitan populations (Rost et al., 2002). A study of three rural primary care clinics finds that psychological distress, more than severity of chronic medical illness, accounts for functional impairment among primary care patients. Such impairment can extend to the ability to hold a job and retain health benefits (Rost et al., 2002). Mental illness can seriously undermine the employment participation of the rural workforce. Among all illnesses and health behaviors, mental disorders are identified as one of the leading contributors to disability and associated disease burden, defined as years of life lost to premature death and weakened by disability (Rost et al., 2002).

The provision of mental health services in rural areas often is dependent upon a small collection of formal and informal care providers including primary care physicians, rural hospital and nursing home staff, school counselors, social workers, counselors, ministers, law enforcement personnel, criminal justice workers, self-help groups, family members and friends (Jameson et al., 2007). The largest difference in mental health services in rural and urban areas is the availability of and accessibility to specialty mental health services (Jameson et al., 2007). Although there is a substantial growth of mental health specialists nationwide, the increase is minimal in rural areas (Jameson et al., 2007). There is evidence of both an insufficiency of both mental health infrastructure and supply of professionals in rural areas. Twenty percent of non-metro counties lack mental health services nationwide whereas only five percent of metro counties lack such services (Jameson et al., 2007). Nationwide, using federal definitions of mental health professional shortages, rural areas disproportionately suffer from a shortage of mental health providers (Jameson et al., 2007). In 1999, 87% of Mental Health Professional Shortage Areas (MHPSAs) in the United States

were in non-metropolitan counties (Wagenfeld, 2003) (See Figure 2 for Virginia's MHPSAs).

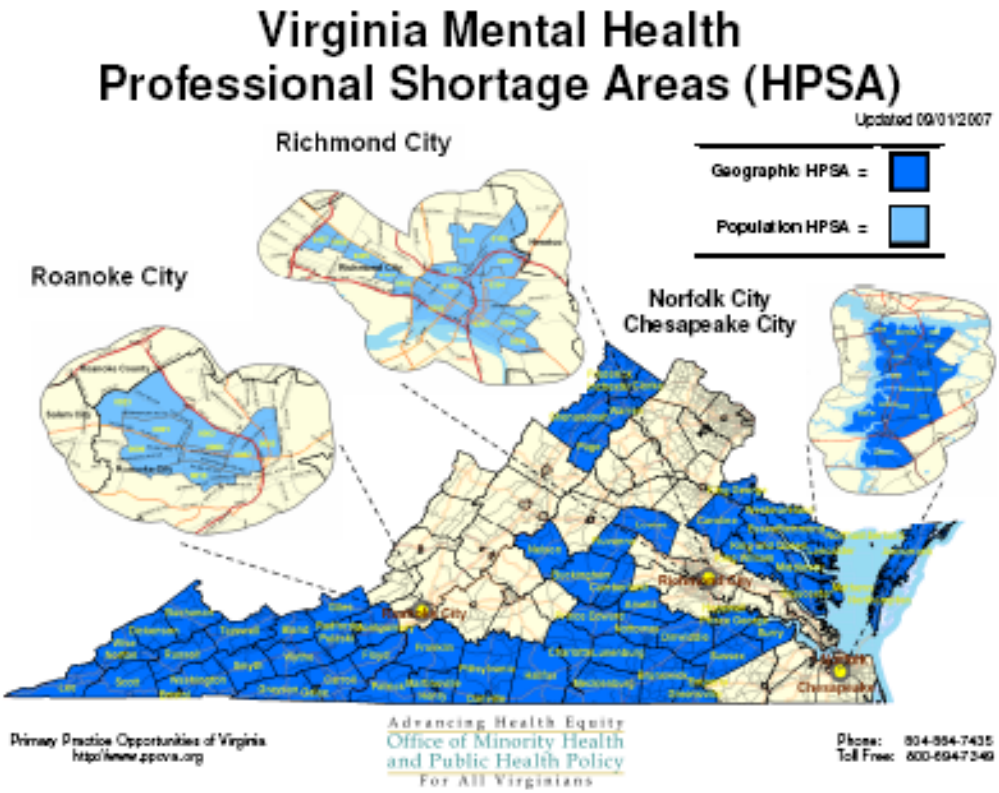

Figure 2. Virginia Mental Health Professional Shortage Areas (HPSA)

Help seeking

The above review illustrates some potential impacts on help seeking for mental health concerns in rural communities. In the following section I first will discuss commonly accepted models of help seeking for health concerns as they relate to mental health care. Next, I will discuss help seeking within professional and non-professional service networks. Finally, I will discuss the systemic and individual barriers to help seeking within rural communities for mental health care.

It is important to make a distinction between help seeking and service utilization. Jackson et al. (2007) described service utilization as a patient's actual presentation to

treatment and use of services for mental health problems (e.g. number of sessions with a professional, number of hospital admission days). On the other hand, help seeking is a broader term that encompasses a range of indicators including attitudes to seeking help, planned behavior, and consultation with family, religious leaders, friends, help lines, the internet or professionals (Jackson et al., 2007).

Models of professional help-seeking. The factors that influence help seeking are important when examining help seeking and seeking to improve mental health in the community. There are many models focused on behavioral predictors of help seeking. The Behavioral Model of Health Services Utilization (Andersen, 1995) proposes that people's use of health services is a function of their predisposition to use services, factors which enable or impede use and their need for services as well as their needs. Predisposing characteristics or factors which influence self-recognition of problems and attitudes towards treatment including: demographics such as gender and age, social structure measured by variables such as education, occupation and ethnicity and heath beliefs (Andersen, 1995). In addition there are attitudes, values and knowledge that people have about health and health services (Andersen, 1995). The enabling resources are the means and knowledge to get into treatment and include availability, accessibility and cost of services as well as awareness of which services exist and what they can provide (Andersen, 1995). Additionally there are needs include the nature of the illness and its severity (Andersen, 1995). While Andersen's (1995) model acknowledges attitudes towards health and health services, the following model acknowledges the health care context as it affects patient's help seeking.

Rost et al. (2002) developed a model within which individuals operate and that predicts their help seeking behaviors within health care systems. This model identifies

critical determinants of use, quality, and outcomes that need to be modified to improve the mental health of individuals in both rural and urban locations (Rost et al., 2002). Specifically, Rost et al. (2002) proposes that the characteristics of individuals, the social networks in which they are embedded, the health plans in which they are enrolled, and the service delivery system interact to shape an individual's perception of need and access to care (Rost et al., 2002). In turn, perceived need and access affect entry into treatment, choice of service setting, and sustained engagement in care (Rost et al., 2002). Quality of care is determined by both patient and provider behavior (Rost et al., 2002). Patients contribute to quality through their sustained involvement in treatment and providers contribute to quality by practicing evidence-based medicine, or in the case of mental health services, empirically supported treatments (Rost et al., 2002). Quality also is affected by the attributes of the health plan and the structure of the service system (Rost et al., 2002). In turn, quality of care affects outcomes and expenditures (Rost et al., 2002).

Professional versus non-professional help-seeking. Much of the research examining help seeking for mental health concerns has conducted within health care settings or mental health settings. Within rural communities there is a de facto mental health system (Regier et al., 1993). According to Regier et al. (1993) there are four major sectors in which mental health services are provided: specialty mental health sector, general medical sector, social welfare/criminal justice/education/religious sector, and the voluntary support network sector. Due to the fact that rural communities have a dearth of specialized providers, rural mental health systems are even more de facto than mental health systems in urban areas (Gale & Deprez, 2003). It is important to view the various sectors of the de facto system not as substitutes for one another but as different points of access and levels of care that

complement one another (Gale & Deprez, 2003). This broader view towards mental health care is important rather than being only concerned with the mental health needs of persons who "show up at the front door" of mental health facilities (Gale & Deprez, 2003). Instead it is important to realize that especially within rural community settings there are multiple "doors" of entry for mental health care. For the purposes of this literature review, professional help seeking will include specialty mental health providers/ behavioral health providers and general medical sector. However, first I will discuss the non-professional help seeking sector which includes the social welfare/criminal justice/education/ religious sector and the voluntary support network. While some of these non-professional providers may be trained in mental health, mental health is typically not their primary training.

Non-professional help seeking refers to community members' preference for seeking help within informal networks of care. Lin et al. (1996) examined mental health utilization and help seeking in Ontario, Canada and found a significant interaction between urbanicity and public assistance such that urban recipients were 3-5 times more likely to use mental health services compared to rural respondents. Lin and colleagues suggested that one reason may be that rural residents have different help-seeking patterns by preferring more "informal sources of help" rather than professional help. Informal sources of help often include social welfare, criminal justice, education and religious sectors (Gale & Deprez, 2003). Often times within these informal networks of care, there is limited training in identifying and addressing mental illness. Additionally, volunteer support networks include self-help groups, family members, social groups and organizations committed to education (Gale & Deprez, 2003). The National Institute of Mental Health also has been involved in supporting this sector with public education directed toward improving early detection of mental disorders by patients,

family members and professional caregivers (Gale & Deprez, 2003). Social service systems may be of greater importance in rural communities because they serve as a congregation point for individuals and families (Sears, Evans & Kuper, 2003). The social service system often includes at the least education, health and religion services which often work independently from each other (Sears et al., 2003).

Kane and Ennis (1996) discussed the utilization of lay and informal caregivers for the severely mentally ill in rural communities. The nature of rural life, self-reliance and strong allegiance to family and church serve as a framework for the communities' response to a rural individual's need (Kane & Ennis, 1996). The President's Panel on Rural Mental Health in 1978 advised that the importance of lay caregivers should not be underestimated and consequently there have been a number of professionals who have documented their experiences with informal networks of care providers (Kane & Ennis, 1996). One major source of informal care for the mentally ill is families. Families of the severely mentally ill provide 24 hour residential support as well as day to day monitoring for medication compliance, behavioral management and observing for symptoms of relapse (Kane & Ennis, 1996). Family members offer an invaluable resource to persons with mental illness often times from a non-medical perspective which provides a valuable resource to mental health professionals as well as general practitioners (Kane & Ennis, 1996).

Churches often provide informal services within the de facto mental health delivery system, particularly in rural areas (Blank, Mahmood, Fox & Guterbock, 2002). Members of the clergy hold a position of respect and trust in rural communities and are often the first caregivers to notice that an individual or family needs special help, especially with mental health (Gale & Deprez, 2003). The role of churches and pastors in provision of these services

is well recognized among lay and professional health care providers (Blank et al., 2002). However, the place of the church in the delivery of mental health care is not well understood (Blank et al., 2002). Churches occupy a unique position because they offer counseling and guidance along spiritual lines and often provide support in a non-stigmatizing way (Blank et al., 2002). However, there are very few studies that have examined the merits of receiving services through churches and how churches link with formal systems of care when congregants need more specialized services (Blank et al., 2002). Integrating behavioral services with religious communities is helpful in that the majority of religious institutions within rural communities have been linked to the regions they are in. Specifically, many rural churches have been in existence for decades and have served as places of worship and refuge for generations of residents (Sears et al., 2003). Rural religious institutions are often viewed as "natural helpers" for people in crisis (Sears et al., 2003). Furthermore the leaders and elders in the religious institutions are often trusted and viewed as influential within the community (Sears et al., 2003). As the behavioral health professional gains the trust of these individuals, it is likely that the community as a whole will begin to accept and trust the behavioral health professional as a person who can comfort people in their time of need. An effective collaboration between behavioral health provider and religious leader will increase the likelihood the community will view the behavioral health provider not as an unfamiliar and "mysterious outsider" but rather as a trusted member of the community (Sears et al., 2003).

A major barrier for establishing relationships between churches and mental health providers has to do with the incongruent conceptualizations of the nature, cause and treatment of mental health problems within the framework of religion as contrasted with

traditional mental health services (Blank et al., 2002). Unfortunately disagreements between ideologies have resulted in a separation in these two systems of care for rural community members (Blank et al., 2002). Some religious leaders and congregation members may view psychologists or psychiatrists as being "antithetical or even hostile to specific religious teachings" (Sears et al., 2003). Therefore rural behavioral health providers may need to spend time with religious leaders and congregation members to help them understand that behavioral health services can help provide relief of those in need without challenging religious beliefs (Sears et al., 2003).

However, Kane and Ennis (1996) acknowledge an important issue that the informality of natural support systems establishes an opportunity for lapses in practices of confidentiality that professional ethical standards adopted by psychiatrists, psychologists, social workers and nurses. Within informal systems of care there often are blurry boundary lines between people as individuals, members of family and communities in which there is a need to protect an individual's privacy but also the need to create a caring and supportive network of care (Kane & Ennis, 1996). Professionals often embrace lay caregivers as part of the service delivery system which puts professionals at risk of any practice violations as generally lay caregivers have not received training in the care of the mentally ill (Kane & Ennis, 1996). More research needs to be conducted to examine whether these informal sources of care represent an effective alternative to specialty mental health care (Jameson et al., 2007).

Professional help seeking studies have varied in their definitions by including a range of professionals. As mentioned in the rural mental health section there is a need within rural communities, for mental health providers to be trained as generalists across cohorts as well as across types of mental disorder. The generalist model is consistent with the emerging role of

psychologists that involves emphasizing the idea of being a "health provider" rather than a "mental health specialist" (Sears et al., 2003). Therefore within rural behavioral health care, primary care providers do not limit themselves to physical medicine and ignore mental health; nor should behavioral health providers limit their practices to health behavior modification neglecting other aspects of mental health (Sears et al., 2003). Often times rural primary care providers offer the most helpful access point to the behavioral health care provider so that mental and behavioral health services can be efficiently delivered as part of a health care team (Sears et al., 2003). Rural residents may view their health as the sum of physical, mental and social functioning so they may appreciate the "one-stop health care shopping" provided through integrated primary care (Sears et al., 2003). However, the reality is that rural health care often is very fragmented between mental health and physical health care. The majority of mental health providers practice in relatively isolated "mental health only" settings (Sears et al., 2003). Mental health providers typically see their patients in 1-hour segments with inter-professional communication limited by confidentiality concerns (Sears et al., 2003). Whereas behavioral health providers tend to be trained in medical settings as part of multidisciplinary teams and they use comprehensive, biopsychosocial treatment approaches to achieve optimal health, which tends to find a good "fit" within rural primary care settings (Sears et al., 2003).

Some studies have lumped general practitioners with mental health professionals together while others have sought to examine differences between various types of professionals. Specialty mental health providers can refer to any or all of the following: psychiatrists, psychologists, psychiatric nurses and social workers practicing in community mental health centers; public and private agencies; state, county, private, non-profit

psychiatric and substance abuse treatment hospitals or treatment units of general hospitals; residential treatment centers; freestanding outpatient, public and multiservice clinics; halfway houses and private practices (Gale & Deprez, 2003). This sector is the one most often thought of in when discussing the mental health system. Often due to the lack of providers within rural communities, mental health providers must be able to examine the clinical needs of children, adolescents, older adults as well as the general adult population (Gale & Deprez, 2003). There is a significant shortage of mental health providers within rural communities as compared to urban communities (Jameson et al., 2007). Often times mental health specialists such as psychologists and counselors favor more urban areas for employment and practice (Jameson et al., 2007). Specifically, this is likely to be due to increased specialization in doctoral programs in psychology where psychologists are not well prepared to handle the wide scope of clients with a wide range of problems that are encountered in rural areas (Jameson et al., 2007).

The primary care or general medical sector is comprised of family physicians, pediatricians, internists, nurse practitioners, and physician's assistants practicing in rural health clinics, private practices, community health centers, general hospitals and nursing homes (Gale & Deprez, 2003). Unfortunately these providers do not often have training to recognize early warning signals of mental illness (Gale & Deprez, 2003). Even if they are able to identify risk factors within primary care patients, referals to specialty mental health care is limited and often hard to access (Gale & Deprez, 2003). Wrigley et al. (2005) examined seeking help in general versus seeking help from a general practitioner for mental health problems. The key finding was that seeking help from a general practitioner (GP) was preferred to seeking help in general. Wrigley et al. (2005) suggests seeking help from a GP in

rural areas may be more acceptable because rural residents likely know the GP, believe in the GP's ability to provide support and perceive seeking help from a GP as being less stigmatized. Yuen, Gerdes, and Gonzales (1996) examined the utilization by rural residents within primary care clinics. The more rural sites used more mental health services by primary care providers and also had more mental health hospital utilization (Yuen, Gerdes & Gonzales, 1996). It was noted that although primary care physicians have the most frequent contact with mentally ill patients, they may not always recognize mental health problems or the care given may not be complete or appropriate (Yuen, Gerdes & Gonzales, 1996). However, the identification of mental health problems early by primary care providers could lead to treatment in less intensive and less expensive care settings (Yuen, Gerdes & Gonzales, 1996).

Rural people are more likely than urban people to use primary care practitioners for mental health needs. This is especially true for the poor, the elderly, minorities, problem drinkers and the seriously mentally ill (Jameson et al., 2007). Physicians who practice in rural and frontier communities play an even larger role in mental health care than their urban counterparts because of both the scarcity of mental health professionals and the stigma-associated reluctance with seeing a mental health professional (Jameson et al., 2007). However the treatment of mental illness by primary care practitioners faces a number of barriers including insufficient mental health training in medical school or residency, limited time for additional education required for managing challenging cases, insufficient skills in mental health, failure to detect a mental disorder, heavy patient case load, short patient visits, lack of time for counseling and related therapies and lack of specialized mental health resources (Jameson et al., 2007). Even when specialized mental health professionals are

available for possible referrals there are a number of obstacles keeping primary care providers from making referrals. Some of these barriers include such as idiosyncratic standards regarding when to refer patients to mental health specialist, stigma and concerns about the patients' acceptance of the diagnoses and future impact on insurability and patient reluctance to use mental health providers (Jameson et al., 2007). In addition physicians must consider the lack of available specialist services, long waiting times for appointments, and primary care physicians' bad experiences with psychiatrists; lack of communication from referral mental health specialist inhibits physicians' ability of follow-up, and disagreement with psychiatrists' concern for confidentiality impeding necessary information (Jameson et al., 2007). Primary care physicians according to some researchers may deliberately under diagnose mental illness (Jameson et al., 2007). Rural family physicians may readily detect depression but may be reluctant to make formal diagnoses due to stigma which may result in the patient's acceptance of a mental illness (Jameson et al., 2007). Individuals in rural areas often perceive a lack of privacy for primary care treatment of mental illness (Jameson eta al., 2007).

Systemic versus individual predictors of professional help seeking. As mentioned above, there is less research available on non-professional help seeking behaviors. Therefore the following discussion will examine the differences between systemic and individual contributions to professional help seeking behaviors. Systemic barriers to professional help seeking will include access within the rural health system.

While mental illness is equally prevalent in rural and urban areas, rural areas generally have fewer resources than do urban settings (Gale & Deprez, 2003). Despite the equal prevalence, the total number of individuals suffering from mental disorders is

comparatively small in rural areas and spread across wider geographic regions (Gale & Deprez, 2003). These factors combined with the weak economic bases of many rural areas suggest that specialty mental health services may not be economically feasible (Gale & Deprez, 2003). The systemic problems of rural communities make it difficult to recruit and retain specialty mental health providers even if the local population is of sufficient size to support their practice (Gale & Deprez, 2003). Often rural mental health providers treat patients outside of their expertise, make complex decisions without advice from other professionals and interact with patients in a variety of non-clinical roles (Gale & Deprez, 2003). Not surprisingly, rural communities have a smaller supply of specialty mental health providers than urban areas which translates into fewer rural residents accessing mental health services (Gale & Deprez, 2003). However, when rural residents gain access to services, they often are required to accept compromises that include long-distance travel to receive care, limited choices in providers, loss of confidentiality as a result of the visibility of mental health services in small communities and a heightened sense of personal stigma (Gale & Deprez, 2003).

Systemic and individual barriers to the provision of mental health care were evaluated and inadequate funding for services was recognized in a study of community health clinics in Virginia as being the most critical barrier to providing mental health care services (Merwin, Hinton, Harvey, Kimble & Mackey, 2001). Furthermore, inadequate funding was identified as being more important than other important barriers including personal resistance to mental health care, lack of specialty providers, and the limited time of primary care providers (Merwin et al., 2001). Another shared barrier to rural general health is that of a lack of transportation due to geographic isolation (Merwin et al., 2001). Lack of transportation is an

issue for some of low socioeconomic status without private transportation and a lack of public transportation (Merwin et al., 2001). Also rural residents with private transportation find large distances from home to mental health service facilities an additional barrier (Merwin et al., 2001).

Individual demographic factors have been studied as predictors of help seeking attitudes and service utilization for mental health problems. Jackson et al. (2007) reviewed 11 studies focused on general help-seeking (including both rural and non-rural samples) and service utilization for mental health problems. Jackson and colleagues reported that being female, being alone, young, widowed, divorced or separated, having a mental disorder, having a physical condition or comorbidity with a mental disorder were all positive predictors of attitudes to or actual help-seeking. Persons with these characteristics were more likely to display help-seeking behaviors or positive attitudes towards it. Additionally, as reported by Jackson et al. (2007) in a study by Tijuis et al. (1990), sociodemographic variables (younger age, higher education, higher income) and having acquaintances working in mental health care were more likely to report help seeking behaviors in the past. Gender also emerged as a significant predictor of help seeking for mental health problems in five studies (Barry, Doherty, Hope, Sixsmith, & Kelleher, 2000; Gunnell & Martin, 2004; Hoyt, Conger, Valde, & Weihs, 1997; Lin, Goering, Offord, Campbell, & Boyle, 1996; Smith, McGovern, & Peck, 2005). Gunnell and Martin (2004) examined differences between rural and urban young people in the United Kingdom and found that overall mental health consultation rates for women were double that of men. They also found a significant interaction effect with gender and rurality indicating that rural male participants were less likely to seek help from general practitioners for mental health problems compared to their

urban counterparts (Gunnell & Martin, 2004). The authors suggested that one of the reasons for this finding was greater perceived stigma by males relative to females. After controlling for socioeconomic variables, general practitioner rates for rural male participants were 30% lower and for rural female participants were 16% lower than their urban counterparts (Gunnell & Martin, 2004).

Beyond demographic variables research has shown that individual attitudes predict help seeking behaviors. Tijuis et al. (1990) found that people who were less likely to see chance as a factor in control of their health sought help for mental health problems more often. Sareen et al. (2005) also examined attitudes as predictors of help seeking and found that the three most common barriers to help-seeking reported by respondents were attitudes such as "I did not get around to it" "the waiting time was too long" and I "felt the treatment would be inadequate" as reasons for not initiating help seeking for mental health problems. Wells, Robins, Bushnell, Jarosz and Oakley-Browne (1994) found that the two most common reasons for not seeking help were attitudinal: "respondents felt the problem would get better by itself and they could handle the problems themselves." Additionally, Wells et al. (1994) found that "situational factors" such as cost, insurance, time and location were less important determinants of help seeking than attitudes. An additional attitude that was a significant predictor of help seeking behaviors was whether or not participants believed mental health professionals could help or provide support for people's problems (Wells et al., 1994). Overall the general (rural and non-rural samples) help seeking studies showed significant predictors that were demographic as well as attitudinal. Another interesting finding concerned the attitude of stoicism and self efficacy as well as perceived stigma (Judd et al., 2006). The inclusion of measures on stoicism and self efficacy was based on "the widespread

view that rural people are more stoic and more self-reliant in dealing with problems of all kinds including mental health problems and more stigmatizing of those with mental health problems and that people who seek help are viewed as being of weak character (Judd et al., 2006)." The authors found that lifetime help-seeking for a psychological problem or mental health problem was positively associated with higher levels of distress and lower levels of stoicism and lower levels of self-efficacy (Judd et al., 2006).

Many people who are experiencing mental health problems never seek psychological help. Large scale epidemiological studies have found that less than 40% of individuals with a mental health problem seek any type of professional help (Vogel, Wade, & Haake, 2006). The percentage of those people who seek help from a counselor or mental health professional is much smaller, 11% (Vogel et al., 2006). Therefore it is important to explore what keeps individuals from seeking psychological help when they are experiencing a psychological problem. As reported by Vogel et al. (2006), researchers have found some factors that keep individuals from seeking psychological help such as the desire to avoid discussing distressing or personal information as well as the desire to avoid experiencing painful feelings. However, the most well cited reason is the stigma of seeking treatment (Vogel et al., 2006).

Stigma

Stigma has been defined as the perception of being flawed because of a personal or physical characteristic that is regarded as socially unacceptable (Vogel et al., 2006). Stigma also has been defined as a "negative evaluation of a person as tainted or discredited on the basis of attributes such as a mental disorder, ethnicity, drug misuse or physical disability (Rost et al., 1993)." People with mental illness often face stigma mainly in the form of hostile, oppressive community environments filled with bias and discrimination and that

isolate them from community life (Kirkwood & Stamm, 2006). These negative attitudes and behaviors affect treatment seeking (Rost et al., 1993) and may affect access to community living across life areas. For example, stigma may result in education and housing discrimination, a lack of public services and jobs, and other restricted opportunities (Rost et al., 1993). In turn, these barriers may prevent people with mental illness from living full and productive lives (Kirkwood & Stamm, 2006).

According to Corrigan (2004), two types of stigma exist: public stigma and self-stigma. Public stigma is the perception held by a group or society that an individual is socially unacceptable and often leads to negative reactions toward them (Corrigan, 2004). Public stigma is often harmful because it can lead to stereotyping, prejudice, and discrimination of individuals who seek psychological care (Corrigan, 2004). Researchers hypothesize that people hide psychological concerns due to public stigma (Corrigan, 2004). Additionally Corrigan (2004) recently expanded self-stigma to be measured as the reaction of stigmatized individuals toward themselves.

Although public stigma is associated with seeking psychological services an equally important barrier might be the stigmatizing beliefs of mental illness on one's self esteem (Corrigan, 2004). Self-stigma occurs when an individual labels himself or herself as socially unacceptable which results in a reduction of an individual's self-esteem or self-worth (Vogel et al., 2006). This may be due to the largely negative images within western culture of mental illness and psychological services that could lower an individual's internalized self-concept, self-esteem and self efficacy if they were to seek treatment (Vogel et al., 2006). Furthermore, seeking help from another may be internalized by the individual as meaning they are inferior or inadequate (Vogel et al., 2006). Therefore a person may not seek help even if they are in

great emotional pain because of the belief that it would be a sign of weakness or an acknowledgement of failure (Vogel et al., 2006). These beliefs may be particularly salient for rural communities.

Hoyt, Conger, Valde, and Weihs (1997) found this to be the case within a survey of adults. They found higher perceived stigma associated with mental health care in rural areas than in non-rural areas. The degree to which stigma was perceived predicted willingness to seek treatment for mental health problems (Hoyt et al., 1997). Individuals in rural areas also perceived a lack of privacy for primary care treatment of mental illness (Hoyt et al., 1997). Higher levels of perceived stigma are associated with more negative attitudes towards help-seeking among rural residents which is particularly a problem in small rural towns where social networks are often closely enmeshed and privacy is lacking (Judd et al., 2006). Hoyt et al. (1997) found that people living in rural regions expressed significantly greater concern about stigma than those in populated areas and stigma towards mental health care was associated with significantly less likelihood of willingness to seek formal help in the future. In an Australian study (Judd et al., 2006) examining barriers to seeking mental health care via general practitioners, researchers found that perceived stigma was the only variable that predicted attitudes about help-seeking over all other demographic variables including sex, age, education and income (Judd et al., 2006). The researchers also examined the beliefs about potential causes of depression and schizophrenia in rural communities and found the possible causes included upbringing, stress, social/environment, genetics, drug use, personality and weakness of character (Wrigley et al., 2005). Consistent with the demonstrated effect of perceived stigma, “weakness of character” negatively predicted attitudes towards help-seeking for depression (Wrigley et al., 2005).

Rost, Smith and Taylor (1993) examined the rural and urban differences in stigma and the use of care for depressive disorders. Two hundred participants from metropolitan and non-metropolitan counties rated one of four randomly selected vignettes using a 14- point semantic differences scales (Rost et al., 1993). The findings indicated that rural residents with a history of depressive symptoms labeled people who sought professional help for the disorder somewhat more negatively than their urban counterparts (Rost et al., 1993). The researchers controlled for socio-demographic characteristics and found that the more negative the labeling, the less likely depressed rural resident were to have sought professional help (Rost et al., 1993). According to Rost and colleagues (1993), the most frequently offered explanation for this relationship is that stigma is more severe in rural communities because rural people are more poorly educated. When the effects of education were removed, rural and urban subjects reported comparable levels of stigma (Rost et al., 1993). These results suggest that rural culture does not attach greater stigma to mental health care treatment than urban culture but stigma in rural communities is a much stronger deterrent to seeking mental health care than in urban areas (Rost et al., 1993). One possible explanation for this may be that due to the nature of rural communities as having tighter social networks, the greater flow of information may result in being labeled by all the people one knows, rather than a select few, when one decides to seek treatment (Rost et al., 1993).

Research has indicated that when people internalize negative perceptions when dealing with mental health issues, it can significantly lower one's self esteem (Vogel et al., 2006). Therefore by not asking for help, the individual is more likely to protect his or her self-esteem. This is true within non-professional systems of care as well as professional help seeking (Vogel et al., 2006). Laboratory studies have found that participants are less likely to

seek help when they feel embarrassed or believe that seeking help will result in inferiority or incompetence (Vogel et al., 2006). Research suggests that the impact of seeking help on one's self esteem may also be an important barrier to seeking help from family and friends (Vogel et al., 2006).

Important theoretical work has been geared toward understanding the underlying factors that contribute to stigma. Day et al. (2007) developed the Mental Illness Scale based on the work of Jones and colleagues (1984) related to stigma theory. Jones et al.'s (1984) theory of stigma identifies the six dimensions that are generally associated with all types of stigma: concealability (whether the ailment is visible or can be hidden), course (how the illness will progress over time), disruptiveness (whether the condition interferes with daily living and interpersonal interactions), aesthetic qualities (whether the illness is aesthetically unpleasing), origin (the cause of the disorder) and peril (whether the disorder will be destructive to the self or others).

Challenging stigma is difficult due to negative attitudes toward people with mental illness which have been learned early from the influences of the media and schools (Kirkwood & Stamm, 2006). One way to change stigma within rural communities is an approach entitled "social marketing" which is based on the tenets of persuasion (Kirkwood & Stamm, 2006). The goal is to "open community doors formerly closed due to stigma" for persons with mental illness (Kirkwood & Stamm, 2006). Successful social marketing is organized and collective; one group (change agent) persuades another group (target audience) to accept, change or discard certain ideas, attitudes, practices or behaviors (Kirkwood & Stamm, 2006). For mental illness, social marketing encourages the target audience to change negative attitudes and reduce stigma therefore opening up the community

for people with mental illness and other disabilities. However, successful social marketing must be informed by empirical research by way of targeting culturally specific attitudes that may be the most effective locus of intervention.

Statement of Purpose

The purpose of the current study was to examine if factors associated with rurality would form a latent construct for emerging adults living within rural communities (see Figure 3). The hypothesized composite variable included high levels of religious commitment, internal locus of control, high family cohesion, and low levels of openness to emotions. The hypothesized rural acculturation variable was examined as a predictor of both professional and non-professional help seeking (See Figure 4). I hypothesized that a higher level of rural acculturation would be associated with lower levels of professional help seeking attitudes and behaviors, and with higher levels of non-professional (ie. pastors, family, etc.) help-seeking attitudes and behaviors. Additionally, I hypothesized that high levels of rural acculturation would be associated with higher levels of stigma attitudes towards persons with mental illness and help seeking for psychological concerns. Stigmatized attitudes towards mental illness were hypothesized to explain the relationship between rural acculturation and professional and non-professional help-seeking and weaken the relationship between rural acculturation and non-professional help seeking. If the hypothesized variables did not form a latent construct, each contributor was to be examined as predictors of help seeking and stigma. Further, demographic and systemic variables known within rural community samples or hypothesized to influence help seeking within this sample were measured (i.e., gender, income, rural vs. mixed rural, health insurance, reliable transportation, employment status, marital status, college).

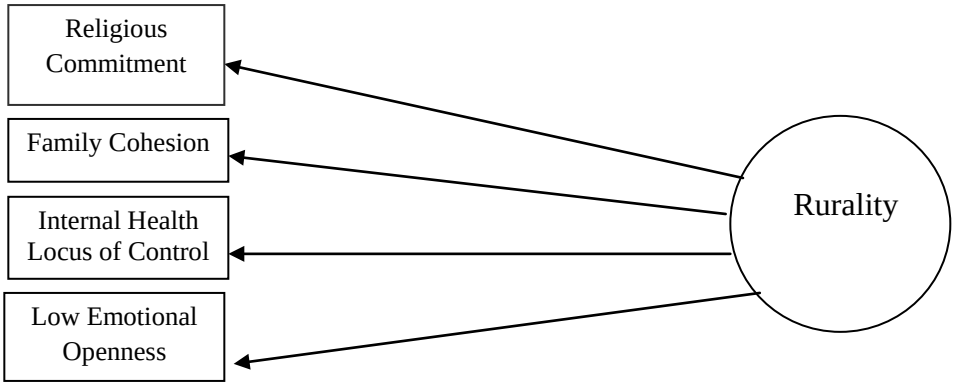

Figure 3. Hypothesized "rurality" latent variable

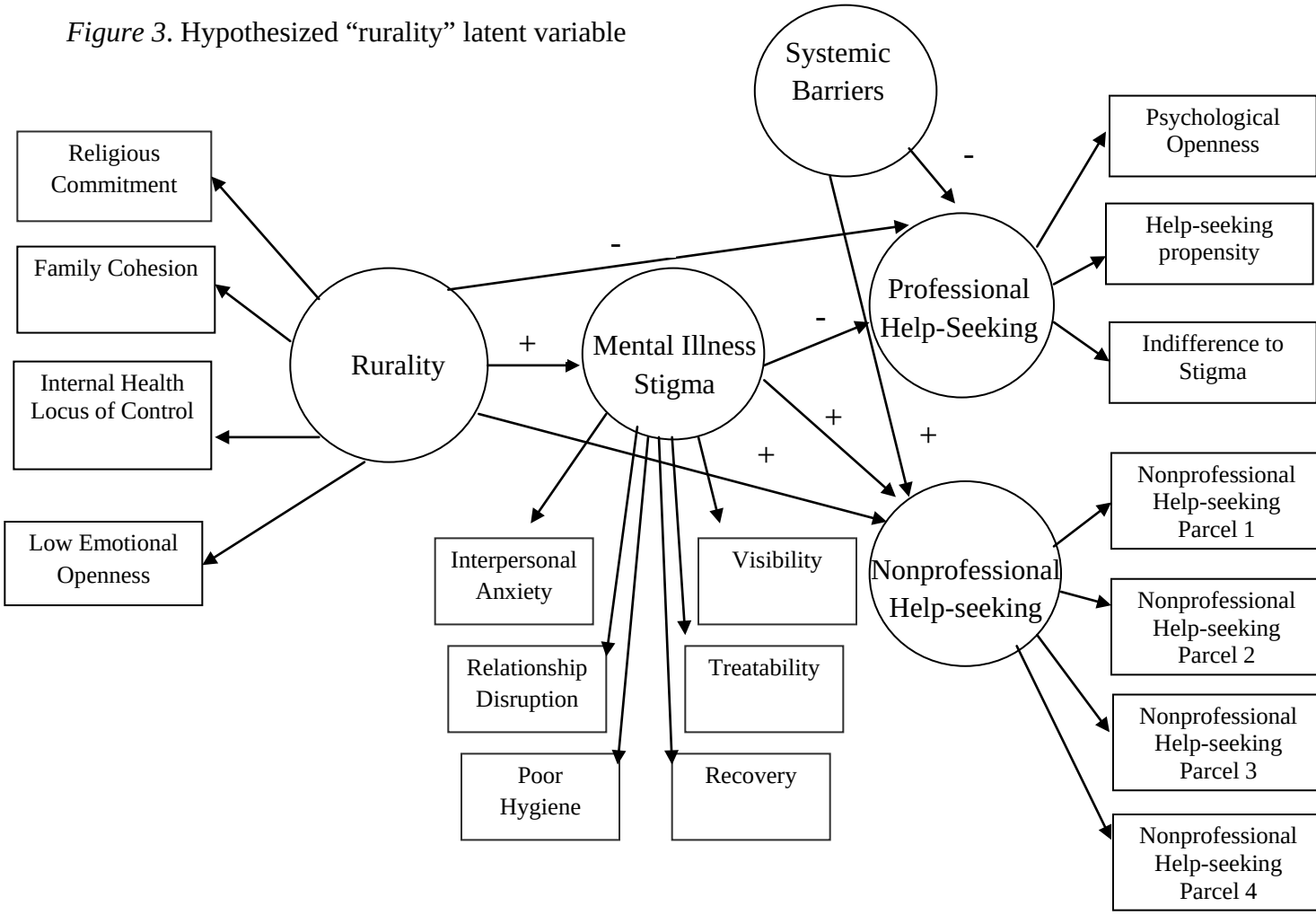

Figure 4. Hypothesized model of the relations between rurality, stigma and help seeking.

Method

Participants

College students (*N*=225) who have resided in a rural or mixed rural county in Virginia as determined by the Isserman (2005) definition for at least ten years were recruited from three universities in Virginia: Virginia Commonwealth University (VCU), Virginia Tech (VT) and University of Virginia at Wise (UVAW). Institutional Review Boards for all three universities approved recruitment of their students for the current study. Participants had to be English speaking and at least 18 years of age to be included in the study. Eligible individuals were asked to complete a web-based survey examining individual contributions to stigma towards mental illness and help seeking.

Participants were recruited based on their reported residency in a rural county for at least ten years. Based on a priori hypotheses, only college students from ages 18 to 24 years old were included in this study to examine a cohort of emerging adults. The majority of college student participants were female (71.1%), never married (87.0%) and Caucasian (83.1%). Most participants reported that their income was stable (69.8%) and the most frequently endorsed income bracket with 28% reporting a weekly income of $901 per week. Regarding health care, 88% of participants reported having health insurance, although 56.4% didn't know whether it covered specialty mental health services (counseling or psychotherapy). Students were recruited from Virginia Tech (56.9%), Virginia Commonwealth University (40.4%) and University of Virginia at Wise (2.8%). Some participants reported working in addition to attending school (42.7%), but most worked part-time (less than 35 hours; 65.6%). Most participants reported having resided in a rural county for more than 15 years (65.3%). Participants were evenly distributed between residences in both rural (50.2%) and mixed

rural (49.8%) counties in Virginia and 87.6 % of the sample reporting a reliable source of transportation. Regarding the family each participant grew up in, most reported their family as working in business and finances (20.6%), healthcare (12.4%), education (11.0%), service occupations (10.6%), among others. Some participants reported their families to have raised crops (8.8%) and animals (12.4%) for a living.

Measures

Health internal locus of control. The Multi-dimensional Health Locus of Control, internal scale (IHLC; Wallston, Wallston & DeVellis, 1978) was used to measure an internal health locus of control. The health locus of control is comprised of two other subscales related to locus of control: powerful others health locus of control and chance health locus of control. However, only the internal subscale was included in the current study. Internal locus of control was developed to measure the "health internals" who believe that the locus of control for health is internal and that one stays or becomes healthy or sick as a result of his or her behavior (Wallston et al., 1978). The internal scale consists of 12 items using a 7- point Likert type format ranging from *Strongly Disagree* to *Strongly Agree*. A sample item includes "I am in control of my health." The Cronbach's alpha for the internal subscale is .86 (Wallston et al., 1978). The test-retest reliability ranges from .60-.70. The criterion related validity is measured by comparing the MHLC, internal scale with the internal scale of the generalized internal locus of control measure (Levenson, 1973) it was modeled after. The Levenson's generalize internal subscale was correlated .57 with the IHLC. The construct validity of the IHLC is demonstrated by r=.40 with a two-item measure of self-reported health status.

Religious Commitment. Religious Commitment Inventory (Worthington et al, 2003) was used to assess religious commitment and spirituality. For this 10-item measure participants were asked "How true is each of the following statements for you?" in reference to behaviors displaying religious commitment and spirituality. Response options range from 1= *Not at all true of me* to 5 = *Totally true of me*. Sample item is "I spend time trying to grow in understanding my faith." Higher scores indicate greater religious commitment. Three week test-retest reliability was .87. RCI-10 was tested for reliability and validity based on data from therapists and clients at secular and explicitly Christian counseling agencies. The client sample had a Cronbach's alpha for the RCI-10 of .95, with corrected item-total correlations ranging from .69 to .87.

Family adaptability and cohesion. Family Adaptability and Cohesion Evaluation Scales (FACES; Olson et al., 1979) measure both family adaptability (11 items) and cohesion (22 items). For the present study, only the family cohesion items were included. Items were rated on a 5-point Likert-type scale, ranging from 1 = *Almost never* to 5 = *Almost always*. Examples of items are "preferably, we seek warmth and togetherness for a feeling of coziness within the family"; "in our family we need each other for all sorts of things"; and "each decision is made by the entire family." The higher the cohesion score, the more enmeshed the family is said to be. The internal consistency of the cohesion subscale of the FACES-III is .77. Test-retest data for four to five weeks was a correlation of .83 for cohesion, showing very good stability. FACES-III appears to have good face validity. FACES III has discriminated between numerous types of dysfunctional families and control groups (Olson et al., 1985).

Emotional openness. NEO-PI-R (Revised NEO Personality Inventory; Costa & McCrae, 1992) will be used to assess participants' openness to experience. The NEO-PI-R is a questionnaire measure of the five-factor model (Costa & McCrae, 1985), which comprises the NEO Inventory (Costa & McCrae, 1980; McCrae & Costa, 1983a) along with additional scales to measure agreeableness and conscientiousness. The original NEO Inventory is a 144-item questionnaire developed through factor analysis to fit a three-dimensional model of personality, neuroticism, extraversion and openness. Item scoring is balanced to control for acquiescence, and socially desirable responding does not appear to bias scores (McCrae & Costa, 1983b). The current study only included the openness scale and two subscales of the openness subscale: feelings and actions. There were 24 items with response options ranging from 0= *Strongly disagree* to 4= *Strongly agree*. A sample item is "I rarely experience strong emotions" and "I think it's interesting to learn and develop new hobbies." Estimates of internal consistency and 6-month temporal stability for the three global scores range from .85 to .93 (McCrae & Costa, 1983a). Questionnaire measures of openness give higher validity coefficients than do adjective-factor measures (using a bi-polar rating scale, e.g. conventional, original). Furthermore, when self report was compared with peer report, the correlation was .57 between the self-reported NEO Openness scale and the peer-rated NEO Openness scale (Costa & McCrae, 1987).

Mental Illness Stigma. Day's (2007) Mental Illness Stigma Scale was developed based on theory of stigma, which included 7 factors and 28 items of attitudes toward people with mental illness: interpersonal anxiety, relationship disruption, poor hygiene, visibility, treatability, professional efficacy, and recovery. Day and colleges (2007) developed this measure with responses pertaining to mental illness in general, depression, bipolar disorder

and schizophrenia. Within the current study, only the "mental illness" condition was used. However, for the present study the term "mental illness" was changed to "psychological problems" and defined as "nerves, stress, mental health concerns, emotional problems, mental troubles, and personal difficulties." The paragraph in the mental illness condition gave a brief historical overview of mental illness without mentioning any specific symptoms and informed by the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR, 2000). The current study did not include the subscale of professional efficacy because items overlapped substantially with the outcome variable of professional help seeking. The anxiety subscale consisted of seven items and none were reverse scored. A sample item from the anxiety subscale was "I feel anxious and uncomfortable when I'm around someone with a psychological problem." Higher scores indicated more perceived interpersonal anxiety from interacting with a person with a psychological problem. The relationship disruption subscale consisted of six items and none were reverse scored. A sample item from the relationship disruption subscale is "I would find it difficult to trust someone with a psychological problem." Higher scores indicated more disruption imagined while in a relationship with a person with a psychological problem. The hygiene subscale consisted of four items and none were reverse scored. A sample item of the hygiene subscale is "People with psychological problems neglect their appearance." Higher scores indicate the belief that persons with psychological problems have poor hygiene. The visibility subscale consisted of four items and one item was reverse scored. A sample item is "It is easy for me to recognize the signs of psychological problems." Higher scores indicate endorsement that persons with psychological problems are highly visible. The treatability subscale consisted of three items with two items reverse scored. A sample item is "There are effective medications that allow

persons with psychological problems to return to normal and productive lives." Higher scores indicate endorsement that psychological problems are treatable. Finally, the recovery subscale consisted of two items that were both reverse scored. A sample item is "Once someone develops a psychological problem, he or she will never fully recover from it." Higher scores indicate the belief that persons with psychological problems are able to recover. Response options ranged from 1= *Strongly disagree* to 7= *Strongly agree*. Online questionnaire automatically generated with a Likert scale of 1= *Very strongly disagree* to 7= *Very strongly agree*, slightly different from the original measure. The Cronbach's alphas for subscales range from .71 (Treatability) to .86 (Professional Efficacy). The MISS scale was developed and validated across two studies among college students, community members, and psychiatric patients. The scale was validated among college students and community members, measuring attitudes toward people with mental illness, depression, bipolar disorder, and schizophrenia.

Help seeking for mental health concerns. Inventory of Attitudes toward Seeking Mental Health Services (IASMHS; Mackenzie, Knox, Gekoski & Macaulay, 2004) was used to assess professional help seeking. The IASMHS consists of 24 items and 3 internally consistent factors: psychological openness, help-seeking propensity and indifference to stigma. Responses were recorded on a 5-point Likert scale ranging from 0=disagree to 4=agree. Responses within the online survey system were automatically generated using a 5-point Likert scale ranging from 0= strongly disagree to 4= strongly agree, The psychological openness factor reflects the extent to which individuals are open to acknowledging psychological problems and to the possibility of seeking professional help for them (Mackenzie et al., 2004). A sample item of the psychological openness factor is "People with

strong characters can get over psychological problems by themselves and would have little need for professional help." All eight items comprising the psychological openness subscale were negatively worded and therefore reverse coded. The help seeking propensity factor reflects the extent to which individuals believe they are willing and able to seek professional psychological help (Mackenzie et al., 2004). A sample item for help seeking propensity factor is "If I believed I was having a mental breakdown, my first inclination would be to get professional attention." All eight items were positively worded and therefore none were reverse coded. The indifference to stigma factor reflects the extent to which individuals are concerned about what various important others might think should they find out that the individual was seeking professional help for psychological problems (Mackenzie et al., 2004). A sample item of the indifference to stigma subscale is "Important people in my life would think less of me if they were to find out that I was experiencing psychological problems." Seven out of eight items of the Indifference to Stigma subscale were negatively worded and therefore reverse coded. Internal consistency of the full-scale IASMHS was estimated with a Cronbach's alpha of .87. Alpha was .87 for the psychological openness subscale, .76 for the help-seeking propensity subscale and .79 for the indifference to stigma subscale. Test of convergent and discriminant validity were limited by the absence of psychometrically valid and reliable measures of attitudes toward seeking mental health services (Mackenzie et al., 2004). Therefore, past use of mental health services and intentions to use such services were chosen to examine criterion validity using participants from community and replication samples. The measure discriminated between participants' intentions to use professional and nonprofessional help. The three factors were all positively correlated with one another (MacKenzie et al., 2004). With respect to past use of professional

psychological help, both psychological openness and help-seeking propensity exhibited moderate correlations, whereas correlations between past use and indifference to stigma were weaker (Mackenzie et al., 2004). Regarding intentions to seek mental health services, both psychological openness and indifference to stigma exhibited moderate correlations, whereas help-seeking propensity was highly correlated (Mackenzie et al., 2004).

Attitudes towards seeking non-professional help. Participants responded to items adapted from the "help-seeking propensity" subscale items from the IASMHS. To reflect non-professional help seeking, the participants responded to help seeking items from a non-professional as defined as individuals who have not been formally trained to deal with psychological problems (e.g., clergy, minister, priest, naturopath, herbalist, pharmacist, family or friends). A sample item is "If I believed I was having a mental breakdown, my first inclination would be to get non-professional attention." Response options were uniform with professional help seeking items within a 5-point Likert scale ranging from strongly agree to strongly disagree.

Help-seeking behavior. Participants responded to items measuring lifetime and past year help-seeking for mental health concerns from a primary care provider, mental health specialist, family member or friend and a spiritual leader. A sample item for lifetime help-seeking is "Have you ever discussed psychological problems, nerves or stress with family members or friends?" with response options as "yes, no or no response." A sample item for past year use is "Do you regularly discuss psychological problems, nerves or stress with family members or friends? For past year help-seeking, response options included "yes within the past year," "yes but not within the past year," "No" and "No response." Both

lifetime help-seeking and past year help seeking questions were parallel for primary care providers, mental health providers, family/friends and religious providers.

Procedures

Participants were recruited via introductory psychology courses at Virginia Commonwealth University, Virginia Tech and University of Virginia at Wise. Students completed the survey online and took less than 60 minutes to complete. Students who completed the survey had the option to enter their contact information for one of three random drawings for $100.00 gift certificates to Wal-Mart. The participants were not asked to give their name at any time unless they choose to enter the drawing for a gift certificate. Any contact information of students was entered into a secure webpage that was separate from the study. At no time was student contact information associated with the responses given in the study. Participant responses were not provided to course instructors.

Results

Descriptive Statistics: Means and Standard Deviations

The appropriate descriptive statistics were conducted to reveal distributional qualities of the data. The means, standard deviations and range of predictor variables (religious commitment, family cohesion, internal health locus of control, openness to emotions) and potential mediating or process variables (mental illness stigma scale (MISS), MISS anxiety subscale, MISS relationship disruption subscale, MISS hygiene subscale, MISS treatability subscale, MISS recovery subscale, MISS visibility subscale) are shown in Table 2. The means, standard deviations and range of outcome variables (full scale professional help-seeking, psychological openness subscale, professional help seeking propensity, indifference to stigma, non-professional help seeking propensity, lifetime and past year primary care

provider help-seeking, lifetime and past year mental health specialist help-seeking, lifetime and past year family member/friend help-seeking, lifetime and past year spiritual leader help-seeking) are also shown in Table 2. Scaled predictor and outcome variables were transformed using z-scores to evaluate the variables using the same scale. As seen in Table 2, all scales had acceptable to excellent estimated internal consistency. Participants reported help seeking for mental health concerns with a family physician over the lifetime (34.7%) and past year help seeking (12.4%) as well as lifetime use (32.9%) and past year use (11.1%) of a mental health specialist. Help-seeking for mental health concerns from a pastor, clergy, priest or spiritual leader was endorsed by participants for lifetime (17.3%) and past year (5.8%) use. Lifetime (84.4%) and past year (69.8%) help seeking for mental health concerns from family members or friends was the most frequently endorsed help seeking source.

Table 2

Means, Standard Deviations, and Alphas for Predictor and Outcome Variables

	M	*SD*	Range	α
Predictor Variables				
Religious commitment	27.82	11.09	10-50	.96
Family cohesion	36.89	8.01	10-50	.93
Internal health locus of control	53.57	10.85	17-84	.91
Emotional openness	30.69	4.49	13-40	.72
Mediating or Process Variables				
Mental illness stigma	95.99	16.82	51-144	.87
Treatability	16.00	3.05	6-21	.72
Relationship disruption	19.54	6.56	6-39	.88
Hygiene	11.48	4.77	4-26	.89
Anxiety	21.71	7.99	7-49	.92
Visibility	16.59	4.02	5-28	.79
Recovery	10.68	2.32	4-14	.80
Outcome Variables				
Professional help seeking	77.79	13.26	34-116	.88
Psychological openness	23.91	5.31	8-40	.73
Professional help seeking propensity	26.94	5.18	13-40	.77
Indifference to stigma	27.03	5.94	10-40	.81
Non-professional help seek propensity	16.44	3.76	5-25	.70

Correlational Analyses

Correlational analyses were conducted to examine inter-correlations within the three hypothesized latent constructs: rurality (Table 3), stigma (Table 4), and help seeking attitudes (Table 5). See Table 6 for a correlation matrix of all predictor and outcome subscales. The first set of analyses revealed that the variables hypothesized to comprise a unified construct of rural cultural values -- religious commitment, family cohesion, internal health locus of control and low openness to feelings --were not strongly correlated. Therefore, each of the four scales was treated as a separate construct in the path models.

Prior to analyses, the overall stigma scale was hypothesized to measure a stigma towards mental illness as a latent construct. When correlational data were examined in the second set of analyses, it was observed that there likely were two latent constructs within the overall scale. While all subscales were significantly correlated with the overall stigma scale at $p < .01$ level, separate patterns emerged. Namely, treatability and recovery were strongly correlated with each other, while anxiety, relationship disruption and hygiene were strongly correlated with each other. Furthermore, each of the two sets of subscales was negatively correlated with each other (see Table 4). However, one subscale, visibility, did not strongly correlate with the other subscales and was removed from the path models. In response to these findings, path models included two latent constructs measuring stigma ARH (interpersonal anxiety, relationship disruption, hygiene) and TRRC (treatability and recovery). These stigma variables, ARH and TRRC, are theoretically differing concepts; one (ARH) describes stigma rooted in the effects of mental illness; the other (TRRC) refers to stigma based in the course of mental illness

over time. The latent construct of stigma (TRRC) should be interpreted as stigma regarding mental illness such that it is treatable and can lead to recovery, based on Day (2007)'s development and interpretation of these subscales. However, similar to emotional openness, directions of correlations and paths reflect the original measure's direction.

When examining the subscales of the IASMHS, all subscales appeared to be strongly correlated and therefore represented as one latent construct, measured by three subscales (psychological openness, professional help seeking propensity and indifference to stigma) in the path models. However, the non-professional help seeking propensity subscale modeled after the IASMHS professional help seeking propensity subscale was not strongly correlated with the IASMHS subscales. Due to theoretical differences regarding attitudes towards seeking help from professionals versus non-professionals, non-professional help seeking attitudes was entered into path models as a separate measured construct.

Table 3

Pearson correlations between scales hypothesized to comprise a "rural values" variable

	2	3	4
1 Religious commitment	.18***	.04	-.02
2 Family cohesion	--	.17*	.23**
3 Internal health locus of control		--	.01
4 Openness to feelings			--

*Note. N*s range from 217 to 219.

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

Table 4

Pearson correlations between subscales comprising the Mental Illness Stigma Scale (MISS)

	2	3	4	5	6	7
1 Anxiety	.78**	.73**	.10	-.37***	-.42***	.88***
2 Relationship disruption	--	.72***	.17*	-.47***	-.51***	.84***
3 Hygiene		--	.13	-.44***	-.43***	.80***
4 Visibility			--	.22***	.00	.43***
5 Treatability				--	.44***	-.19**
6 Recovery					--	-.30***
7 Mental illness stigma						--

*Note. N*s range from 217 to 219.

*p <.05 **p < .01 ***p < .001

Table 5

Pearson correlations between subscales comprising the Inventory of Attitudes towards Seeking Mental Health Services (IASMHS)

	2	3	4	5
1 Psychological openness	.59***	.48***	.08	.84***
2 Professional help seeking propensity	--	.47***	.27***	.84***
3 Indifference to stigma		--	.17*	.79***
4 Non professional help seeking propensity			--	.21**
5 Professional help seeking attitudes				--

*N*s range from 220 to 221.

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

Table 6

Pearson correlations between subscales of predictor and outcome variables

	2	3	4	5	6	7	8	9	10	11	12	13
1 Religious commitment	.04	-.02	.18**	.24**	.24**	.24**	-.06	-.14*	-.02	.09	-.10	.37**
2 Internal health locus of control	--	-.01	.17*	.25**	.26**	.30**	-.13	.04	-.16*	-.10	-.10	.11
3 Emotional openness		--	.23**	-.27**	-.29**	-.30**	-.40**	.33**	.28**	.40**	.35**	.28**
4 Family cohesion			--	-.04	-.03	-.05	.12	.13*	.15*	.22*	.12	.23**
5 Interpersonal anxiety				--	.78**	.73**	-.37**	-.42**	-.39**	-.31**	-.45**	-.06
6 Relationship disruption					--	.72**	-.47**	-.57**	-.43**	-.38**	-.44**	-.05
7 Poor hygiene						--	-.44**	-.43**	-.35**	-.22**	-.29**	-.05
8 Treatability							--	.44**	.36**	.42**	.24**	.08
9 Recovery								--	.23**	.18**	.24**	.08

	2	3	4	5	6	7	8	9	10	11	12	13
10 Psychological openness									--	.59**	.48**	.08
11 Professional help seeking propensity										--	.47**	.27**
12 Indifference to stigma											--	.17*
13 Nonprofessional help seeking propensity												--

*N*s range from 217 to 222.

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

Means comparison by demographic and hypothesized systemic barriers

T-tests and one-way ANOVAs were utilized to determine the associations of demographic and systemic variables with both predictor and outcome variables. Variables (gender, income, rural vs. mixed rural, health insurance, reliable transportation, employment status, marital status, college) were chosen based on their known or hypothesized impact on individual values, stigma and help-seeking within community samples. I examined whether these demographic variables would be associated in similar ways for rural, emerging adult college students compared with research using rural community samples. T-tests or one-way ANOVAs were conducted with each of the predictor and outcome variables (religious commitment, internal health locus of control, openness to feelings, family cohesion, stigma related to the effects of mental illness: anxiety, poor hygiene, relationship disruption (ARH), stigma related to the course of mental illness: treatability, recovery (TRRC), professional help-seeking attitudes, non-professional help seeking propensity, lifetime and past year help-seeking behaviors for mental health concerns from a primary care provider, spiritual leader, family member or friend or mental health care provider). When predictor and outcome variables were compared by gender, significant differences were found for internal health locus of control, openness to emotions, both stigma factors, help-seeking attitudes towards professionals and non-professionals, lifetime and past year help-seeking behavior from family members/friends and mental health professionals as well as lifetime help seeking behavior from primary care providers (see Table 7). Females reported more openness to emotional experiences, the belief that mental illness is treatable and capable of recovery, and more positive attitudes towards seeking help from non-professionals. Females also reported more lifetime help-seeking from primary care providers, family members/friends and mental

health providers as well as past year help-seeking from family members/friends and mental health providers than males. In contrast, males reported higher internal health locus of control as well as more stigmatized beliefs about persons with mental illness than females.

There were no significant differences between groups when predictor and outcome variables were compared by rural versus mixed rural county status in Virginia according to Isserman (2005), or by health insurance status. Based on these findings, I examined between groups differences for residents of "Appalachian" counties based on the definition by the Appalachian Regional Commission (2010). There was only one marginally significant difference between Appalachian versus non-Appalachian counties: religious commitment, $t(216) = 1.90$, $p = .06$. Appalachian residents reported higher religious commitment than non-Appalachian residents.

However, there was a significant association with transportation status such that owning or having access to a reliable source of transportation significantly related to lower lifetime help-seeking from primary care providers, $t(212) = -2.39$, $p = .02$. When compared across employment status, there was a significant difference such that students who reported not currently working in addition to school were more likely to report more openness to emotions, $t(216) = -2.22$, $p < .05$.

One-way ANOVAs were used to determine whether the study variables differed across the three colleges included within this sample. Non-professional help seeking significantly differed across colleges, $F(2,215) = 3.78$, $p = .02$. Tukey post-hoc comparisons of the three colleges indicated that students attending Virginia Tech ($M = 16.98$, 95% CI [16.31, 17.64]) reported significantly more help-seeking propensity from a non-professional than students attending Virginia Commonwealth University ($M = 15.72$, 95% CI [14.94,

16.50]). Comparisons between University of Virginia at Wise (M = 14.50, 95% CI [11.33, 17.67]) and the other two colleges were not statistically significant at the $p < .05$ level. Stigma towards mental illness, specifically relating to treatability and recovery differed significantly across colleges, $F(2, 213) = 5.21$, $p = .006$. Tukey post-hoc comparisons of the three colleges indicated that students attending Virginia Tech (M = 27.49, 95% CI [26.78, 28.20]) were significantly more likely to endorse beliefs that psychological problems are treatable and persons with psychological problems can recover than students attending Virginia Commonwealth University (M = 25.47, 95% CI [24.37, 26.58]. Comparisons between University of Virginia at Wise students (M = 27.50, 95% CI [23.01, 31.99]) and the other two colleges were not statistically significant at the $p < .05$ level.

One way ANOVAs also revealed significant differences across reported family household income. Religious commitment significantly differed across income level, $F(10, 206)= 1.92$, $p = .04$. Tukey post-hoc comparisons of the income level intervals indicated that the students who had a lower family household income, namely $100-200 per week ($M$ = 18.54, 95% CI [14.58, 22.50]) reported significantly lower levels of religious commitment than both students who earned $601-700 per week ($M$ = 33.13, 95% CI [27.06, 39.21]) as well as students who reported earning $801-900 per week ($M$ = 32.73, 95% CI [28.15, 37.31]). Lifetime help seeking for mental health concerns from a spiritual leader also differed across income level, $F(10, 206) = 3.56$, $p < .001$. Tukey post-hoc comparisons of the income level intervals revealed that students who endorsed making $601-700 per week ($M$ = 0.53, 95% CI [.25, .82]) endorsed significantly more lifetime help seeking for mental health concerns from a spiritual leader than students who reported making $101-200 ($M$ = 0, [0,0]) and $701-800 per week ($M$ = 0, [0,0]) and $901+ per week ($M$ = 0.13 [.04, .21]).

Table 7

Predictor and outcome variable means by gender

	Males	Females	*t*	*df*
Religious commitment	27.32 (11.64)	28.02 (10.89)	-.42	216
Internal health locus of control	57.21 (10.69)	52.09 (10.59)	-3.33***	219
Family cohesion	36.62 (7.28)	37.01 (8.31)	-.32	215
Openness to feelings	28.73 (4.55)	31.49 (4.22)	-4.28***	216
Stigma based on effects of mental illness (ARH)	59.10 (16.16)	50.16 (17.62)	3.48***	217
Stigma based on course of mental illness (TRRC)	25.29 (4.37)	27.24 (4.56)	-2.89**	215
Professional help seeking attitudes	73.25 (12.83)	79.78 (13.34)	-3.33***	219
Non-professional help seeking propensity	15.63 (3.84)	16.76 (3.68)	-2.03*	218
Primary care provider help-seeking behaviors (lifetime)	.24 (.43)	.40 (.49)	-2.30*	218
Spiritual leader help-seeking behaviors (lifetime)	.16 (.37)	.19 (.39)	-.43	216
Family member/friend help-seeking behaviors (lifetime)	.74 (.44)	.92 (.27)	-3.70***	216
Mental health care provider help-seek behaviors (lifetime)	.23 (.42)	.38 (.49)	-2.22*	217
Primary care provider help-seeking behaviors (past year)	.06 (.24)	.15 (.36)	-1.83	223

	Males	Females	*t*	*df*
Spiritual leader help-seeking behaviors (past year)	.06 (.24)	.06 (.23)	.153	223
Family member/friend help-seeking behaviors (past year)	.45 (.50)	.80 (.40)	-5.57***	223
Mental health care provider help-seek behaviors (past year)	.03 (.17)	.14 (.35)	-2.47*	223

Note. Standard deviations appear in parentheses next to means. *df* range from 215 to 223. ARH= Mental Illness Stigma Scale, interpersonal anxiety subscale, relationship disruption subscale and poor hygiene subscale; TRRC= Mental Illness Stigma Scale, treatability subscale and recovery subscale.

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

Path Analyses

Structural equation modeling was used to test competing models of the relations among religious commitment, internal health locus of control, family cohesion, emotional openness, stigma towards mental illness, and help-seeking attitudes and behaviors from professionals and non-professionals. The variables hypothesized to comprise a rural cultural values variable were entered separately based on their weak or non-correlations with each other. Each variable was entered into the model as individual measured predictor variables. Mental illness stigma was entered as two separate latent factors ARH (anxiety, relationship disruption, hygiene) and TRRC (treatability, recovery). Each latent factor was measured by subscales within the Mental Illness Stigma Scale and created based on correlational data suggesting similar patterns of endorsement by respondents based on underlying factors. Outcome variables included a latent factor of attitudes towards seeking mental health services from professionals, measured by the Inventory of Attitudes towards Seeking Mental Health Services (IASMHS), with three subscales (psychological openness, professional help seeking propensity and indifference to stigma). Non-professional help seeking attitudes were measured based my adaptation of the help-seeking propensity subscale of the IASMHS. Furthermore, help-seeking behavior was measured with dichotomous (yes/no) responses to lifetime and past year help-seeking from primary care providers, mental health specialists, family members/friends and spiritual leaders. Each help-seeking behavior item was entered as a measured (versus latent) construct.

Several indicators of model fit were used to determine how well the specified model fit the sample data, as well as to compare model fit for different models. The Chi square statistic was examined, which in this case represents the difference between the actual covariance matrices of the

data and those estimated by the specified model. Smaller Chi square values represent better-fitting models. A non-significant chi-square value would be ideal, indicating the specified model was not significantly different from the sample covariance, but this is unlikely in large samples in which even small differences are significant. Models can be compared by calculating a chi square difference test which compares chi square values and degrees of freedom; the resulting chi square value can be evaluated for significance by comparing it to the chi square distribution. The overall model fit also was evaluated using the comparative fit index (CFI), the Tucker-Lewis Index (TLI) and the root mean square error of approximation (RMSEA). The CFI and TLI compare the proposed model fit to that of a baseline model in which no relationships between the variables are specified (i.e., they are assumed to be zero), and as such are considered "incremental fit" indices. The RMSEA is an absolute fit index, with values of .06 or less indicating a close fit, and values of .06 to .08 indicating an acceptable fit.

First, model 1 was constructed to simultaneously examine all relations between religious commitment, internal health locus of control, emotional openness, family cohesion and both stigma variables (ARH & TRRC) and help-seeking attitudes from non-professionals as well as professionals (see Figure 5). This model did not fit well, CFI = 0.83, TLI = 0.76, RMSEA = 0.12.

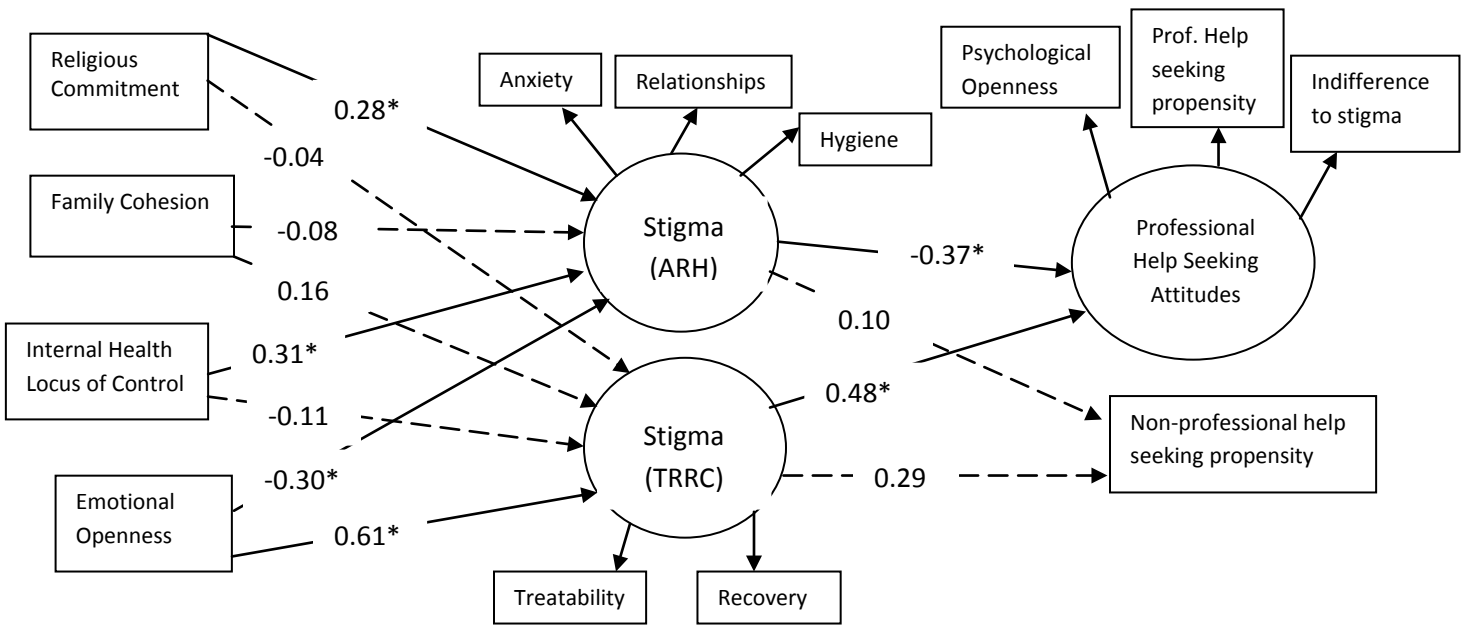

Figure 5. Model 1. ARH= Stigma based in the effects of mental illness (interpersonal anxiety, relationship disruption, poor hygiene); TRRC= Stigma based in the course of mental illness over time (treatability and recovery). Significant paths at $p < .05$ are indicated by solid lines, non-significant paths are dashed. Standardized path coefficients are indicated on paths.

Subsequent models examined the two latent variables indicating stigma separately, and examined help-seeking attitudes from professionals and non-professionals separately. Model 2 included religious commitment, internal health locus of control, emotional openness and family cohesion as predictors, and one stigma variable (ARH), representing the stigma based in the effects of mental illness (interpersonal anxiety, relationship disruption and poor hygiene) and the outcome of help-seeking attitudes towards professionals. This model revealed a significant association such that more religious commitment and internal health locus of control and less openness to emotional expression meant higher endorsement that psychological problems cause interpersonal anxiety, relationship disruption and poor hygiene (ARH). Further, participants who endorsed the belief that psychological problems lead to anxiety, relationship disruption and poor hygiene were less likely to endorse positive attitudes towards seeking help from professional providers. Model 2 was a reasonable fit to the data, CFI = .93, TLI = .91, RMSEA = .09, although the RMSEA was slightly higher than acceptable.

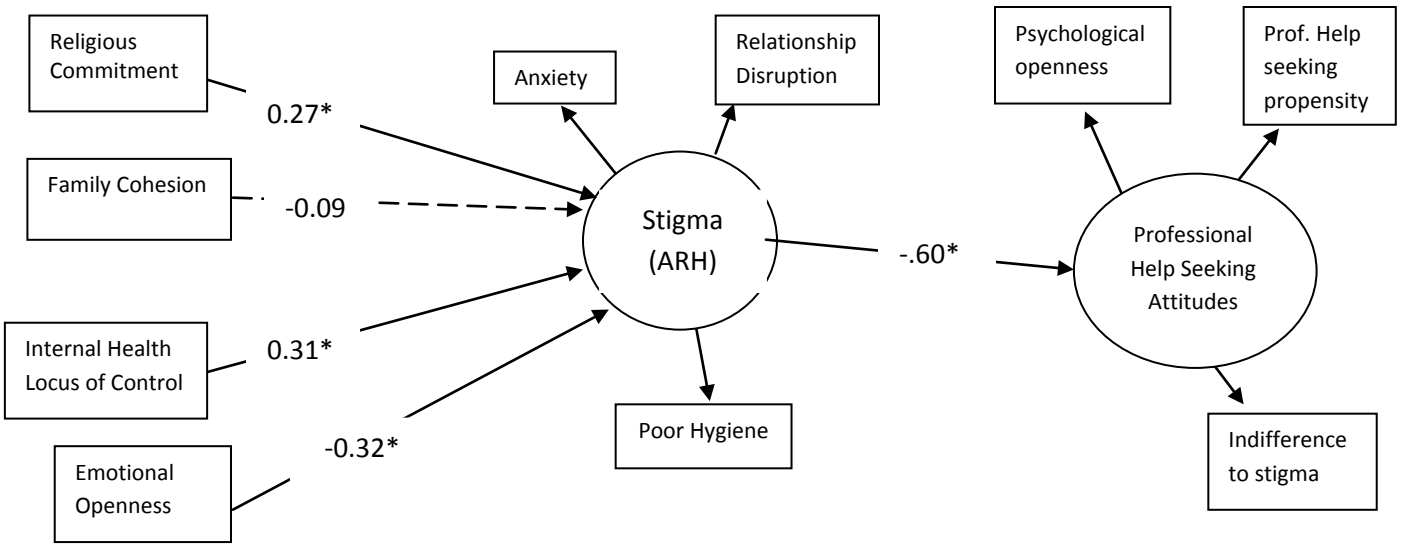

Figure 6. Model 2. ARH= Stigma based in the effects of mental illness (interpersonal anxiety, relationship disruption, poor hygiene). Significant paths at $p < .05$ are indicated by solid lines, non-significant paths are dashed. Standardized path coefficients are shown above.

A competing model (Model 2a) was then constructed similar to model 2 which included religious commitment, internal health locus of control, emotional openness, family cohesion as predictors, and one stigma variable (ARH), representing the stigma based in the effects of mental illness (interpersonal anxiety, relationship disruption and poor hygiene) and the outcome of help-seeking attitudes towards professionals. Model 2a included additional direct paths from predictor values variables to the outcome variable of professional help seeking attitudes. The only significant direct path was a positive association between emotional openness and professional help-seeking attitudes. Model 2a was an acceptable fit to the data, CFI = .97, TLI = .94, RMSEA = .07 (see Figure 7).

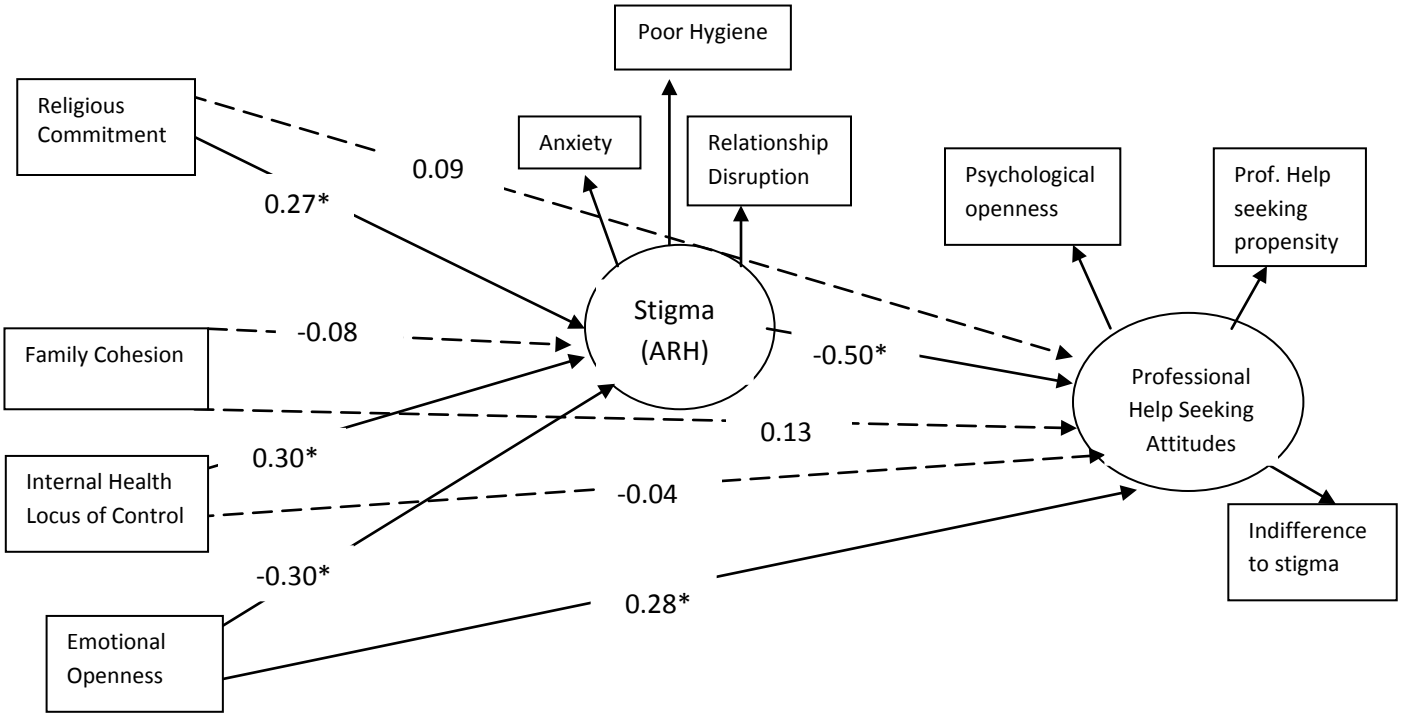

Figure 7. Model 2a. ARH=Stigma based in the effects of mental illness (interpersonal anxiety, relationship disruption, poor hygiene). Significant paths at $p < .05$ are indicated by solid lines, non-significant paths are dashed. Standardized path coefficients are displayed in the above model.

Model 3 was constructed to evaluate the relations between religious commitment, internal health locus of control, emotional openness and family cohesion and the stigma factor based in the effects of mental illness, ARH (anxiety, relationship disruption and hygiene) and non-professional help seeking propensity attitudes. Model 3 was a poor fit to the data, CFI = .90, TLI = .84, RMSEA = .13 (see Figure 7).

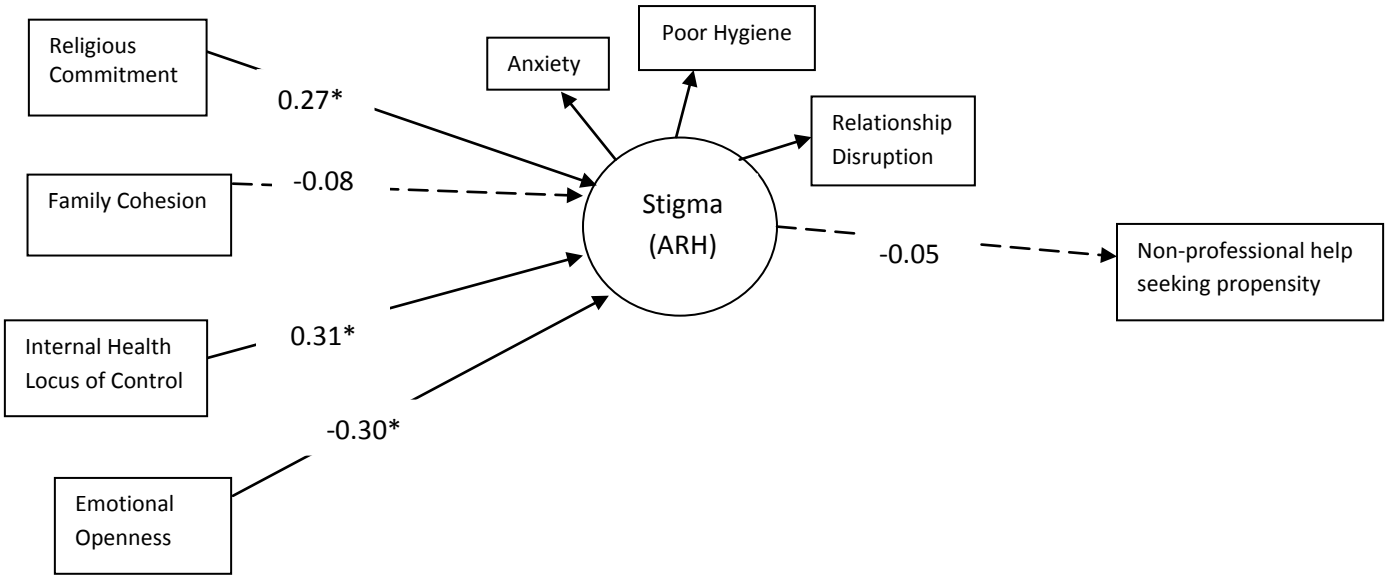

Figure 8. Model 3. ARH=Stigma based in the effects of mental illness (interpersonal anxiety, relationship disruption, poor hygiene). Significant paths at $p < .05$ are indicated by solid lines, non-significant paths are dashed. Standardized path coefficients are displayed above.

Model 3a included religious commitment, internal health locus of control, emotional openness and family cohesion, ARH stigma factor (anxiety, relationship disruption and hygiene) and non-professional help seeking attitudes. There were direct but not mediated associations for religious commitment and emotional openness with non-professional help-seeking attitudes. The model fit was good, CFI = 1.0, TLI = 1.3, RMSEA =0.

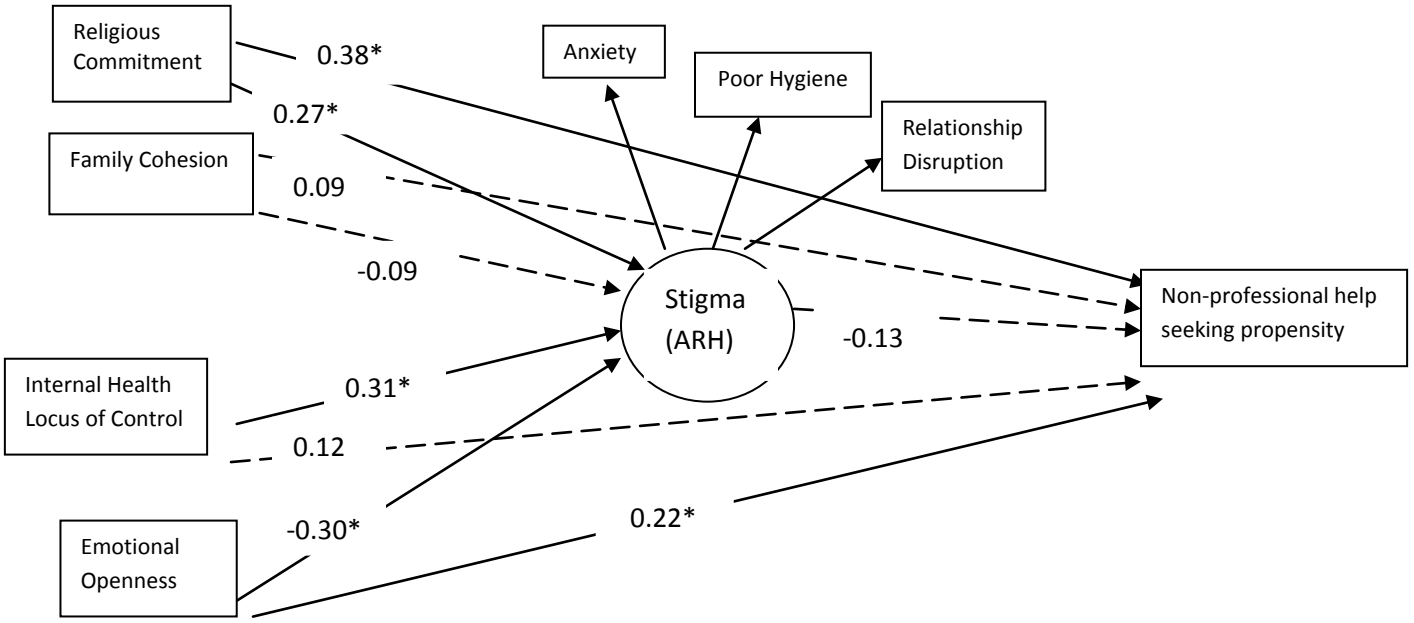

Figure 9. Model 3a. ARH=Stigma based in the effects of mental illness (interpersonal anxiety, relationship disruption, poor hygiene). Significant paths at $p < .05$ are indicated by solid lines, non-significant paths are dashed. Standardized path coefficients are displayed above.

Model 4 included individual value predictors (religious commitment, internal health locus of control, emotional openness, and family cohesion), stigma factor based in the course of mental illness over time, TRRC (treatability, recovery) and professional help seeking attitudes. This model revealed a significant relation such that more internal health locus of control and less openness to emotional expression meant higher endorsement that psychological problems are not treatable and nor can they be recovered from (TRRC). Further, participants who endorsed the belief that psychological problems were not treatable or recoverable were less likely to endorse positive attitudes towards seeking help from professional providers. Overall the model fit was an acceptable fit to the data, CFI = 0.93, TLI = 0.89, RMSEA =0.08.

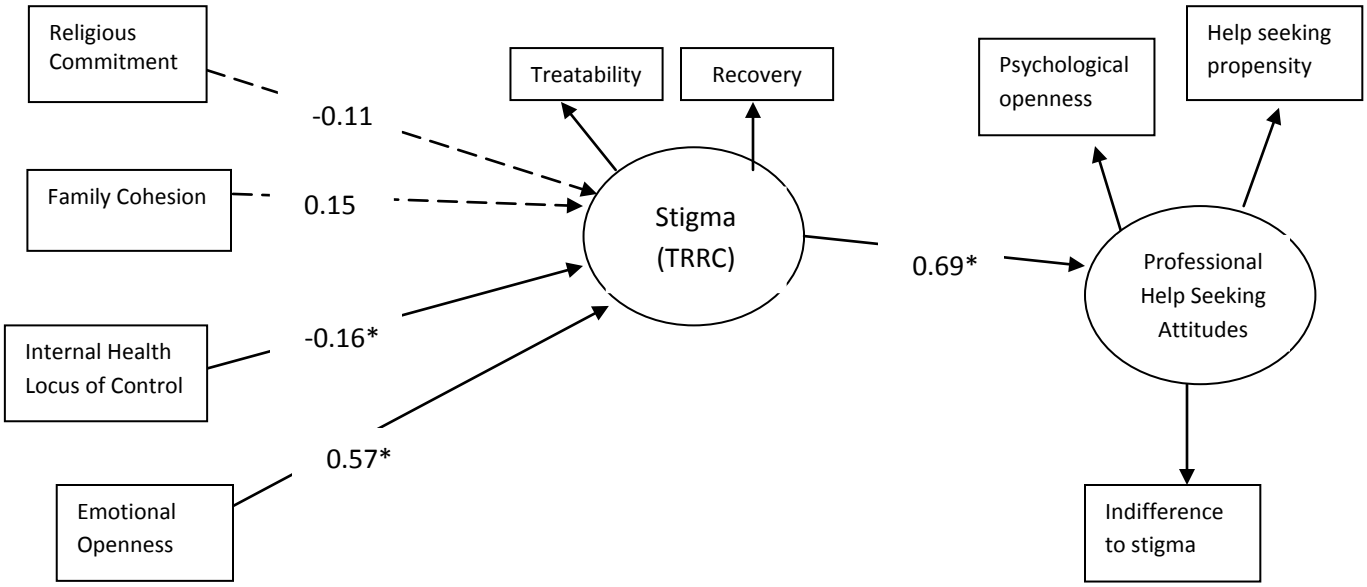

Figure 10. Model 4. TRRC= Stigma based in the course of mental illness over time (treatability and recovery). Significant paths at $p < .05$ are solid lines, non-significant paths are dashed. Standardized path coefficients are displayed above.

Model 4a included individual value predictors (religious commitment, internal health locus of control, emotional openness, and family cohesion), TRRC stigma factor (treatability and recovery) and professional help seeking attitudes. Model 4a also included direct pathways from predictor to outcome variables. Model 4 revealed a direct pathway between low emotional openness and professional help seeking attitudes through the belief that psychological problems are not treatable nor can they lead to recovery. Participants who endorsed low levels of openness towards emotional experiences were less likely to express positive attitudes towards professional help seeking when they also held beliefs that mental illness was neither treatable nor capable of recovery. Overall the model was an acceptable fit to the data, CFI= 0.94, TLI= 0.90, RMSEA= 0.08.

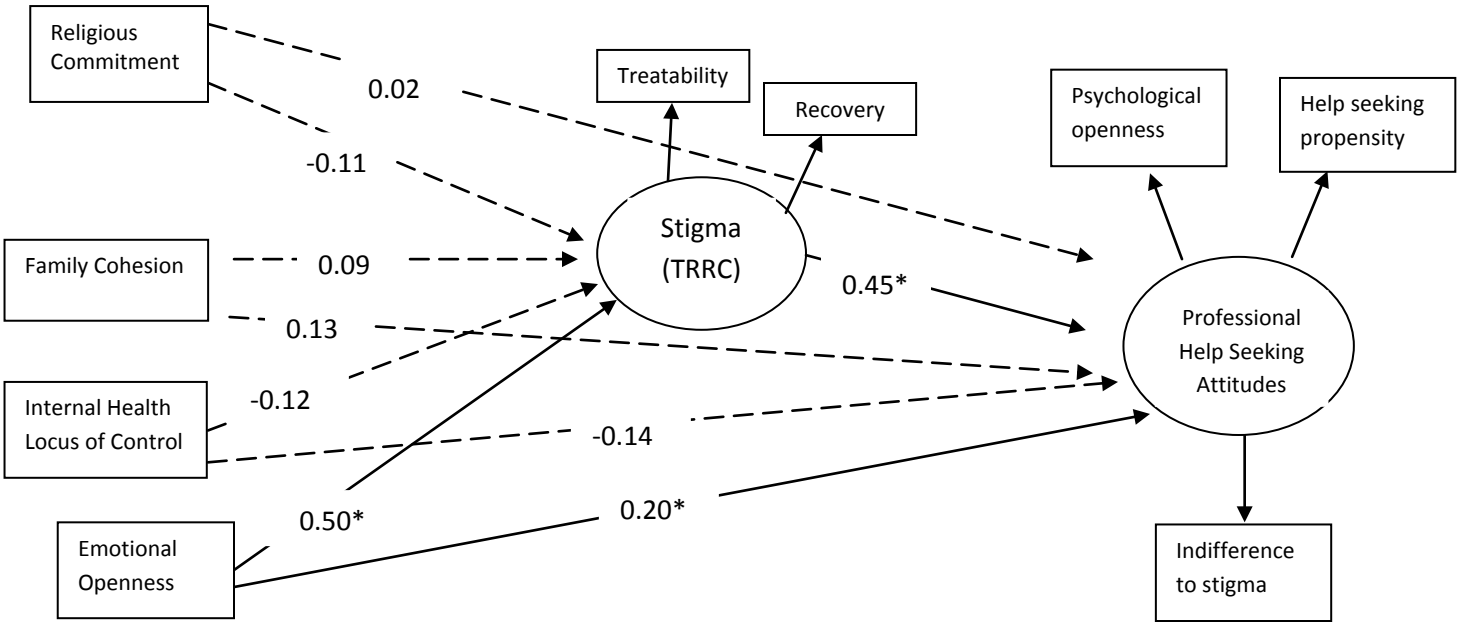

Figure 11. Model 4a. TRRC= Stigma based in the course of mental illness over time (treatability and recovery). Significant paths at $p < .05$ are solid lines, non-significant paths are dashed. Standardized path coefficients are pictured above.

Model 5 included individual value predictors (religious commitment, internal health locus of control, emotional openness, and family cohesion), TRRC stigma factor (treatability, recovery) and non-professional help seeking attitudes. Model 5 revealed no significant paths from stigma (TRRC) related to non-professional help seeking attitudes. This non-significant pattern was observed with the other stigma variable (ARH) in model 3. However, the emotional openness variable was still positively related to stigma variable such that participants who endorsed low emotional openness also responded that mental illness is neither treatable nor can it lead to recovery. Overall model 5 was a poor fit to the data, CFI= 0.64, TLI= 0.32, RMSEA= 0.17.

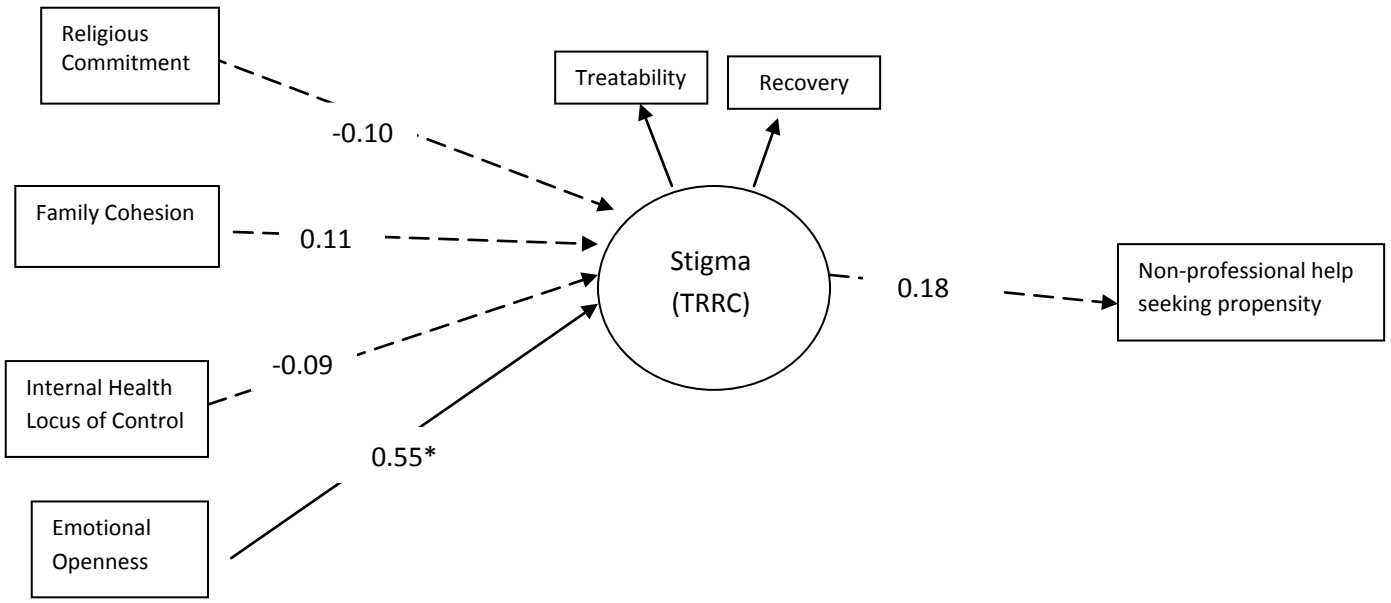

Figure 12. Model 5. TRRC= Stigma based in the course of mental illness over time (treatability and recovery). Significant paths $p < .05$ are solid lines, non-significant paths are dashed. Standardized path coefficients are shown above.

Model 5a included individual value predictors (religious commitment, internal health locus of control, emotional openness, and family cohesion), and TRRC stigma factor (treatability and recovery) and non-professional help seeking attitudes. Model 5a included direct paths between individual value predictors and the outcome variable. Model 5a revealed an indirect path from emotional openness to non-professional help-seeking attitudes through stigma relating to treatability and recovery. While emotional openness was positively related to both stigma towards treatability and recovery and non-professional help seeking attitudes, stigma and non-professional help-seeking were not significantly related to each other. Religious commitment was positively associated with attitudes towards seeking help from non-professionals, including spiritual leaders and family members. Overall, model 5a was an acceptable fit to the data, CFI= 0.97, TLI= 0.90, RMSEA= 0.07.

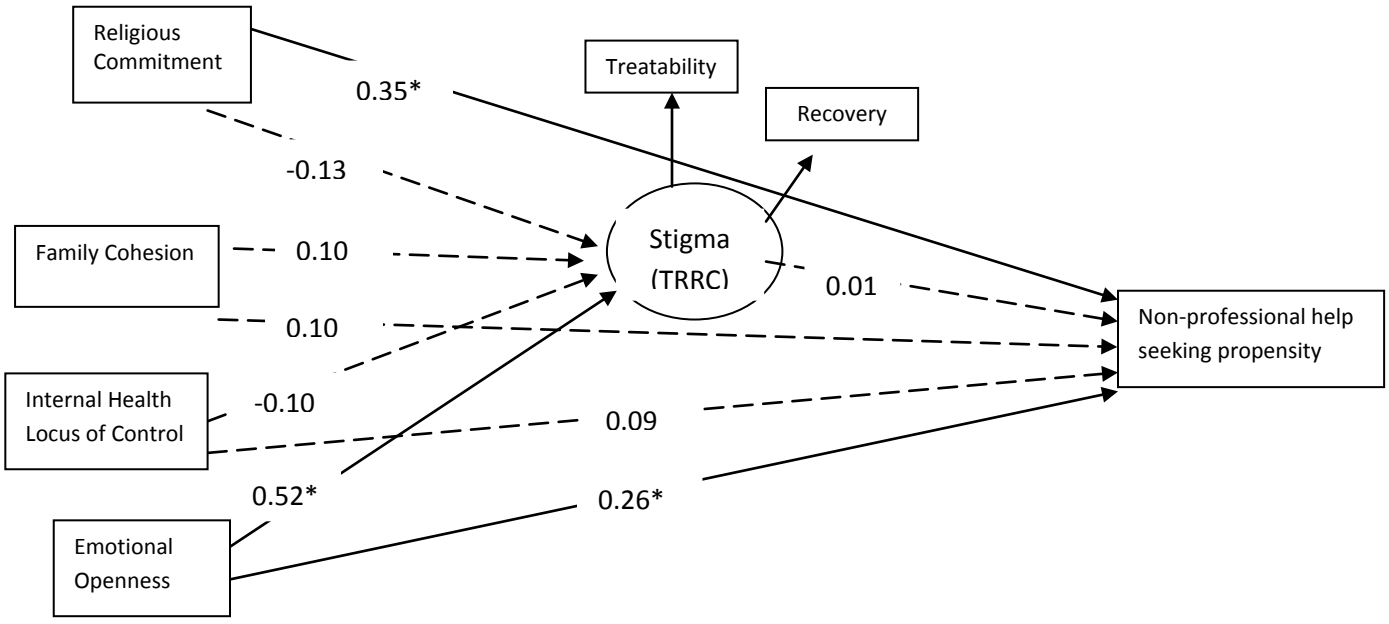

Figure 13. Model 5a. TRRC= Stigma based in the course of mental illness over time (treatability and recovery). Significant paths at $p < .05$ are solid lines, non-significant paths are dashed. Standardized path coefficients are displayed above.

Model 6 included individual value predictors (religious commitment, internal health locus of control, emotional openness, and family cohesion), ARH stigma factor (anxiety, relationship disruption, and hygiene) and life time help seeking behavior from a primary care provider, spiritual leader, family member/friends or a mental health specialist. As predicted, stigmatized attitudes were associated with reduced help-seeking from mental health providers and family care providers for mental health concerns. However, these stigmatized values also were associated with reduced help seeking from family and friends but not from spiritual leaders. Overall the model 6 was an acceptable fit to the data, CFI= 0.92, TLI= 0.88, RMSEA= 0.08.

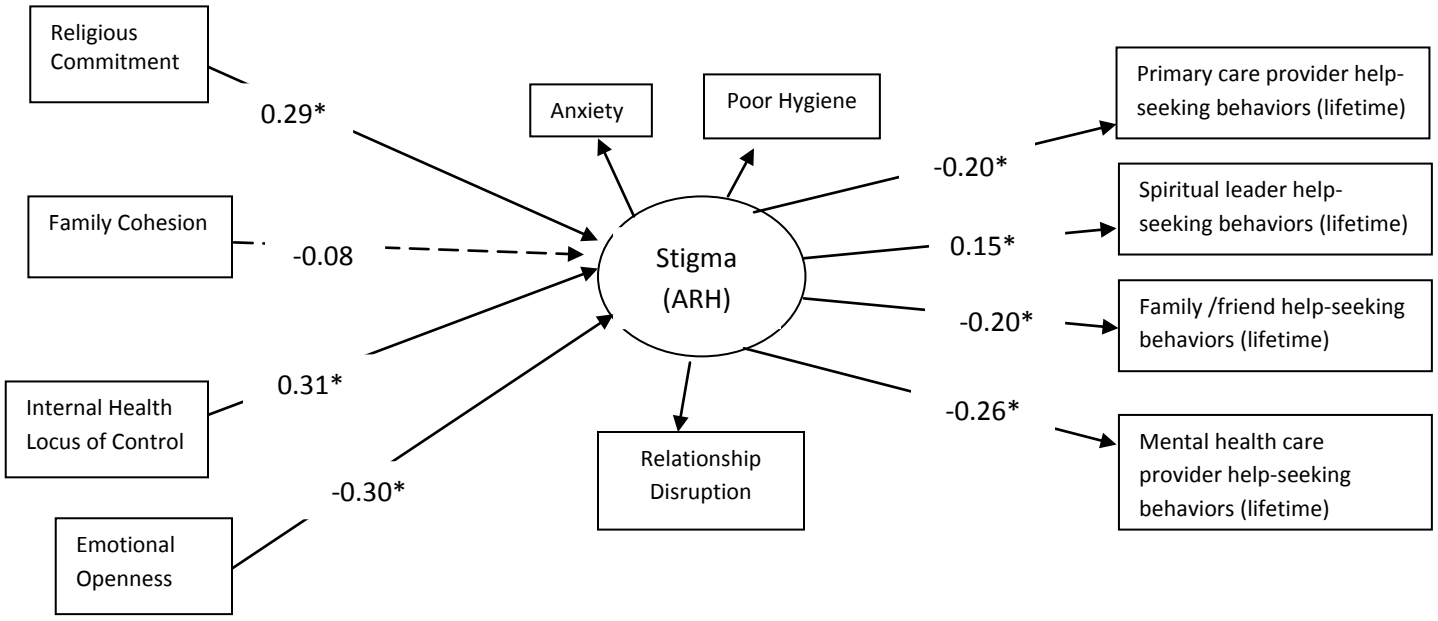

Figure 14. Model 6. ARH=Stigma based in the effects of mental illness (interpersonal anxiety, relationship disruption, poor hygiene). Significant paths at p<.05 are solid lines, non-significant paths are dashed. Standardized path coefficients are displayed above.

Model 7 included individual value predictors (religious commitment, internal health locus of control, emotional openness, and family cohesion), ARH stigma factor (anxiety, relationship disruption, and hygiene) and past year help seeking behavior from a primary care provider, spiritual leader, family member/friends or a mental health specialist. Overall model fit was acceptable, CFI= 0.94, TLI= 0.88, RMSEA= 0.07.

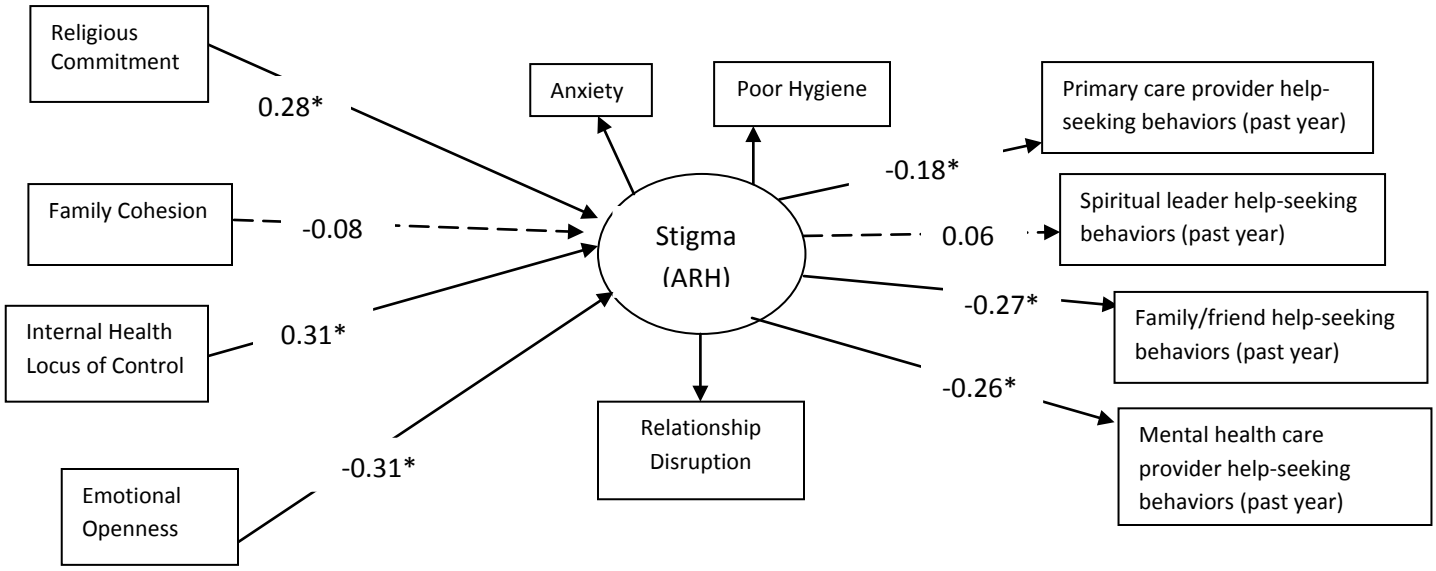

Figure 15. Model 7. ARH= Stigma based in the effects of mental illness (interpersonal anxiety, relationship disruption, poor hygiene). Significant paths at $p < .05$ are solid lines, non-significant paths are dashed. Standard path coefficients are shown above.

Model 8 included individual value predictors (religious commitment, internal health locus of control, emotional openness, and family cohesion), and TRRC stigma factor (treatment and recovery) and life time help seeking behavior from a primary care provider, spiritual leader, family member/friends or a mental health specialist. Overall model fit was poor, CFI= 0.74, TLI= 0.55, RMSEA= 0.11.

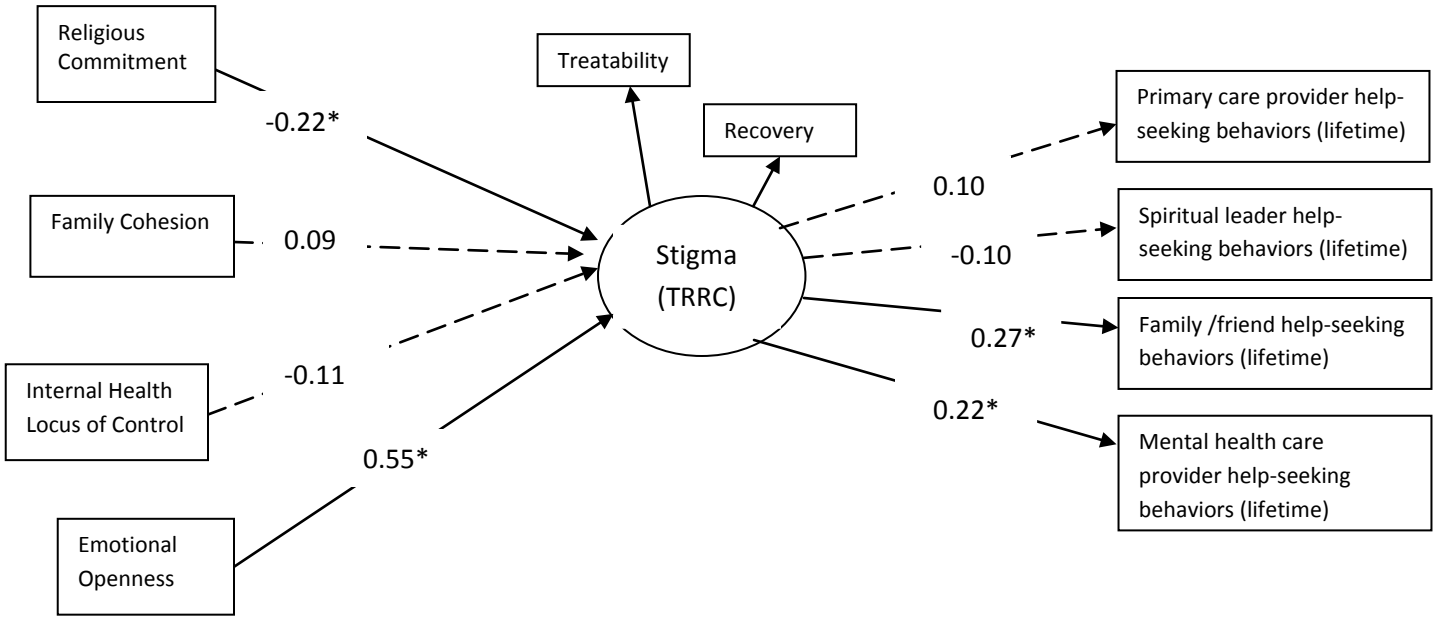

Figure 16. Model 8. TRRC= Stigma based in the course of mental illness over time (treatability and recovery). Significant paths at $p < .05$ are solid lines, non-significant paths are dashed. Standardized path coefficients are displayed above.

Model 9 included individual value predictors and TRRC stigma factor (treatability and recovery) and past year help seeking behavior from a primary care provider, spiritual leader, family member/friends or a mental health specialist. Within this model, only emotional openness was significantly related to the belief that mental illness is treatable and capable of recovery. Otherwise those participants who believed mental illness is not treatable and recoverable also reported less past year help-seeking from primary care providers, family members and/or mental health providers.

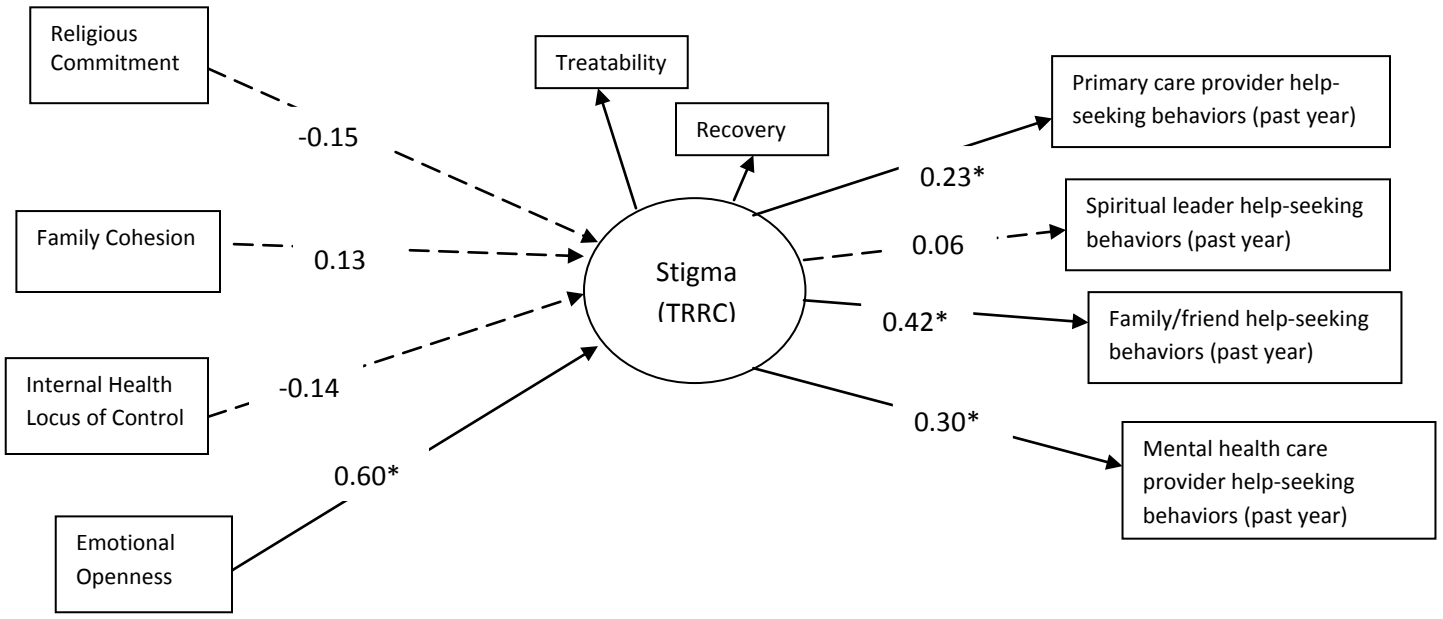

Figure 17. Model 9. TRRC= Stigma based in the course of mental illness over time (treatability and recovery). Significant paths at $p < .05$ are solid lines, non-significant paths are dashed. Standardized path coefficients are shown above.

Table 8

Model Fit Statistics for Competing Models

	Chi square	df	*p*	CFI	TLI	RMSEA	BIC
Model 1	216.16	51	0.0001	0.83	0.76	0.12	7434.48
Model 2	75.47	28	0.0001	0.93	0.91	0.09	5618.04
Model 2a	49.34	24	0.002	0.97	0.94	0.07	5613.50
Model 3	64.05	14	0.0001	0.90	0.84	0.13	4556.24
Model 3a	4.27	10	.93	1.0	1.3	0	4518.04
Model 4	45.13	20	0.001	0.93	0.89	0.08	5334.52
Model 4a	35.74	16	0.003	0.94	0.89	0.08	5346.72
Model 5	61.47	8	0.0001	0.64	0.32	0.17	4268.57
Model 5a	8.06	4	0.09	0.97	0.90	0.07	4236.74
Model 6	77.94	32	0.0001	0.92	0.88	0.08	4845.74
Model 7	63.99	32	0.001	0.94	0.91	0.07	4472.43
Model 8	85.25	23	0.0001	0.74	0.55	0.11	4484.41
Model 9	53.08	23	0.0004	0.84	0.73	0.08	4181.13

Competing model comparisons

Models were compared based on their competing model fit to the data. Models were compared when direct pathways were added from predictor to outcome variables. Significant differences were found between models 2 and 2a, such that Model 2a was a significantly better fitting model to the observed data than model 2, $\chi^2_{diff}(4) = 26.13$, $p < .0001$. When Models 3 and 3a were compared, model 3a was a significantly better fit, $\chi^2_{diff}(4) = 59.78$, $p < .0001$ when direct pathways were added from the individual predictor variables to the non-professional help-seeking attitudes variable. Models 4 and 4a were not significantly different, $\chi^2_{diff}(4) = 9.39$, $p = .05$. Finally, when models 5 and 5a were compared, model 5a was a significantly better fit, $\chi^2_{diff}(4) = 53.41$, $p < .0001$. These findings suggest that for models 2, 3 and 5, adding direct paths in models 2a, 3a, 5a from the predictors to the outcome significantly improved model fit with the observed data of this sample.

In summary, high religious commitment, high internal health locus of control and low emotional openness were positively associated with stigma towards mental illness (high ARH, low TRRC). Stigma towards mental illness was negatively related to professional help-seeking attitudes for mental health concerns, persons who held more stigmatized beliefs also endorsed less professional help-seeking attitudes for mental health concerns overall. However, there were no significant associations between stigma and non-professional help-seeking attitudes.

Further, two variables emerged within the data reflecting two stigma variables, one comprising stigma based on the effects of mental illness, ARH (interpersonal anxiety, relationship disruption, poor hygiene) and the course of mental illness over time, TRRC (treatability, recovery). Individual cultural values differed in their relations to the two stigma

latent variables within models including help-seeking attitudes. Stigma based in the belief that mental illness causes interpersonal anxiety, relationship disruption and poor hygiene was positively associated with religious commitment and internal health locus of control while negatively associated with emotional openness. However, stigma towards mental illness relating to the course over time as treatable or capable of recovery was negatively related to internal health locus of control and positively associated with emotional openness. For ease of interpretation, directions are reversed to mean that persons who reported that mental illness is not treatable or capable of recovery reported a high internal locus of control and low emotional openness. The difference between these stigma variables is the non-significant relation between stigma based on the course of mental illness over time and religious commitment.

Models containing help-seeking behaviors indicated different relations for individual value predictors and stigma related to the course of mental illness over time. Specifically, model 8 which included lifetime help-seeking behaviors showed significant associations for both high religious commitment and low emotional openness with stigma that mental illness is not treatable or capable of recovery. However, model 9 which included past year help-seeking behaviors indicated only a significant association for low emotional openness and stigma based on the course of mental illness over time and a non-significant relation for religious commitment.

When I added direct pathways in models 2a, 3a and 5a more variance was accounted for than models 2, 3 & 5 without these pathways. This additional pathway is visible in model 2a where emotional openness was positively associated with professional help-seeking attitudes. Further, emotional openness was negatively associated with stigma based in the

effects of mental illness (ARH) and stigma was negatively associated with professional help-seeking attitudes. Therefore, this significant direct pathway means that stigma accounts for additional variance within the association between emotional openness and professional help-seeking attitudes such that emotional openness affects professional help-seeking through consecutively held beliefs about stigma based in the belief that mental illness causes anxiety, relationship disruption and poor hygiene. Models 3a & 5a were significantly better fitting models with the addition of direct significant pathways from emotional openness and religious commitment which were positively associated with non-professional help-seeking behaviors. Religious commitment and emotional openness were positively associated with non-professional help-seeking attitudes. However, there were indirect relationships due to non-significant associations between both stigma latent factors (ARH & TRRC) and non-professional help-seeking attitudes.

Overall, these key findings support my predictions of the positive association between religious commitment, internal health locus of control and low emotional openness with stigma towards persons with mental illness. Another prediction supported in the data was the positive association between stigma towards mental illness and professional help-seeking attitudes, family/friend help-seeking behaviors and mental health care provider help-seeking behaviors (past year and lifetime). Findings were varied for primary care and spiritual leader help-seeking behaviors. Primary care provider help-seeking behaviors in the past year were negatively associated with stigma based in the effects of and course over time of mental illness (ARH &TRRC) but lifetime help-seeking from primary care providers was only associated with stigma based in the effects of mental illness (ARH). Spiritual leader lifetime

help-seeking was only significantly associated with stigma based in the effects of mental illness.

Discussion

The purpose of the current study was to examine the cultural variables of rural emerging adult college students. These hypothesized rural cultural variables (religious commitment, internal health locus of control, family cohesion and low emotional openness) were evaluated for their association to stigma towards mental illness and help-seeking attitudes and behaviors. The following salient results will be discussed: the non-finding of a rural cultural variable; the relation between each cultural value, stigma and help-seeking; the relation between stigma and help-seeking, this study's limitations and directions for future research.

No Observed Rural Cultural Variable

Within this emerging adulthood population of college students, there was a lack of evidence for endorsement of values that comprise a single rural cultural variable. Previous rural community-based studies and reports from rural practitioners' clinical experiences have shown higher endorsement of values such as stoicism (low emotional openness), religious commitment, family cohesion and control over one's health (internal health locus of control) when compared to non-rural communities. Theoretically, my hypothesis was that a sample of college students from rural communities would endorse similar values to those found in community studies, based on an underlying rural identity. However, within this sample, correlational data showed that religious commitment, internal health locus of control, low emotional openness and family cohesion were not highly correlated with one another, and therefore, rural emerging adults were not likely to hold these values simultaneously. In fact,

only family cohesion was significantly correlated with the other variables hypothesized to comprise a rural cultural values variable, i.e., religious commitment, internal health locus of control and low emotional openness. Previous research studies have included individual value predictors and compared these across rural and non-rural and also within solely rural samples (Fisher, 1982; Judd et al., 2006; Meystedt, 1984; Murray et al., 2008). Researchers such as Wagenfeld (2003) have called for research to develop a measure of rural cultural values that assesses acculturation to a place-based identity. In this light, my finding that family cohesion, internal health locus of control, lack of openness to new experiences and religious commitment did not form a rural cultural variable is a significant contribution to the literature. It is likely that since these variables did not show similar patterns of endorsement, the development of a measure of rural culture would report similar findings.

A lack of an underlying construct of rurality in this study is likely due to multiple factors. One reason may be due to the emerging adulthood population of participants selected for this study. An underlying construct of rurality may exist, but it may only be present in an older cohort. This sample of students 18-24 years old may not possess values consonant with roots in agrarian living that their parents and grandparents had. While agriculture is important in rural communities, it is no longer central to rural economies within America. Just 6.3% of rural Americans live on farms, and 50% of these farm families have significant off-farm income (New Freedom Commission on Mental Health, 2004). Similarly, within the current sample, few participants reported growing up in a family that raised crops (8.8%) and animals (12.4%) for a living. Further, young adults may not hold characteristically rural values, or act in ways more consistent with those values. This finding would be consistent with those of Slama (2003), who suggested more rural values were found in rural residents

who (a) are older, (b) have less higher education, (c) live on a farm or in a smaller town or have never lived in an urban area for any significant length of time, (d) have parents and grandparents living in rural areas, and (e) have not traveled often or far. On the other hand, this rural cultural variable could likely be an artifact of a number of demographic variables that occur in higher numbers than in non-rural areas (i.e., poverty, geographic isolation) and that were not found in this sample. The majority of participants within this study had a stable source of income and did not work in addition to attending school, likely with other sources of income from parents or spouses.

The current sample included college students who reported having lived in a rural Virginia county for at least 10 years, these findings may not reflect the values of emerging adults who still reside in the communities they were born. Initially the targeted sample was rural emerging adults enrolled in community colleges with majors in technical fields (i.e. welding, carpentry) as well as those students who are bound for higher education in universities. However, Virginia Community Colleges did not allow for data collection and so data was collected from university students who also met the rural residence requirement of at least ten years. There is a substantial difference between these two samples because the initially targeted sample would likely have still lived in the rural community where they were raised where most of the present sample likely lived on or near the academic campus. Additionally these rural youth who are enrolled in universities are likely in the minority among their peers as fewer young adults in rural areas seek higher education when compared to urban youth (New Freedom Commission on Mental Health, 2004). These peers who remain in the rural communities from which they came are likely to be poorer and less educated than their college-attending cohorts and may endorse a different constellation of

values. Further, due to the advent of widespread access to media and the internet, the geographic isolation felt in many rural communities may no longer prevent a reflection of mainstream values within rural populations, especially within this younger population with increased access to multiple forms of media. Additionally patterns of migration have brought urban persons to rural areas and to call them rural "simply because they reside there may obscure a very important difference, although their mailing address is rural, their values may remain firmly urban (Wagenfeld, 2003)." Rural cultural values are likely still a major factor preventing access to care for rural residents, but the constellation of values hypothesized to comprise this cultural value were not found in this sample.

Furthermore, the operational definition of rural may have accounted for this non-finding. Counties in Virginia defined as mixed rural and rural have diverse topographies including remote and mountainous terrain, rolling hills of the Piedmont while other counties are more flat. Topographies or varying bioregions may account for a murky picture of cultural values. An analysis of Appalachian (ARC, 2010) counties versus non-Appalachian counties provided some insight into these cultural differences. While only a marginal difference emerged between groups for religious commitment, it is likely that Appalachian culture may differ from non-Appalachian culture on value systems which may affect stigma and help-seeking. One possible reason for cultural differences may be due to the mountainous topography of the Appalachian region which translates to higher rates of poverty than non-Appalachian rural areas due to geographical isolation from the rest of the community (Elder, 2007). Just as rural Minnesota is likely not the same in cultural values as rural New Mexico, it is likely that within rural Virginia there is significant variability in cultural values.

The current study contributes to the literature by examining an emerging adult population who are seeking higher education. While these individuals have roots in rural communities, they may not reflect the values of the majority rural population. This sample of young college students did not report the systemic barriers to care reflected in findings of community based studies including poverty, a lack of reliable transportation and health insurance, among others. More work to understand the diversity of rural culture values in emerging adults is needed particularly with a non-college sample.

Cultural Values Linked to Stigma and Help Seeking

The values hypothesized to comprise a rural cultural identity varied in their relations to stigma and help seeking variables. I hypothesized that individuals with a high level of religious commitment, high internal locus of control, low emotional openness, and high family cohesion would report more stigma towards mental illness, less professional help-seeking, and more non-professional help-seeking.

Before discussing the relations among variables, it is important to note that the measurement of predictors and outcome variables did not overlap. While the predictor emotional openness variable appears similar to the outcome variable, psychological openness, they do not these items do not overlap. Psychological openness subscale is comprised of items measuring the participant's openness to acknowledging psychological problems and to the possibility of seeking professional help for them while emotional openness refers to openness to emotional experiences in general. Two other similarly sounding variables are stigma towards mental illness and indifference to stigma. Indifference to stigma refers to concerned about what various important others might think should they find out that the individual were seeking professional help for psychological problems which

is similar to the visibility scale, which was removed from the analyses and therefore this aspect of stigma does not overlap with either stigma variable.

Consistent with my hypothesis, religious commitment was significantly and positively related to stigma towards persons with mental illness, characterized by a belief that mental illness results in poor hygiene, relationship disruption, and interpersonal anxiety. Furthermore, higher endorsement of religious commitment was linked to the belief that mental illness is neither treatable nor could it lead to recovery. Within this rural context, religious commitment and attendance in religious groups is at the heart of one's identity. According to Fischer (1982), residents in small communities were most likely to form and expand network relations within a church or church-based setting compared with urban communities. Therefore, those participants who endorsed higher religious commitment run the risk of losing access to a social network if they endorse beliefs inconsistent with the majority. This may be especially true in rural communities, where religious attendance in rural communities has not followed the pattern of decline that has occurred in urban areas (Meystedt, 1984). Research comparing rural and non-rural communities indicates a higher incidence of stigmatized beliefs towards persons with mental illness within rural communities (Hoyt, Conger, Valde, & Weihs, 1997). With religious institutions at the heart of social networks, it is likely that the majority of religious groups hold stigmatized beliefs towards mental illness. Living in a rural community often means exposure to tighter social networks; a greater flow of information may result in being labeled by all the people one knows, rather than a select few, when one decides to seek treatment for mental health concerns (Rost et al., 1993). These rationales led to my hypothesis that higher religious commitment would be linked to less favorable professional help seeking attitudes and more

favorable non-professional help-seeking, including religious leaders as well as family members and friends. However, within this study, religious commitment only was directly related to non-professional help-seeking attitudes; direct paths to attitudes about professional help-seeking were not significant. This may be explained by mixed opinions towards professional help-seeking within rural communities. Additionally, a difference may exist between fundamentalist and non-fundamentalist interpretations of faith. Again, a shift may be taking place within this emerging adult population from rural areas whereby stress and mental health concerns are viewed as more normative and help-seeking is more acceptable than in previous generations. Another explanation may be that since this study's sample included emerging adults with access to higher education, these findings may differ from their rural counterparts without such access or interest.

Internal health locus of control was included as a hypothesized rural cultural variable to reflect an ethos of self-reliance stemming from agrarian values and possible reliance on more non-traditional health practices, such as folk medicine. The data within the current study suggests that internal health locus of control was positively associated with endorsement of stigma towards mental illness. Participants who endorsed more perceived control over their own health outcomes also endorsed stigmatized beliefs about persons with mental illness. An attribution was likely made in this case that just as the participant feels control over his or her health outcomes, so should the person with mental illness. Therefore, any resulting illness, mental or physical, is within the individual's control and preventable. However, internal health locus of control was not directly related to help-seeking attitudes towards professionals or non-professionals. It is possible that two competing values exist within rural communities, one including a reliance on folk medicine or homeopathic

remedies outside the medical setting, and the other as an over-reliance on medical professionals for their health outcomes. A reliance on health care professionals for one's health outcomes is considered one form of an external locus of control. These competing values would provide for a murky picture in research findings without measurement of both internal and external sources of responsibility. Additionally, feelings of control over one's health outcomes may truly not relate to stigmatized beliefs towards persons with mental illness.

Low emotional openness was hypothesized to relate positively to stigma towards mental illness and negatively towards seeking professional help. Findings within the current study were those individuals who were not open to emotional experience had more stigmatized beliefs towards persons with mental illness in all models. This finding is consistent with previous research in rural community based samples, where a similar construct to low emotional openness, stoicism, has been linked to higher endorsement of stigma (Judd et al., 2006; Murray et al., 2008). Further, individuals who were not emotionally open were less likely to seek help from either professionals or non-professionals. My hypothesis was that low emotional openness would relate to more help-seeking from non-professionals, as a component of rural acculturation whereby mental health concerns are kept confidential with family, friends and religious leaders. However, the data revealed that respondents who reported low openness to emotions were less likely to seek help from non-professionals the same as they were less likely to seek help from professionals. For these individuals, seeking help from professionals is no less of a barrier than seeking help from non-professionals. This may be based on a cohort effect of low emotional openness or

stoicism which occurs more frequently within older generations. The current sample was comprised of emerging adults, who may be less likely to endorse these values.

Finally, family cohesion was not significantly related to either stigma variable or any of the help-seeking variables. This finding is interesting in light of the correlational data that family cohesion was significantly correlated with religious commitment, low emotional openness and internal health locus of control. It is likely that family cohesion, while possibly more frequent in rural communities, is not a significant predictor of attitudes towards mental illness. However, it was hypothesized that family cohesion may be linked to non-professional help-seeking such that family members within a cohesive family would likely seek help from one another rather health professionals (Judd et al., 2006). The data within this sample does not support this prediction, possibly since this sample included emerging adults enrolled in college. Distance while at college could have weakened this familial bond. It also may be the case that shared variance with the other variables is accounting for the non-unique associations with stigma and help seeking. Another explanation may be that divorce within rural communities is similar to trends in non-rural communities, more so than in the past, which has affected levels of family cohesion.

Direct pathways from cultural values to help-seeking. Path models with direct paths from cultural values predictor to help-seeking outcome variables produced better model fit than models without these paths. This suggests that the predictors do not operate through stigma alone, and in fact stigma may be one of several processes through which low openness to emotion, internal health locus of control and religious commitment are associated with attitudes toward help seeking.

Stigma and Help-Seeking

Stigma was related to help-seeking in ways that were predicted and ways that were not. As predicted, stigma was positively linked to less favorable attitudes towards help-seeking from professionals. One reason for a positive correlation between stigma and help-seeking is that asking for help or "help-seeking" is in and of itself stigmatizing. Persons from rural communities may be less likely to consider talking to a friend or family member about psychological concerns as "help-seeking" but would consider asking a professional for help as "help-seeking." There may be more utilization of family and friends for help because there is less of a barrier for seeking help because they don't consider their actions to be stigmatizing.

Further, higher endorsement of stigmatized beliefs was associated with lower past year and lifetime help seeking behaviors from mental health specialists and from primary care providers. The present study echoes previous research linking stigma to help-seeking such that for individuals holding stigmatized beliefs reported less endorsement of help-seeking from mental health providers and primary care providers alike (Hoyt et al., 1997). This finding conflicts with research indicating more help-seeking for mental health concerns within primary care settings versus specialty mental health providers in rural communities, because the person is more likely to already know the primary care provider, believe in the provider's ability to provide support and perceive seeking help from a primary care provider as being less stigmatizing (Wrigley et al., 2005).

Non-professional help seeking, from family, friends, and spiritual leaders produced mixed findings in relation to stigma. This study contributed to the literature by extending evaluation of non-professional or informal networks for help-seeking by including attitudes and not being solely based on a yes or no endorsement of behavior. A subscale of attitudes

towards getting help from friends and family and religious leaders, a particularly salient variable for this population, was created based on a subscale of an established measure of help-seeking propensity from professionals (IASMHS). This is an important distinction whereby a measure of help-seeking in general may produce murky results due to mixed opinions towards getting help from professionals versus non-professionals. However, this measured construct was not significantly related to stigma. This may be an artifact of poor measurement or mixed attitudes towards help-seeking from non-professions among those who hold stigmatizing beliefs towards persons with mental illness.

I predicted that non-professional help seeking behaviors and attitudes would be positively related to stigma. Differences were observed across stigma variables as well as across lifetime versus past year non-professional help-seeking. Stigma based in the effects of mental illness (interpersonal anxiety, relationship disruption and poor hygiene), was associated with lifetime spiritual help seeking but not lifetime family and friends help-seeking. Holding these stigmatized beliefs prevented help-seeking from family and friends, but was associated with increased spiritual help-seeking. Interestingly this pattern did not remain for past year help-seeking, whereby the spiritual leader path became non-significant. This change likely reflects a change over time in beliefs about help-seeking.

Another interesting finding within the data is the difference across stigma variables. For lifetime help-seeking, significant paths were present for stigma based in the effects of mental illness (interpersonal anxiety, relationship disruption and poor hygiene) and primary care provider help-seeking (positive) and for spiritual leader help-seeking (negative) whereas neither of these paths was significant for those who held stigmatized beliefs based in treatability and recovery. While this finding shows further evidence for the unique

contributions of these two types of stigma, it may also be that the effects of mental illness (interpersonal anxiety, relationship disruption and poor hygiene) account for more variance in decisions regarding help-seeking for mental health concerns. Further, this pattern may vary over time. For past year help-seeking, both stigma variables evidenced the same significant paths. Both stigma variables significantly predicted past year help-seeking from primary care providers, family/friends and mental health providers.

Help-seeking from a friend and/or family member was the most frequently endorsed source of help, followed by a primary care provider, mental health specialist and then a spiritual leader. These frequencies of help-seeking reveal a unique characteristic of this emerging adult population. Prior to analyses, I made predictions that there would be more reliance on non-professional networks for help-seeking than professional sources, which were upheld for family and friends but not for spiritual leaders. It may be that this population of emerging adults is less religious than their peers not in college or than their rural neighbors and therefore has less access to spiritual leaders for help or are less inclined to seek help from these leaders. It may also be that spiritual or religious leaders may be an unsafe source of help due to enmeshed social networks and religious communities, where word travels fast and help-seeking from spiritual leaders may afford limited privacy. Interestingly, participants cited more help-seeking from professionals than spiritual leaders. This may be evidence of the mixed opinion within many rural communities between a historical reliance on informal networks and the over-reliance on professional providers to "fix" health problems.

Study Limitations and Directions for Future Research

Several limitations of this study must be kept in mind in interpreting hypotheses that were supported and potentially explaining why some were not. The current study included

college students whereby for the majority, income was stable and education level was controlled based on selection criteria. Future studies should include varying levels of education beyond university settings to include vocational trainings and community colleges because prior studies have demonstrated that demographic variables, including lower income and less educational attainment have been linked to variability in stigma and help-seeking behaviors (Rost et al., 1993). There is likely a difference in the attitudes of stigma and help-seeking for college students from rural communities and their same age peers still residing in rural communities. The current sample may have changed their attitudes as they acculturate to university life. Further, due to the wide population distribution characteristic of rural populations, recruitment of emerging adults within these settings may be the most practical. An additional systemic barrier, reliable transportation status showed a significant impact such that owning or having access to a reliable source of transportation significantly predicted lifetime help-seeking from primary care providers. While transportation status was expected to impact help-seeking behavior, it is surprising that this did not significantly affect other forms of help-seeking. It may be that for those without reliable transportation, the source of help most often sought after is that of primary care providers. Employment status was expected to be a potential systemic barrier such that unemployment would significantly negatively impact help-seeking. However, the data revealed that a significant difference was found but only for emotional openness, such that students who reported not currently working in addition to school were more likely to report more openness to emotions. Similarly, low openness to emotions was linked to working in addition to attending school. Future studies could expound on this finding by gathering additional information about financial resources to discriminate between the varying levels of financial support provided

by close others in college versus supporting oneself independently. College of attendance but not rural versus non-rural counties of origin did not vary across stigma and help-seeking variables. Students enrolled in colleges located in urban versus rural areas may also vary in their adherence to a cultural identity (rustic versus urbane). This difference may suggest an indicator of their place based identity beyond that measured by rural versus mixed-rural county categorization. However, the college located in the most remote rural region of the three universities, UVAW contained only 2.8% of the overall sample. Future studies should include a larger sample from a more remotely located college such as UVAW. Income level was also found to vary in relations to variables. Students who reported earning less money per week also reported lower levels of religious commitment. Findings were significant and mixed for the relation between income level and help-seeking from spiritual leaders such that persons reporting $601-700 a week also reported significantly more help-seeking from those earning less and more than they reported. These findings were confusing to interpret when considering participants are 18-24 years of age and enrolled in college. Reports of income may be incomplete as it is not clear to whether students reported any financial support from family members. It may be that the lower reports of income may be fully supported by their parents while in college. Studies examining these trends in the future should include more accurate measures of sources of income for relations between variables to be more clearly explained.

This study's findings were based on cross-sectional data, which represented the attitudes and past behaviors of participants at one point in time. With a longitudinal design, findings could be evaluated over time and temporal association between constructs could be evaluated. A longitudinal design would have been particularly salient within an emerging

adult cohort, whereby a sense of identity has recently been formed in adolescence and likely still malleable. Data collection over time would likely demonstrate changes in identity and attitudes which may or may not vary from those of family members. Also using more than one source of data would have strengthened findings by corroborating participant self-report i.e., a family member's report for the family cohesion variable. Additionally, correlational data was used to evaluate my hypotheses, which limits the causal implications that can be made among variables. Sex differences were observed across variables, based on mean comparisons. The current study did not allow for multi-group analyses of models by gender due to less than adequate sample size. Future studies could contribute by adding additional participants to provide sufficient power for multi-group analyses to examine whether significant findings differed for males versus females.

Despite certain limitations, this study made important contributions to the literature on rural cultural identity in relation to stigma towards mental illness and help-seeking. While this study found no clear evidence for a cluster of values rooted in an underlying rural cultural identity, this finding was still significant. Prior research has examined individual attitudes and values as predictors of higher rates of stigma and lower rates of professional help-seeking in rural areas. However, there has not been examination of a potentially hidden rural identity which informs these values. While values measured here have been examined before in community samples, this study sought to replicate these findings within a college sample of emerging adults. This study sought to examine whether links between values, stigma and help-seeking were present within an emerging adult sample or if these patterns were subject to a cohort effect. Findings indicated that within this emerging adult population, stigmatized beliefs towards persons with mental illness were positively linked to less

favorable help-seeking attitudes from professionals and less help-seeking behaviors from primary care providers, family members and mental health providers. Surprising were the findings related to the relations between religious commitment and help-seeking from spiritual leaders and stigma. Stigma based in the effects of mental illness (i.e., interpersonal anxiety, relationship disruption and poor hygiene) was positively linked to higher report of religious commitment while also positively linked to lifetime reported help-seeking from religious leaders. Future research can expound further on the relations between stigma, help-seeking and religious commitment. This study included behavioral and attitudinal measures of non-professional help seeking, a particularly salient variable for rural communities. While this study's findings were likely limited by sample, future research evaluating rural place based identity has vast implications for understanding the individual in a larger multi-cultural context.

References

Andersen, R. (1995). Revisiting the Behavioral Model and Access to Medical Care: Does it Matter? *Journal of Health and Social Behavior*, 36, 1-10. Retrieved from http://www.jstor.org/stable/2137284

Appalachian Regional Commission. (2010). Counties in Appalachia. *Appalachian Regional Commission.* Retrieved from www.arc.gov/counties

Barry, M., Doherty, A., Hope, A., Sixsmith, J. & Kelleher, C. (2000). A community needs assessment for rural mental health promotion. *Health Education Research,* 15, 293-304. doi: 10.1093/her/15.3.243

Blank, M., Mahmood, M., Fox, J. & Guterbock, T. (2002). Alternative Mental Health Services: The Role of the Black Church in the South. *American Journal of Public Health,* 92, 1668-1672. Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/12356619

Bureau of the Census (2001). *Profiles of general demographic characteristics 2000 census of population and housing: United States.* Washington D.C.: U.S. Department of Commerce.

Campbell, C., Richie, S. & Hargrove, D. (2003). Poverty and Rural Mental Health. In B.H. Stamm (Ed.), *Rural behavioral health care: An interdisciplinary guide* (pp. 41-51). Washington, D.C.: American Psychological Association.

Corrigan, P. (2004). How stigma interferes with mental health care. *American Psychologist*, 59, 614-625. doi:10.1037/0003-066X.59.7.614

Creed, G. & Ching, B. (1997). Recognizing Rusticity: Identity and the Power of Place. In Creed & Ching (Eds.), *Knowing Your Place: Rural Identity and Cultural Hierarchy* (pp. 1-38). New York, NY: Routledge.

Day, E. & Edgren, K & Eshleman, A. (2007). Measuring Stigma toward Mental Illness: Development and Application of the Mental Illness Stigma Scale. *Journal of Applied Social Psychology*, 37, 2191-2219. doi:10.1111/j.1559-1816.2007.00255.x

Elder, M. (2007) A Reason for Optimism in Rural Mental Health Care: Emerging Solutions and Models of Service Delivery. *Clinical Psychology: Science and Practice*, 14, 299-303. doi: 10.1111/j.1468-2850.2007.00090.x

Fischer, C. (1982). *To dwell among friends: Personal networks in town and city.* Chicago: University of Chicago.

Fox, J., Blank, M, Berman, J. & Rovnyak, V. (1999). Mental disorders and help seeking in a rural impoverished population. *International Journal of Psychiatry in Medicine*, 29, 181-195. Retrieved from: http://www.springerlink.com/content/w5115v7355456853/

Gale, J. & Deprez, R. (2003). A Public Health Approach to the Challenges of Rural Mental Health Service Integration. In B.H. Stamm (Ed.), *Rural Behavioral Health Care: An Interdisciplinary Guide* (pp. 95-108). Washington, D.C.: American Psychological Association.

Gamm, L., Stone, S, and Pittman, S. (2003). Mental Health and Mental Disorders: A Rural Challenge. *Rural Healthy People 2010: A companion document to Healthy People 2010.* College Station, TX: The Texas A&M University System Health Science Center, School of Rural Public Health, Southwest Rural Health Research Center.

Gunnell, D. & Martin, R (2004). Patterns of general practitioner consultation for mental illness by young people in rural areas: A cross-sectional study. *Health Statistics Quarterly*, 21, 30-31.

Hart, L., Larson, E., & Lishner, D. (2005). Rural Definitions for Health Policy and Research. *American Journal of Public Health*, 95, 1149-1155. doi:10.2105/AJPH.2004.042432

Hoyt, D., Conger, R., Valde, J. & Weihs, K. (1997). Psychological distress and help-seeking in rural America. *American Journal of Community Psychology*, 25, 449-470. doi:10.1023/A:1024655521619

Isserman, A. (2005). In the National Interest: Defining Rural and Urban Correctly in Research and Public Policy. *International Regional Science Review*, 28, 465-499. doi: 10.1177/0160017605279000

Jackson, H., Judd, F., Komiti, A., Fraser, C., Murray, G., Robins, G.…Wearing, A. (2007). Mental Health Problems in Rural Contexts: What are the barriers to seeking help from professional providers? *Australian Psychologist*, 42, 147-160. doi: 10.1080/00050060701299532

Jameson, J. & Blank, M. (2007). The Role of Clinical Psychology in Rural Mental Health Services: Defining Problems and Developing Solutions. *Clinical Psychology: Science and Practice*, 14, 283-298. doi:10.1111/j.1468-2850.2007.00089.x

Judd, F., Jackson, H., Komiti, A., Murray, G., Fraser, C., Grieve, A. & Gomez, R. (2006). Help-seeking by Rural Residents for Mental Health Problems: the Importance of Agrarian Values. *Australian and New Zealand Journal of Psychiatry*, 40, 769-776. doi:10.1080/j.1440-1614.2006.01882.x

Kane, C. & Ennis, J. (1996). Health Care Reform and Rural Mental Health: Severe Mental Illness. *Community Mental Health Journal*, 32, 445-463. doi:10.1007/BF02251045

Kirkwood, A. & Stamm, H. (2006). A Social Marketing Approach to Challenging Stigma. *Professional Psychology: Research and Practice*, 37, 472-476. doi:10.1037/0735-7028.37.5.472

Kline, R. (2005). Measurement Models and CFA. In R. Kline (Ed), *Principles and Practice of Structural Equation Modeling: Second Edition*, (pp. 165-207). New York, NY: Guilford.

Lin, E., Goering, P., Offord, D., Campbell, D. & Boyle, M. (1996). The use of mental health services in Ontario: Epidemiological findings. *Canadian Journal of Psychiatry*, 41, 572-577.

Lindbloom, G. & Faw, T. (1982). Three Measures of Locus of Control: What Do They Measure? *Journal of Personality Assessment*, 46, 70-71. doi:10.1207/s15327752jpa4601_12

MacKenzie, C., Knox, V., Gekoski, W. & Macaulay, H. (2004). An Adaption and Extension of the Attitudes toward Seeking Professional Psychological Help Scale. *Journal of Applied Social Psychology*, 34, 2410-2435. doi:10.1111/j.1559-1816.2004.tb01984.x

McCrae, R. & Costa, P. (1987). Validation of the Five-Factor Model of Personality Across Instruments and Observers. *Journal of Personality and Social Psychology*, 52, 81-90. doi:10.1037/0022-3514.52.1.81

Merwin, E., Hinton, I., Harvey, J., Kimble, K., Mackey, S. (2001). Mental Health Care in

Virginia Community Health Centers. Southeastern Rural Mental Health Research Center, University of Virginia. Prepared for: Virginia Primary Care Association.

Merwin, E., Hinton, I., Debling, B. (2002). Shortages of Mental Health Professionals in Virginia. Southeastern Rural Mental Health Research Center, University of Virginia. Prepared for: Virginia Primary Care Association.

Meystedt, D. (1984). Religion and the Rural Population: Implications for Social Work. *Social Casework: The Journal of Contemporary Social Work*, 1, 219-226. Retrieved from www.familiesinsociety.com

Murray, G., Judd, F., Jackson, H., Fraser, C., Komiti, A., Pattison, P.,…Robins, G. (2008). Big Boys Don't Cry: An investigation of stoicism and its mental health outcomes. *Personality and Individual Differences*, 44, 1369-1381. doi:10.1016/j.paid.2007.12.005

National Rural Health Association (1999). *Mental health in rural America.* Retrieved from http://www.nrharural.org/dc/issuepapers/ipaper

New Freedom Commission on Mental Health (2004). *Subcommittee on Rural Issues: Background Paper*. DHHS Pub. No. SMA-04-3890. Rockville, MD.

Raftery, A.E. (1993). Bayesian model selection in structural equation models. In *Testing Stuctural Equation Models* (K.A. Bollen and J.S. Long, eds.), Beverly Hills: Sage, pp. 163-180.

Regier, D., Narrow, W., Rae, D., Manderscheid, R., Locke, B. & Goodwin, F. (1993). The de facto U.S. mental health and addictive disorders service system: Epidemoiologic Catchment Area prospective 1-year prevalence rates. *Archives of General Psychiatry*, 50, 85-94.

Rost, K., Fortney, J., Fischer, E., Smith, J. (2002). Use, Quality and Outcomes for Care for Mental Health: The Rural Perspective. *Medical Care Research and Review*, 59, 231-265.

Rost, K., Smith, R., Taylor, J. (1993). Rural-Urban Difference in Stigma and the Use of Care for Depressive Disorders. *The Journal of Rural Health*, 9, 57-62.

Sareen, J., Cox, B., Afifi, T., Yu, B. & Stein, M. (2005). Mental health service use in a nationally representative Canadian survey. *Canadian Journal of Psychiatry*, 50, 753-761.

Sears, S., Evans, G. & Kuper, B. (2003). Rural Social Service Systems As Behavioral Health Delivery Systems. In B.H. Stamm (Ed.), *Rural Behavioral Health Care: An Interdisciplinary Guide* (pp. 109-120). Washington, D.C.: American Psychological Association.

Slama, K. (2004a). Rural Culture is a Diversity Issue. *Minnesota Psychologist*, 9-13.

Slama, K. (2004b). Toward Rural Cultural Competence. *Minnesota Psychologist*, 6-13.

Smith, L., McGovern, R. & Peck, P. (2004). Factors contributing to the utilization of mental health services in a rural setting. *Psychological Reports*, 95, 435-442. doi:10.2466/PR0.95.6.435-442

Stamm, B., Metrick, S., Kenkel, M. Davenport, J., Davenport, J., Hudnall, A.,…Markstrom, C. (2001). Introduction. In B.H. Stamm (Ed.), *Rural Behavioral Health Care: An Interdisciplinary Guide* (pp. 3-9). Washington, D.C.: American Psychological Association.

Stamm, B., Piland, N., Lambert, D. & Speck, N. (2007). A Rural Perspective on Health Care for the Whole Person. *Professional Psychology: Research and Practice*, 38, 298-304. doi:10.1037/0735-7028.38.3.298

U.S. Congress. (2002). Why rural matters. In *Fast Facts* [Electronic version]. Washington, DC: Congressional Rural Caucus, U.S. House of Representatives.

U.S. Department of Health and Human Services. (1999). *Mental health: A report of the Surgeon General.* Rockville, MD: U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Center for Mental Health Services, National Institutes of Health, National Institutes of Mental Health. Retrieved from http://www.surgeongeneral.gov/library

Virginia Department of Health Office of Minority Health and Public Health Policy & Virginia Rural Health Association (2008). *Virginia Rural Health Plan: Supporting Rural Health through Action.* Retrieved from http://www.va-srhp.org/plan-toc.htm

Vogel, D., Wade, N. & Haake, S. (2006). Measuring the Self-Stigma Associated with Seeking Psychological Help. *Journal of Counseling Psychology*, 53, 325-337. doi:10.1037/0022-0167.53.3.325

Wagenfeld, M. (2005) A Snapshot of Rural and Frontier America. In B.H. Stamm (Ed.), *Rural Behavioral Health Care: An Interdisciplinary Guide* (pp. 33-40). Washington, D.C.: American Psychological Association.

Wallston, K., Wallston, B. & DeVellis, R. (1978). Development of the Multidimensional Health Locus of Control (MHLC) Scales. *Health Education Behavior*, 6, 160-170. doi: 10.1177/109019817800600107

Wells, J., Robins, L., Bushnell, K., Jarosz, D. & Oakley-Browne, M. (1994). Perceived barriers to care in St Louis (USA) and Christchurch (NZ): Reasons for not seeking professional help for psychological distress. *Social Psychiatry and Psychiatric*

Epidemiology, 29, 155-164. Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/7939964

Wrigley, S., Jackson, H., Judd, F., & Komiti, A. (2005). Role of stigma and attitudes toward help seeking from a general practitioner for mental health problems in a rural town. *Australian and New Zealand Journal of Psychiatry*, 39, 514-521. doi:10.1111/j.1440-1614.2005.01612.x

Yuen, E., Gerdes, J. & Gonzales, J. (1996). Patterns of Rural Mental Health Care: An exploratory study. *General Hospital Psychiatry*, 18, 14-21. doi:10.1016/0163-8343(95)00099-2

Appendix A

Online Consent Form

Please carefully read the information on this page.

Compensation: As compensation for participating in the study, you have the option to enter yourself in a drawing for $100 Wal-Mart Gift certificate. In order to enter the gift certificate drawing, you will need to enter your contact information at the end of the study.

Quitting the Study: In order to participate in the study, you must click the link titled "Next" at the bottom of the page. If you choose not to participate in the study, simply close your browser window.

You are free to quit the study at any time after you click the "next" button on this page. You will not be penalized for quitting the study.

Estimated Time to Complete the Study: The estimated amount of time to complete the study is 30 -45minutes. You will not be able to exit the study and then resume it at a later time; therefore, you should complete the study in one sitting.
It is highly recommended that you disable any popup blockers and decrease your security settings prior to beginning the study in order to decrease any problems with completing the study tasks.
At the end of the study, you should close all of your browser windows and tabs to help protect the confidentiality of your responses.

Virginia Commonwealth University: Rural Experiences Survey
Researchers: Margaret H. Ray, M.S., Psychology Graduate Student, VCU
Advisor: Wendy Kliewer, Ph.D., Professor, VCU Department of Psychology

Please send any questions or concerns about the study to Wendy Kliewer at wkliewer@vcu.edu or 804-828-1793

Researchers' statement

We are asking you to participate in a research study. The purpose of this consent form is to give you the information you will need to help you decide whether or not to participate in the study or not. Please read the form carefully. You may email questions to the above email address about the purpose of the research, what we would ask you to do, the possible risks and benefits, your rights as a volunteer, and anything else about the research or this form that is not clear. When we have answered all your questions, you can decide if you want to be in the study or not. This process is called "informed consent." We will send you a copy of this form for your records if you send a request to the primary investigator (Wendy Kliewer).

PURPOSE OF THE STUDY
Experiences of persons residing in rural communities are likely to be different from persons residing in non-rural communities. These experiences are likely to have an impact on a person's thoughts, emotions and behaviors. This study aims to examine how rural residency affects these factors.

STUDY PROCEDURES
In this study you will complete a series of online questionnaires. The study is estimated to take a total of 30-45 minutes to complete. At the end of the study, you will have the opportunity to enter a drawing for a $100.00 gift certificate to Wal-mart as compensation for participating in this study. If you decide to enter the drawing, you will be asked to enter your contact information at the end of the survey.
You may refuse to answer any question or item on any of the questionnaires. Your refusal to answer a question or item will not affect your ability to enter the drawing for the gift certificate.

RISKS, STRESS, OR DISCOMFORT
You may experience some distress in answering the questions or items on the questionnaires. It is anticipated that the discomfort and distress that you may experience as a result of participating in this study will be temporary.

BENEFITS OF THE STUDY
Although there are no direct benefits in participating in this study, your participation will enable us to examine the experiences of persons residing in rural communities.

OTHER INFORMATION
The data you provide for this study will be confidential. At no point will the researchers use data that will reveal the identity of any specific participant.
You will have the opportunity to provide your contact information if you wish to discuss your feedback about the study or to enter the drawing for the gift certificate. You may refuse to participate or withdraw from the study at any time without penalty or loss of opportunity to enter the drawing for the gift certificate.
As compensation for participating in the study, you have the opportunity to enter a drawing for $100.00 Wal-mart gift certificate. In order to enter the drawing for the gift certificates, you must enter your contact information on a secure webpage. The drawing will take place at the completion of the research project and the winner will be notified by the researcher via the contact information entered by the participant on the webpage.

Subject's statement
This study has been explained to me. I volunteer to take part in this research. I have had a chance to ask questions. If I have questions later about the research, I can ask the researcher listed above. If I have questions about my rights as a research subject, I can call the VCU Human Subjects Division at (804-827-2157). If I request it, I will receive a copy of this consent form. By clicking the Next button below, I have consented to participate in the study. I agree to be in this study by clicking NEXT.
To quit the study, EXIT your browser.

Appendix B

Demographics and Hypothesized Systemic Barriers

What is your gender? 1. male 2. female 3. Prefer not to answer

How old are you? 1. 24 years or younger 2. 25-40 3. 41-60 4. 61-older

What rural Virginia county do you live in or did you previously lived in for at least 10 years?
Pull down menu of options from rural Virginia counties according to Isserman (2005)

How long have you currently lived in the county you live in ?
1. < one year 2. 1-5 years 3. 5-10 years 4. 10-15 years 5. > 15 years 6. No response

What is your current marital status?
1. Never Married 2. Married 3. Living with a Partner
4. Separated 5. Divorced 6. Widowed

What race do you consider yourself to be? You can choose more than one.
1. Asian American 2. African American or Black 3.Hispanic or Latina
4. White, Caucasian American or European 5. American Indian 6.Other

What college are you currently attending?
1. Virginia Commonwealth University
2. Virginia Tech
3. University of Virginia at Wise

Are you currently working in addition to attending school? 1. yes 2. No
If yes, which best describes your work hours?
1. part time (less than 35 hours/week) 2. full time (35 hours or more per week)

Think of all the income from people who live in the same house with you. Which category is closest to the household earnings *after taxes* per week?

1. Less than $100 per week 2. $101-$200 per week 3. $201-$300 per week
4. $301-$400 per week 5. $401-$500 per week 6. $501-$600 per week
7. $601-$700 per week 8. $701-$800 per week 9. $801-$900 per week
10. $901 + per week

Is this weekly income from members of the household pretty much the same from week to week or does it change from week to week? 1. Income is Stable 2. Income Changes

When you think about the amount of money that comes into your house every month, would you say that you and the other members of your household are:

1. Very Well Off: have *more than enough* money for bills, food, etc. and can buy *anything* extra that we want.
2. Doing Well: have *enough* money for bills, food, and *most* of the extra things we want.
3. Doing Okay: have *enough* money for bills, food, and *a few* of the extra things we want.
4. Barely Getting By: have *just enough* money for bills and food but *cannot* buy any of the extra things we want.
5. Not Getting By: *don't have enough money for bills and food* and *cannot* buy any of the extra things we want.

Do you have health insurance? 1. yes 2. no

If yes, what type of health insurance?

1. state sponsored (Medicaid, Medicare)
2. private insurance through your employer or your spouse's employer
3. private insurance paid by you

Does your health insurance cover specialty mental health services (such as counseling or psychotherapy)? 1. yes 2. no 3. don't know

Do you own a car or have a reliable method of transportation? 1. yes 2. no

Finally, please answer the following questions about the family you grew up in.

Which of the following professions describes the family you grew up in?

1. Business and finances 2. Computer and mathematics
3. Architecture and engineering 4. Life, physical and social sciences
5. Community and social services 6. Legal
7. Education 8. Arts and media 9. Healthcare 10. Service occupations
11. Farming, fishing and forestry 12. Military specific 13. Other 14. No response

Did the family you grow up in raise crops for a living? 1. Yes 2. No 3. No response
Did the family you grow up in raise animals for a living? 1. Yes 2. No 3. No response

Appendix C

Cultural Values

Measure of Internal Health Locus of Control

The Multi-dimensional Health Locus of Control Scale, Internal Subscale (Wallston, Wallston & DeVellis, 1978)

	Strongly Disagree		Disagree		Agree		Strongly Agree
If I get sick, it is my own behavior which determines how soon I get well again	1	2	3	4	5	6	7
I am in control of my health	1	2	3	4	5	6	7
When I get sick I am to blame	1	2	3	4	5	6	7
The main thing which affects my health is what I myself do	1	2	3	4	5	6	7
If I take care of myself I can avoid illness	1	2	3	4	5	6	7
If I take the right actions I can stay healthy	1	2	3	4	5	6	7
If I become sick I have the power to make myself well again	1	2	3	4	5	6	7
I am directly responsible for my health	1	2	3	4	5	6	7
Whatever goes wrong with my health is my own fault	1	2	3	4	5	6	7
My physical well-being depends on how well I take care of myself	1	2	3	4	5	6	7
When I feel ill, I know it is because I have not been taking care of myself properly	1	2	3	4	5	6	7
I can pretty much stay healthy by taking good care of myself	1	2	3	4	5	6	7

Measure of Religious Commitment

Religious Commitment Inventory (Worthington et al., 2003)

The following questions will focus on your spirituality. Respond to the following in relation to your most recent religious or spiritual behaviors and beliefs.

	Not true of me	Somewhat true of me	Moderately true of me	Mostly true of me	Totally true of me
I often read books and magazines about my faith.	1	2	3	4	5
I make financial contributions to my religious organization.	1	2	3	4	5
I spend time trying to grow in understanding of my faith.	1	2	3	4	5
Religion is especially important to me because it answers many questions about the meaning of life.	1	2	3	4	5
My religious beliefs lie behind my whole approach to life.	1	2	3	4	5
I enjoy spending time with others of my religious organization.	1	2	3	4	5
Religious beliefs influence all my dealings in life.	1	2	3	4	5
It is important to me to spend periods of time in private religious thought and reflection.	1	2	3	4	5
I enjoy working in the activities of my religious organization.	1	2	3	4	5
I keep well informed about my local religious group and have some influence in its decisions.	1	2	3	4	5

Measure of Family Cohesion

Family Adaptability and Cohesion Evaluation Scales (FACES; Olson et al., 1979)

The following questions relate to your family closeness. Describe the current level of closeness among your family members and how much you value family activities now.

Describe your family now					
	Almost never	Once in a while	Sometimes	Frequently	Almost always
Family members ask each other for help	1	2	3	4	5
We approve of each other's friends	1	2	3	4	5
We like to do things with just our immediate family	1	2	3	4	5
Family members feel closer to other family members than to people outside the family	1	2	3	4	5

Family members like to spend free time with each other	1	2	3	4	5
Family members feel very close to each other	1	2	3	4	5
When our family gets together for activities, everybody is present	1	2	3	4	5
We can easily think of things to do together as a family	1	2	3	4	5
Family members consult other family members on their decisions	1	2	3	4	5
Family togetherness is very important	1	2	3	4	5

Measure of Openness to Feelings
NEO-PI-R; Openness to Emotions subscale (Revised NEO Personality Inventory; Costa & McCrae, 1992)

Please respond to the following questions with your personal opinions. Respond to the following questions in terms of your openness to new experiences and emotions.
There are no right or wrong answers. Describe yourself honestly and state your opinions as accurately as possible.

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Without strong emotions, life would be uninteresting to me.	0	1	2	3	4
I rarely experience strong emotions.	0	1	2	3	4
How I feel about things is important to me.	0	1	2	3	4
I seldom pay much attention to my feelings of the moment.	0	1	2	3	4
I experience a wide range of emotions or feelings.	0	1	2	3	4
I seldom notice the moods or feelings that different environments produce.	0	1	2	3	4
I find it easy to empathize-to feel myself what others are feeling.	0	1	2	3	4
Odd things-like certain scents or the names of distant places-can evoke strong moods in me.	0	1	2	3	4

Appendix D

Measure of Stigma

Mental Illness Stigma Scale (Day et al., 2007)

Please read the following paragraph about psychological problems.
Psychological problems have been found to exist throughout history and across cultures. For example, accounts of people with psychological problems can be found in the Old Testament of the Bible. Ancient Greek and Roman philosophers and physicians, including Hippocrates, Plato, and Aristotle, sought to explain psychological problems, their causes, and to develop appropriate treatments. Today, many theories of and treatments for these problems exist, each generating their own lines of research. There is also evidence that psychological problems are recognized across different cultures and that very similar cross-cultural descriptions of the symptoms exist. In one cross-cultural study that examined descriptions of psychological problems, very similar descriptions were found across the countries of China (Taiwan), Colombia, Czechoslovakia, Denmark, India, Nigeria, United Kingdom, the United States, and the (former) USSR. We are interested in your opinions about psychological problems and people with psychological problems in general.

	Strongly disagree		Disagree		Agree		Strongly Agree
There are effective medications for psychological problems that allow people to return to normal and productive lives.	1	2	3	4	5	6	7
I don't think that it is possible to have a normal relationship with someone with a psychological problem.	1	2	3	4	5	6	7
I would find it difficult to trust someone with a psychological problem.	1	2	3	4	5	6	7
People with psychological problems tend to neglect their appearance.	1	2	3	4	5	6	7
It would be difficult to have a close meaningful relationship with someone with a psychological problem.	1	2	3	4	5	6	7
I feel anxious and uncomfortable when I'm around someone with a psychological problem.	1	2	3	4	5	6	7
It is easy for me to recognize the symptoms of psychological problems.	1	2	3	4	5	6	7
There are no effective treatments for psychological problems.	1	2	3	4	5	6	7
I probably wouldn't know that someone has a psychological problem unless I was told.	1	2	3	4	5	6	7
A close relationship with someone	1	2	3	4	5	6	7

with a psychological problem would be like living on an emotional roller coaster.							
There is little that can be done to control the symptoms of psychological problems.	1	2	3	4	5	6	7
I think that a personal relationship with someone with a psychological problem would be too demanding.	1	2	3	4	5	6	7
Once someone develops a psychological problem, he or she will never be able to fully recover from it.	1	2	3	4	5	6	7
People with psychological problems ignore their hygiene, such as bathing and using deodorant.	1	2	3	4	5	6	7
Psychological problems prevent people from having normal relationships with others.	1	2	3	4	5	6	7
I tend to feel anxious and nervous when I am around someone with a psychological problem.	1	2	3	4	5	6	7
When talking with someone with a psychological problem, I worry that I might say something that will upset him or her.	1	2	3	4	5	6	7
I can tell that someone has a psychological problem by the way he or she acts.	1	2	3	4	5	6	7
People with psychological problems do not groom themselves properly.	1	2	3	4	5	6	7
People with psychological problems will remain ill for the rest of their lives.	1	2	3	4	5	6	7
I don't think that I can really relax and be myself when I'm around someone with a psychological problem.	1	2	3	4	5	6	7
When I am around someone with a psychological problem I worry that he or she might harm me physically.	1	2	3	4	5	6	7
I would feel unsure about what to say or do if I were around someone with a psychological problem.	1	2	3	4	5	6	7
I feel nervous and uneasy when I'm near someone with a psychological	1	2	3	4	5	6	7

problem.							
I can tell that someone has a psychological problem by the way he or she talks.	1	2	3	4	5	6	7
People with psychological problems need to take better care of their grooming (bathe, clean teeth, use deodorant).	1	2	3	4	5	6	7

Appendix E

Measures of Help Seeking for Mental Health Concerns

Inventory of Attitudes toward Seeking Mental Health Services (IASMHS; MacKenzie et al., 2004)

The term *professional* refers to individuals who have been trained to treat persons with psychological problems (e.g., psychologists, psychiatrists, social workers, and family physicians). The term *non-professional* refers to individuals who have not been formally trained to deal with psychological problems (e.g., clergy, minister, priest, naturopath, herbalist, pharmacist, family or friends). The term *psychological problems* refer to reasons one might visit a professional. Similar terms include *mental health concerns, emotional problems, mental troubles,* and *personal difficulties.* For each item, indicate whether you *disagree* (0), *somewhat disagree* (l), *are undecided (2), somewhat agree (3),* or *agree* (4):

	Disagree	Somewhat disagree	Are undecided	Somewhat agree	agree
There are certain problems which should not be discussed outside of one's immediate family	0	1	2	3	4
I would have a very good idea of what to do and who to talk to if I decided to seek professional help for psychological problems	0	1	2	3	4
I would not want my significant other (spouse, partner, etc.) to know if I were suffering from psychological problems	0	1	2	3	4
Keeping one's mind on a job is a good solution for avoiding personal worries and concerns	0	1	2	3	4
If good friends asked my advice about a psychological problem, I might recommend that they see a professional	0	1	2	3	4
Having had psychological problems carries with it a burden of shame	0	1	2	3	4
It is probably best not to know *everything* about oneself	0	1	2	3	4

If I were experiencing a serious psychological problem at this point in my life, I would be confident that I could find relief in psychotherapy	0	1	2	3	4
People should work out their own problems; getting professional help should be a last resort	0	1	2	3	4
If I were to experience psychological problems, I could get professional help if I wanted to..	0	1	2	3	4
Important people in my life would think less of me if they were to find out that I was experiencing psychological problems	0	1	2	3	4
Psychological problems, like many things, tend to work out by themselves...	0	1	2	3	4
It would be relatively easy for me to find the time to see a professional for psychological problems	0	1	2	3	4
There are experiences in my life I would not discuss with anyone	0	1	2	3	4
I would want to get professional help if I were worried or upset for a long period of time	0	1	2	3	4
I would be uncomfortable seeking professional help for psychological problems because people in my social or business circles might find out about it	0	1	2	3	4
Having been diagnosed with a mental disorder is a blot on a person's life	0	1	2	3	4
There is something admirable in the attitude of people who are willing to cope with their conflicts and fears *without* resorting to professional help	0	1	2	3	4
If I believed I were having a mental breakdown, my first inclination would be to get professional attention	0	1	2	3	4
I would feel uneasy going to a professional because of what some people would think	0	1	2	3	4
People with strong characters can get over psychological problems by themselves and would have little need for professional help	0	1	2	3	4
I would willingly confide intimate matters to an appropriate person if I thought it might help me or a member of my family	0	1	2	3	4
Had I received treatment for psychological problems, I would not feel that it ought to be	0	1	2	3	4

"covered up."					
I would be embarrassed if my neighbor saw me going into the office of a professional who deals with psychological problems	0	1	2	3	4
I would have a very good idea of what to do and who to talk to if I decided to seek non-professional help for psychological problems	0	1	2	3	4
If good friends asked my advice about a psychological problem, I might recommend that they see a non-professional	0	1	2	3	4
People should work out their own problems; getting non-professional help should be a last resort	0	1	2	3	4
It would be relatively easy for me to find the time to see a non-professional for psychological problems	0	1	2	3	4
I would want to get non-professional help if I were worried or upset for a long period of time	0	1	2	3	4
I would be uncomfortable seeking non-professional help for psychological problems because people in my social or business circles might find out about it	0	1	2	3	4
There is something admirable in the attitude of people who are willing to cope with their conflicts and fears without resorting to non-professional help	0	1	2	3	4
If I believed I were having a mental breakdown, my first inclination would be to get professional attention	0	1	2	3	4
I would feel uneasy going to a non-professional because of what some people would think	0	1	2	3	4
People with strong characters can get over psychological problems by themselves and would have little need for non-professional help	0	1	2	3	4
I would be embarrassed if my neighbor saw me going into a building to see a non-professional to deal with my psychological problems	0	1	2	3	4

Prior Professional Help Seeking Behavior

The next set of questions has to do with your experienced seeking help for nerves, stress or psychological problems from different types of professionals.

Have you ever discussed psychological problems, nerves or stress with your family physician? 1. Yes 2. No

Do you regularly discuss psychological problems, nerves or stress with a family physician?

1. Yes within the past year 2. Yes but not within the past year 3. No 4. No response

If you've never discussed psychological problems, nerves or stress with a family physician or not within the last year, what is the reason? _____

Have you ever discussed psychological problems, nerves or stress with a mental health specialist? (i.e., psychiatrist, psychologist, social worker, counselor physician)? 1. yes 2. no

Do you regularly discuss psychological problems, nerves or stress with a mental health specialist? (i.e., psychiatrist, psychologist, social worker, counselor)

1.Yes within the past year 2. Yes but not within the past year 3. No 4. No response

If you've never discussed psychological problems, nerves or stress with a mental health specialist (i.e., psychiatrist, psychologist, social worker, counselor) or not within the last year, what is the reason?

1. I can't afford treatment 2. Too far away or unable to travel to location
3. I don't need treatment 4. There are no providers available in my area

Prior Non-professional help seeking behavior

The next set of questions has to do with your experiences with seeking help for nerves, stress or psychological problems from different types of non-professionals.

Have you ever discussed psychological problems, nerves or stress with a pastor, clergy person, priest or spiritual leader? 1. Yes 2. No

Do you regularly discuss psychological problems, nerves or stress with a pastor, clergy person, priest or spiritual leader?

1. Yes within the past year 2. Yes but not within the past year 3. No 4. No response

If you've never discussed psychological problems, nerves or stress with a pastor, clergy person, priest or spiritual leader or not within the last year, what is the reason?

_____

Have you ever discussed psychological problems, nerves or stress with family members or friends? 1. Yes 2. No

Do you regularly discuss psychological problems, nerves or stress with family members or friends?

1. Yes within the past year 2. Yes but not within the past year 3. No 4. No response

If you've never discussed psychological problems, nerves or stress with family members or friends or not within the last year, what is the reason? _____

Vita

Margaret Ray Gsell (Margaret Hunter Ray) was born on October 6, 1984 in Norfolk, Virginia in the United States to Joseph and Lee Ray. Margaret and her sister, Samantha were raised in Virginia Beach, Virginia. Margaret graduated from Frank W. Cox High School, Virginia Beach, Virginia in 2002.

Margaret received her Bachelor of Science in Psychology and Religious Studies from Virginia Commonwealth University, Richmond, Virginia in 2006 with Magna Cum Laude distinction. She subsequently began her graduate study in the counseling psychology program at Virginia Commonwealth University and received her Masters of Science in psychology in 2008. During her undergraduate and graduate career, she also worked part-time as a research assistant, research interviewer, academic counselor and clinical rater for various pharmaceutical research studies. Further, she worked as a clinician in training within a mental health community based training clinic located in an urban setting, a community health clinic in a rural community as well as an inpatient geriatric hospital.

Margaret and her husband, Christopher Gsell, moved to Tennessee in July 2010 to complete her internship at the James H. Quillen Veterans Affairs Medical Center in Mountain Home, Tennessee. Margaret anticipates graduating with a Doctorate of Philosophy degree in 2011.