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Barriers to Mental Healthcare Across Age and Education Level

Vanessa Lynn Jones

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**BARRIERS TO MENTAL HEALTHCARE ACROSS AGE AND EDUCATION
LEVEL**

A Masters Thesis

Presented to

The Graduate College of

Missouri State University

In Partial Fulfillment

Of the Requirements for the Degree

Master of Science, Psychology

By

Vanessa Jones

May 2015

BARRIERS TO MENTAL HEALTHCARE ACROSS AGE AND EDUCATION LEVEL

Psychology

Missouri State University, May 2015

Master of Science

Vanessa Jones

ABSTRACT

This study examined the relationship between age and education and perceived barriers to mental health care as measured by the Barriers to Access to Care Evaluation (BACE-III). Age ranged from 18-92 and ages were divided into three groups (25 and younger, 26-55, 56 and older). Education ranged from no high school diploma (or its equivalent) to doctoral degrees. A moderation analysis was conducted using each BACE-III factor as well as the BACE-III total. A qualitative analysis was also performed. The results indicated little or no relationship existed between age and education level and perceived barriers to mental health care. The qualitative analysis revealed 78% of respondents in the present study would seek care should they need it. A possible explanation for the lack of significant results could be there are not barriers that prevented the sample from seeking care. A more diverse sample might provide different results. Other implications of the findings from the present study are discussed such as a need for further education regarding mental health care and a need for reduction of cost or a change in the perception of cost of care.

KEYWORDS: barriers, mental health care, age, education

This abstract is approved as to form and content

Paul Deal, Ph.D
Chairperson, Advisory Committee
Missouri State University

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Approved:

Paul Deal, Ph.D

Bradley Fisher, Ph.D.

Erin Buchanan, Ph.D.

Julie Masterson, PhD: Dean, Graduate College

ACKNOWLEDGEMENTS

I would like to thank the following people for their support during the course of my graduate studies. This thesis would not be possible without the contributions and support of my thesis committee: Dr. Buchanan, Dr. Fisher, and Dr. Deal. I would like to thank them for their patience and continued suggestions that led to the improvement of my thesis. I would also like to thank my cohort for continued support throughout my graduate studies. Their support helped me succeed even when I felt that may be difficult.

I would also like to thank my family for their support and understanding when my schedule would be too full to take part in some of their activities. My significant other for his patience when I needed to work on schoolwork. I would also like to thank him for encouraging me when I felt distressed by the workload. The completion of this degree would have been impossible without the support of all of these people.

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LITERATURE REVIEW

Introduction

Healthcare, particularly behavioral healthcare, is not always sought when it is needed for many reasons. One way to conceptualize these reasons would be to label them as barriers to care. These barriers might include lack of financial resources, personal attitudes toward mental health care, societal stigma, or others. People with mental health problems have long been viewed negatively by others, including family members or friends (Goffman, 1963). Individuals with negative attitudes toward those with mental health problems can engage in prejudicial and discriminatory behavior (Government of Western Australia Mental Health Commission, 2010). It is plausible that a perceived stigma about mental health care will contribute toward creating a barrier to receiving mental health services by people who really need care. Many studies have been conducted exploring the barriers to mental health care. Some, but not all, have addressed “stigma” as a potential barrier to care (Pettigrew, Donovan, Pescud, Boldy, & Newton, 2010). Others have focused more on the accessibility of care or the financial constraints placed on individuals that may make care less likely.

Attitudes toward mental health have been studied for decades. According to Alonso et al. (2008), Goffman (1963) was the first to begin the study of, or conceptualize, stigma as it relates to society. The general population in the United States appears to stigmatize individuals with a mental illness (Smith & Cashwell, 2010). Several common attitudes are apparent in the studies cited in Smith and Cashwell’s research (2010) including beliefs that those with mental illness are dangerous, deserving of their illness,

are weak, or are incompetent. Even if individuals are willing to seek treatment for their mental illnesses, the societal stigma they perceive around them may cause a slower recovery (Segal, Coolidge, Mincic, & O’Riley, 2005; Alonso et al., 2008). Societal perceptions of those with mental illness cannot be ignored, but are not the only barriers to care experienced.

Age Related to Mental Health

Age is one factor examined in several studies when considering barriers to care. Older Korean American adults were less likely to use services than younger adults (Jang, Chriboga, & Okazaki, 2009). Older adults were more likely to believe there was shame in being related to someone with a mental disorder (Jang et al., 2009). Korean older adults were also less likely to seek help as their depressive symptoms increased. Younger Korean adults were more likely to view mental illness as a more “medical” condition, believing mental illness can be cured, leading them to seek help (Jang et al., 2009). Older adults in another study viewed those with mental disorders as less socially skilled, more embarrassing, and less socially desirable (Segal et al., 2005). In this same study, it also was hypothesized that older adults would be less willing to seek care, but no differences between older and younger adults were found. Eighty-two percent of Segal et al.’s participants were Caucasian, in contrast to the sample from Jang and colleagues (2009). Given the differing results of these two studies, it is likely culture is another variable that must be considered.

Adults, both younger and older, who have had previous experience with mental health care, were more likely to seek help again (Robb, Haley, Becker, Polivka, & Chwa,

2003). Younger adults were more likely to repeat seeking help than older adults in this sample. Older individuals report a lack of information about services and wished for more knowledge about the appropriate time to seek help.

Other possible barriers to care for older adults were concerns about the cost, lack of insurance, lack of knowledge of services, and lack of coordination with primary care (Jang et al., 2009; Segal et al., 2005). Lack of insurance and concern about cost were shown to be the primary barriers in one study by Robb et al. (2003). The least important barrier was stigma – the societal perceptions of an individual who seeks mental health care. Older adults also differed from younger adults in the types of mental illness for which they will seek help. Both groups would seek help for a serious mental illness such as schizophrenia, but older adults were less likely than younger adults to seek help for more common mental illness such as anxiety, depression, or bereavement. Robb et al. (2003) postulated this trend might be due to the possibility that older adults may view these less serious mental illnesses as another part of life that everyone deals with at some point, making it unlikely they would seek help for something ‘normal.’ The common theme between these varied studies is that age appears to play a role in how mental illness and its treatment are viewed.

Many older adults seek treatment through their primary care settings. Without communication between primary care and behavioral healthcare services, an individual may only get half of what he or she needs. Older adults typically see their primary care physician (PCP) for their mental health needs more than younger adults and even see the care provided by a PCP as satisfactory more so than younger adults (Robb et al., 2003). This result may mean older adults do not see a need to add another provider to their list of

people they see because they are satisfied with the care they are receiving. Older adults may perceive the PCP as an authority on mental health concerns as well or believe if there was additional services to be sought the PCP would make an appropriate referral. Younger adults may be more likely to seek out more information due to technology with which they are familiar.

Other Potential Variables

The cost (perceived or actual) of care and insurance coverage is another area examined in investigating barriers to care. Interestingly, higher household incomes in Singapore were predictors of *lower* rates of mental health service use (Nyunt, Chiam, Kua, & Ng, 2009). Even though financial concerns are one of the barriers identified in research, the finding that higher household incomes in that setting led to lower service utilization suggests the importance of cultural considerations. Related to cultural considerations, ethnicity has shown to be an important variable when exploring the experience of shame in Korean older adults and mental illness (Jang et al., 2009). Another study revealed that older African American adults were more likely to report mental concerns than whites even after controlling for other factors like socioeconomic status (Sorkin, Pham, & Ngo-Metzger, 2009). Results from this study indicated minorities were less likely to use services, even though they might be reporting mental concerns more often, as is the case with African Americans. This deficit in use of care may be due to financial constraints or language. English proficiency was linked to reporting mental illness as well. Those proficient in English were less likely to be depressed than those who were less proficient among the Latinos sampled (Sorkin et al.,

2009). Older adults in this study were less likely to report mental illness. There likely are some barriers that cause older adults to use mental health services less than younger adults, but negative attitudes about mental health care or lower prevalence rates of mental illness may not be some of those factors.

Religion has been considered as a possible predictor of whether someone seeks care (Ng, Nyunt, Chiam, & Kua, 2011). Interestingly, in the Ng et al. study (2011), people who had a religious affiliation also reported higher levels of mental illness, yet sought care less often than those without a particular religious affiliation. Given that the people with a religious affiliation have higher levels of mental health problems and a formal education was found mainly in those who did not identify with a religion, it is possible that formal education may be linked to lower rates of mental illness or higher rates of seeking help, which is consistent with the results of Jang's study (above; 2009; Ng et al., 2011).

Gender is another important variable to consider. Women tend to be more likely to seek help than men (Jang et al., 2009; Nyunt, et al., 2009). Women tend to have a higher prevalence rate for a number of mental health disorders. Education also has been linked to mental health care use. Education was found to be positively correlated with future mental healthcare utilization (Jang et al., 2009; Nyunt et al., 2009). Women who are educated may be more likely to seek care, but help-seeking will likely be dependent on many other factors.

Many of the previous studies cited have focused on either one or two age groups (Jang et al., 2009; Segal et al., 2005; Pettigrew et al., 2010). These age groups are typically young adults (16-45 or 17-26 depending on the study) being compared to older

adults, typically defined as those aged 60-90 (Jang et al., 2009; Segal et al., 2005). Pettigrew's study (2010) involved adults ranging in age from 40 – 80 divided into 3 different age groups: 40-54, 55-64, and 65-80. A more continuous approach to age, which separates large age ranges similar to Pettigrew's study, may be more informative.

While stigma was once thought to be a major barrier to mental healthcare services, it appears other barriers are equally important. These include cost, knowledge of services, language, and ethnicity. Age differences have been found in research, especially those conducted with ethnic groups (Nyunt et al., 2009; Jang et al., 2009). At the same time, Segal et al.'s study consisting primarily of white participants did not produce the same results. Positive correlations were found between education and help-seeking behaviors (Jang et al., 2009; Ng et al., 2011). These age and education differences led to the following hypotheses for the current study.

Hypotheses

In the present study, participants ranging in age from 18 to 65 and older will be included to determine if perceived barriers to care are related to age and education. The following hypotheses will be tested:

1. A negative relationship between age and mental health help-seeking behavior will be found.
2. A positive relationship between education and mental health help-seeking behavior will be found.
3. The interaction of education and age as they relate to mental health help-seeking behavior will be examined on an exploratory basis with the expectation that higher education leads to more mental help-seeking behavior regardless of age.

METHOD

Participants

For this study, participants were separated into groups based on age. Younger adults were defined as those ranging in age from 18 years 0 months to 25 years 11 months. Middle age adults were divided into two groups ranging from 26 years 0 months to 40 years 11 months for the first group and 41 years 0 months to 55 years and 11 months for the second in the original study. For the current study, these two middle age groups were combined. Older adults included those aged 56 years 0 months and upward. Participants were recruited at the following locations. Students enrolled in the introduction to psychology course need research credits as part of the course requirement. SONA is a web based service used to award course credit for participating in research. SONA can be linked to Qualtrics, a web based site that allows survey data to be collected in order for the researcher to remain blind to the participant's identity. SONA was linked to the current study through Qualtrics. Qualtrics was also used by participants recruited through Facebook and the League of Women Voters of Greene County. The League of Women Voters allowed a link to be posted in their monthly newsletter as another means of recruiting participants. The researcher was granted permission to solicit participants from a local senior center. The researcher gave out hard copies of the surveys and removed the informed consent once signed. A link was posted on the researcher's wall on Facebook and a Facebook page was created with the link as well to recruit a wider range of participants. The researcher asked others to post the link to their walls as well.

It is not possible to identify which of the Qualtrics surveys were recruited via Facebook as opposed to the League of Women voters as the link to the survey was also distributed to members of this organization. Qualtrics was also the manner in which the survey was taken for those students in introductory psychology. SONA tracked 74 participants who were granted credit for their participation. However, it is impossible to tell if some of these respondents were removed due to incompleteness. There were eight incomplete surveys from Qualtrics that were removed, but it cannot be known with certainty whether these removed participants were recruited through Facebook, PSY 121, or the League of Women Voters. The table below (Table 1) shows the numbers of participants recruited from each source kept in the sample after the removal of incomplete surveys and outliers.

A previous study was conducted using both the BACE-III and the demographics survey (Deal, Capps, Polking, & Klein, 2013). The previous study focused on what barriers to care exist in Southwest Missouri as well. Because the same measures were used in the previous study as the current study, the archival data was combined with the current data to increase sample size.

Table 1. Number of participants recruited from each source.

| | Number of Participants | Percentage of Total Participants |
|------------------------------|------------------------|----------------------------------|
| Archival | 110 | 50.2% |
| Qualtrics | 86 | 39.3% |
| Senior Center (paper/pencil) | 20 | 9.1% |
| Other (paper/pencil) | 3 | 1.4% |

Materials

Stigma toward the mentally ill and the attitudes about seeking mental healthcare are not observable phenomena. Therefore, these constructs must be studied through other methods, such as self-report. Several scales have been developed to measure this construct including the Community Attitudes Toward the Mentally Ill, the Opinions about Mental Illness, the Community Mental Health Ideology, the Willingness to Seek Help scale, and the Beliefs toward Mental Illness scale among others (Taylor & Dear, 1981; Segal et al., 2005). Broader measurement tools also exist that have encompassed stigma and attitudes while also including other potential barriers to mental health care.

One such scale is the Barriers to Access to Care Evaluation (BACE, now in its 3rd edition, the BACE-III, Clement et al., 2012). The BACE was developed using a number of previous scales and combined questions that were similar. New items not in previously used scales were also added to measure barriers to care based upon previous research, which indicated some additional barriers. Following the development of the preliminary set of items, mental health experts, social scientists, clinicians, and citizens provided feedback on the scale's clarity and language level. The feedback provided was utilized to change, reword or delete some items, for easier comprehension.

The next phase involved administering the scale to a sample population along with two other already standardized scales, the Stigma Scale for Receiving Psychological Help (SSRPH) and the Internalized Stigma of Mental Illness (ISMI), in order to assess convergent validity. The BACE-III has a test-retest reliability of 0.89 (Cronbach's alpha) and "good construct validity" with the SSRPH ($r = 0.30, p = 0.001$) and with the ISMI ($r = 0.40, p < 0.001$) (Clement et al., 2012, p. 5). It should be noted the two convergent

validities reported were associated with only one of the three dimensions of the BACE-III, the treatment stigma dimension. The reading level of the BACE-III is that of the average 11 or 12 year old. The three barrier dimensions defined are treatment stigma, attitudinal barriers, and instrumental barriers.

The treatment stigma dimension includes items related to the concept of societal stigma. These items include topics such as fear of consequences for potential job opportunities, people finding out, or feeling embarrassed, i.e. “Concern that I might be seen as weak for having a mental health problem.” The attitudinal barriers dimension includes items that relate to beliefs people hold about mental health care such as “Thinking the problem would get better by itself.” Finally, the instrumental barriers dimension refers to other barriers such as knowledge of services or financial constraint. An example of an instrumental barrier item is “Being unsure where to go to get professional care.” The BACE-III is a rating scale from 0 (this has stopped, delayed or discouraged me not at all) to 3 (this has stopped, delayed or discouraged me a lot). Six of the thirty questions contain a 5th option: “Not Applicable.”

A demographics survey used in a previous study that included the BACE-III also was utilized with some modifications (Deal, et al., 2013). The survey consists of 12 questions, many of which are multiple choice. Examples of questions include “what is your age,” and “what is your employment status”. There were a number of questions on the demographic survey that were different than the original study. A question was added “have you taken a survey regarding barriers to mental health care before” to ensure participants were not sampled twice. The previous study’s archival data were included in the analyses for the current study. The previous demographic survey included an item

regarding age, but the participants chose an age range from an established range. The current modified version requested an actual number for age. Two open-ended questions were added to the demographic survey, “What do you think about mental health services today?” and “If the need arose, would you willingly seek out mental health services? Please explain why or why not.” Age was changed from a multiple choice to an open-ended question. The demographics survey is contained in Appendix A.

Procedure

Approval from the Institutional Review Board (IRB) at Missouri State University was granted before the researcher solicited participants. The approval for the study can be found in Appendix B. Study packets included informed consent forms, the demographic questionnaire and the BACE-III. If the participant chose to take the surveys online, participants provided consent by clicking “agree” to the consent statement. Once the paper packet was completed, the consent form was removed by the researcher. The web address link to the survey was placed on Facebook in order to gain a wider sample. The participants recruited were added to the archival data from a previous study conducted using these questionnaires for a different purpose (Deal et al., 2013). All of these data were pooled and analyzed for the relationship between age and education as they relate to barriers to mental health care. Participants completed the Barriers to Access to Care Evaluation (BACE-III) and the demographic questionnaire (included in Appendix B) after providing consent. This scale may be read aloud to those with vision or other difficulties, but all were completed independently. The self-report measure was anonymous. Participants mostly completed the questionnaire by computer (85 of 108

participants; 78.7% of the new data), but some used paper and pencil (23 of 108; 21.3% of participants). Once the data were collected, they were entered into SPSS by the researcher.

The BACE-III was scored according to the scoring manual provided by the BACE-III developers. The BACE-III was divided into three factors and an overall score. The stigma barrier was scored first. Four of the items on this factor had “not applicable” options. These were recoded into a new variable to show applicability (1) or not applicable (0). When Qualtrics imported the data into SPSS, all the numbers were shifted up one from the BACE scoring (1= not at all; BACE: 0 = not at all). All the scores were recoded into the same variable to match the BACE-III Likert scale. The “not applicable” responses were recoded into the “not at all” groups. Items for the three respective scales and the total BACE-III were summed and then a constant (eight) added to that total to prevent division by zero. The mean score for each scale and the BACE-III total then was calculated. Simple means were calculated if no “not applicable” items existed in a factor. The archival data already had the BACE-III scored in this manner.

RESULTS

Data Screening

Once the data were entered into SPSS and the BACE-III scored, participants who had taken half or less of the BACE-III were removed from the sample. Other missing data for the BACE-III was replaced using the linear trend at point method. Missing data in the demographics survey were not replaced.

The data then were checked for outliers. During this screening, there were 14 participants with missing age in the new database. These were left in the sample due to the potential for their use in the main effects. One person appeared to be an outlier due to failing two of the three screening measures for outliers (Mahalanobis, Cook's, and Leverage). The primary investigator decided to retain the participant in the sample because it appeared education level made that participant unique. Due to the nature of the study and the desire for higher education levels, the participant was retained in the sample. Other data screening revealed some concerns regarding normality and homoscedacity on some dependent measures.

No outliers appeared in the archival data set. When the archival data was screened, the same concerns regarding normality, homoscedacity, and homogeneity were revealed. There were two respondents with missing education data and one with missing age. These were retained in the final sample as well.

When the two datasets were combined, the same concerns arose: normality, homoscedacity and homogeneity. Linearity was also a concern. Only one outlier was found and was removed from the combined dataset. Tables 2 and 3 show the number of

participants who fit each category of education and age for the two datasets combined. For the new dataset, average age was 36.7 (SD=24.5). Table 4 shows the minimum, maximum, and mean scores for each of the BACE-III factors as well as the total BACE-III. The standard deviation is also reported for each of these factors. The scores for each individual question ranged from 0-3 on the Likert scale. The factor scores were derived by calculating the average response and could also range from 0-3.

Table 2. Number of Participants in each education category.

| | Number of Participants | Percentage of Total Participants |
|---------------------------------------|------------------------|----------------------------------|
| No schooling Completed | 3 | 1.4% |
| Some high school, no diploma | 8 | 3.7% |
| High School Grad. Or equivalent (GED) | 33 | 15.1% |
| Some college credit, ne degree | 98 | 44.9% |
| Trade/Technical/Vocational training | 19 | 8.7% |
| Associate's Degree | 18 | 8.2% |
| Bachelor's Degree | 26 | 11.9% |
| Master's Degree | 8 | 3.7% |
| Doctorate Degree | 3 | 1.4% |
| Missing data (no responses) | 2 | 0.9% |

N=218; total percentages may not add up to 100% due to rounding.

Table 3. Number of participants in each age group.

| Age Range | Number of Participants | Percentage of Total Participants |
|------------------------|------------------------|----------------------------------|
| 25 or younger | 76 | 34.9% |
| 26-55 | 84 | 38.5% |
| 56+ | 44 | 20.2% |
| Missing (no responses) | 15 | 6.9% |

N=218; total percentages may not add up to 100% due to rounding.

Table 4. Descriptive statistics for each of the three factors of the BACE-III as well as the total BACE-III scores.

| | Number of Participants | Range of Scores | Mean of Category | Standard Deviation |
|-----------------------|------------------------|-----------------|------------------|--------------------|
| Total BACE Score | 218 | 0.00 – 2.67 | 1.02 | 0.61 |
| Stigma Barriers | 218 | 0.00 – 2.80 | 1.05 | 0.78 |
| Instrumental Barriers | 218 | 0.00 – 2.50 | 0.86 | 0.62 |
| Attitudinal Barrier | 218 | 0.00 – 2.70 | 1.09 | 0.63 |

Quantitative Analyses

Education and age of the participant were used to predict scores on each of the four parts of the BACE. The PROCESS plug-in (Hayes, 2013) was used to center variables and analyze the interaction between age and education in predicting views toward mental health-care. PROCESS was run four times, one for each of the three factors identified by the BACE-III developers and once for the overall BACE-III score.

The Johnson-Neyman technique was utilized as well. There were 76 people in the younger adult group, 84 in the middle adult group, and 44 in the older adult group. The

overall model of the average BACE-III scores and age and education was not significant [$F(3, 197) = 1.07, p = .36, R^2 = .02$]. The overall model of attitudinal barriers was also not significant [$F(3,197) = 1.50, p=.22, R^2 = .03$]. The same was true for the Instrumental and Stigma factors as well [$F(3,197) = 1.14, p = .33, R^2 = .02$; $F(3,197) = .94, p = .42, R^2 = .01$ respectively]. See table 5 for individual main effects and interactions. Appendix C shows graphs to display of the lack of interaction.

An additional analysis was performed on the new data. A bivariate correlation between age and the three factors of the BACE-III as well as the average BACE-III scores was conducted. Table 6 displays the correlations between the three factors, BACE-III total, and age. Descriptive statistics for each item of the BACE-III using the recoded scores that contain “not applicable” responses in the “not at all” section were next examined.

The new data set first was analyzed. The highest overall mean was 1.639 (SD = 1.05) on question two, “wanting to solve the problem on my own.” The next highest mean was 1.306 (SD = 1.04) on question nine, “Feeling embarrassed or ashamed.” The third highest was 1.287 (SD = 1.1027) on question eleven, “not being able to afford the financial costs involved.” The archival data then was examined. The items had been recoded in the same way as the new data. The highest mean was 2.21 (SD = 1.10) on question eleven, “not being able to afford the financial costs involved.” The second highest means was 1.81 (SD = .914) on question two, “wanting to solve the problem on my own.” The third highest was 1.45 (SD = 1.15) on question three, “Concern I might be seen as weak for having a mental health problem.”

Table 5. Beta, t scores, and significance levels by BACE-III factors and Age and Education.

| | <i>b</i> | <i>t</i> | <i>p</i> |
|--|----------|----------|----------|
| Average BACE-III: | | | |
| Education | 0.04 | 1.58 | p = 0.12 |
| Age | -0.05 | -0.77 | p = 0.44 |
| Education X Age | 0.01 | 0.60 | p = 0.80 |
| Attitude Barriers: | | | |
| Education | 0.04 | 1.54 | p = 0.12 |
| Age | -0.08 | -1.30 | p = 0.20 |
| Education X Age | 0.02 | 0.64 | p = 0.53 |
| Instrumental Barriers: | | | |
| Education | 0.03 | 1.09 | p = 0.28 |
| Age | 0.06 | 0.93 | p = 0.35 |
| Education X Age | 0.01 | 0.30 | p = 0.76 |
| Stigma Barriers: | | | |
| Education | 0.04 | 1.31 | p = 0.19 |
| Age | -0.10 | -1.21 | p = 0.23 |
| Education X Age | -0.004 | -0.07 | p = 0.44 |
| Significance is reach at $p < 0.05$. $df = 197$ | | | |

Finally, the combined data set was analyzed. The highest mean was 1.74 (SD = 1.19) on question eleven, “not being able to afford the financial costs involved.” The second highest mean was 1.72 (SD = .99) on question two, “wanting to solve the problem

on my own.” The third highest was 1.35 (SD = .96) on question seven, “Thinking the problem would get better by itself.”

Table 6. Correlations of each dependent variable: stigma, instrumental, attitude, and average BACE scores to age.

| | Number of participants | P value (significance) | Correlation to age |
|-----------------------|------------------------|------------------------|--------------------|
| Total BACE-III Score | 94 | 0.12 | -0.16 |
| Attitudinal Barriers | 94 | 0.91 | -0.18 |
| Instrumental Barriers | 94 | 0.82 | -0.02 |
| Stigma Barriers | 94 | 0.82 | -0.18 |

.05 is needed to reach significance.

Qualitative Analyses

Two questions were added to the demographic survey for the current study, which were qualitative in nature. The archival data did not include these questions. Of the 109 respondents, one was removed due to being an outlier in the quantitative data.

The qualitative data were placed in a Word document and color coded based on themes such as “helpful,” “need improvement,” “costly,” “getting better,” “not available,” “not supported/misunderstood,” “abused and rely too heavily on medication,” and “need more publicity”. Each response may have had more than one theme. Each theme identified in each response was coded and tallied in all of the themes mentioned. Therefore, the following percentages may not add up to 100% as more than one theme existed in several responses.

Seventy-eight percent of those sampled indicated they would seek out mental health care (84/108). Ten percent indicated they would not be willing to seek care and the remaining eleven percent either were unsure or did not respond to this question. The other question regarded thoughts about mental health care today. Twenty-eight percent of respondents viewed mental health services as helpful (30 respondents out of 108). One respondent commented, “I believe that many mental health services are offered to a larger variety of people. I would think of them to be very helpful and a reliable source for people in need.” Nineteen percent viewed mental health services as in need of improvement. Other common answers included mental health care being too costly (11%), which included comments related to insurance, or not available (8%). One person addressed both concerns in his or her comment: “I think that they are limited to what clinicians can do for them due to their insurance only covering a limited amount of visits. Others cannot seek treatment due to no coverage at all. I think that the service is for the most part successful but I feel that the patients that need the service don't have the access to it.” Some even indicated there was a misunderstanding of what mental health care is and does (6%), which potentially could be considered stigma. Several respondents discussed the issue of mental health care relying too heavily on medication or it being abused in some other fashion, such as gaining benefits (6%). A smaller percent (4%) believe mental health care services are getting better. One respondent stated,

“I believe that they are growing and expanding depending on the mental health cases. I also believe that depending on where the Mental health services are depends on the services you get. There has been alot of changes in the mental health services since we had to go through it with my brother 15 years ago and when my friend had to go through it with her little boy 3 years also. Just like everything else there are a lot of changes made daily.”

Eight percent of respondents did not respond or stated he or she had no opinion (9/108).

Twelve percent stated they did not know (13/108).

DISCUSSION

I hypothesized that the older group would be less willing to seek help, but exhibit less stigma, given the previous research conducted in this area (Segal et al., 2005; Jang, et al., 2009). I believed the biggest barrier to care to be instrumental barriers such as not having access, knowledge or financial means to receive care. I also suspected there would be a linear relationship between the age groups with older adults being the least likely to seek help and younger adults most likely to seek help with the middle age group between. However, the current results indicate that no such relationship can be inferred, at least in this sample.

I expected to find a negative relationship between age and mental-health seeking-behavior. As age increased, mental health seeking behaviors decreased, although the strength of this relationship was non-significant. The relationship between education and the BACE-III was more consistent with the initial hypotheses although still not reaching significance. It is possible a relationship between education and mental-health seeking behavior may be found with increased power (more participants). When these analyses were conducted, the main effects for education were closer to being significant than the age main effects (See table 6). Because many participants in this study indicated his or her current education level to be some college, no degree (98 of 217; 45%), with a more even distribution across education level numbers, results may reach significance.

It is unclear what can be concluded from these results. In this sample, it seems there is no relationship, or a weak relationship at best, between the views of barriers to mental healthcare and people's age and education levels. Power should not have been a problem for the middle and younger age groups, but it is possible the lack of significance

was due to the older age group not having sufficient participants. The same can be said for the upper education levels such as Bachelor's, Master's, and Doctoral degrees. With more participants and greater variability in age and education, significant results might be found.

The qualitative aspect of this study may provide more insight to participant's perspectives about mental health services and may inform a discussion about the absence of significant results. With 78% of respondents stating they would seek out care, it is possible few barriers are perceived by the current sample. Many of the respondents may have been unable to identify barriers that would prevent them from seeking care when necessary because barriers do not exist to them as they would seek out care on their own. This question was asked prior to administration of the BACE-III and may have primed the participants to believe no barriers are large enough to prevent seeking care.

The qualitative data were not examined in relation to education and age for several reasons. First, qualitative data were obtained from 108 participants, but 57 of those 108 (53%) were from the same age group while 67 of the 108 (62%) were from the same education level. It is doubtful an analysis of these two independent variables in this sample would have been useful. Furthermore, 7 of the 9 missing responses were from the older adult age group.

The responses do offer some considerations for improving mental health care seeking behaviors. Many of the respondents stated they would seek care, but proceeded to give reasons why mental health care is a problem. Many of the respondents (6%) also began their answers to "what do you think about mental health care today" with "I don't know much about it, but..." This suggests more education on the purpose of mental

health care and where to gain such care would be beneficial for many of the respondents. Education on what mental health care is really like from different sources may also be useful. Six percent of respondents indicated mental health providers rely too heavily on medication. However, psychologists and counselors cannot prescribe medication in most states. Therefore, it can be inferred that some respondents either are unaware that such mental health services exist and what their capacity for prescribing is, or those respondents believe the only way to treat mental illness is to seek such care from his or her primary care physician. Either way, these respondents could benefit from improved and enhanced education about the nature of mental healthcare.

The individual item analysis provides some interesting points for discussion. When analyzed separately, the new and archival data showed different questions having the highest endorsement for barriers (question 2 for new, and 11 for archival). In the combined data set, cost was identified as the highest barrier endorsed on the BACE-III. However, only 11% of respondents discussed cost as a barrier when asked what they thought of mental health services today. It is possible respondents were conceptualizing the qualitative questions not in terms of barriers such as cost, but in other ways to have caused them to not respond with cost as an initial concern. There were only two qualitative questions and neither specifically asked what would slow down or stop the individual from seeking care. If such a question were added, it is possible cost may have been more prominent.

Question two appeared on all three of the analyses as having one of the highest scores for a barrier to care. It appears that participants have a desire to wait before seeking care to see if it will go away (question seven) or can be solved by the individual.

This appeared in the qualitative answers as well. Thirty-three percent of the 78 percent who stated they would seek help (28/85) stated they would seek care if the need arose, but might do so reluctantly or only if forced. One respondent stated, “If I felt the situation was especially bad” he or she would then seek care. Another respondent stated it would be “hard to admit to myself” that care was needed.

Limitations

There are a number of limitations to this study that must be addressed and could provide possible avenues for future research. The BACE-III may not be the best scale to measure barriers to mental health care as its validity was only examined for one of the three identified barriers, that of stigma related barriers. The BACE-III also has some questions with an option of “not-applicable.” However, if something is not applicable, it would also not be discouraging the use of mental health services, which is an option on each question of the BACE-III. It may be useful information if a researcher were examining the not applicable items individually, but when included might have been confusing for participants.

It may be that these results were due to the smaller size of the older adult sample. It is difficult to know if more participants would have increased power enough to show a result different from this one. However, it would be one area that could be improved in future research. Education also was not evenly distributed. Attaining larger, more consistent sample sizes across education levels may produce significant results. Other areas of the country may also be a source for future research. The results of this study were from Southwest Missouri. It cannot be known if the results are generalizable across

the country without further study of other regions as well as having more diversity in the sample. A further area of future study could also be measuring healthcare seeking behavior rather than attitudes alone.

Southwest Missouri is predominantly white, and this sample was reflective of that lack of diversity. It is possible there may be a cultural effect on age differences occurring given Nyunt et al.'s study (2009), which found age effects in Korean American adults. Segal et al.'s study (2005) was 82% Caucasian and found no age differences. The current study (archival and new data) revealed 87% of the sample identified themselves as white. A more ethnically and culturally diverse sample might provide different results than the current study.

Conclusion

The results of the present study indicate many people in Southwest Missouri may be willing to seek out mental health care when it is needed. While the relationship between age, education, and attitudes toward mental healthcare cannot be inferred based on these results, the current study raises the question of how many barriers to care actually exist in the area. Age may influence knowledge of how to obtain mental healthcare, but firm conclusions cannot be drawn from the current study. With 78% of respondents from the recent study indicating positive feelings toward mental healthcare, attitudes toward mental healthcare appear to be more positive than not.

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APPENDICES

Appendix A – Demographics Survey

- What is your age?
- What is your gender?
 - Female
 - Male
- What is the highest level of education you have completed?
 - No schooling completed
 - Nursery school to 8th grade
 - Some high school, no diploma
 - High school graduate, diploma or the equivalent (for example: GED)
 - Some college credit, no degree
 - Trade/technical/vocational training
 - Associate degree
 - Bachelor's degree
 - Master's degree
 - Professional degree
 - Doctorate degree
- How would you classify yourself?
 - Arab
 - Asian/Pacific Islander
 - Black
 - Caucasian/White
 - Hispanic
 - Indigenous or Aboriginal
 - Latino
 - Multiracial
 - Would rather not say
 - Other
- What is your current marital status?
 - Divorced
 - Living with another
 - Married
 - Separated
 - Single
 - Widowed
 - Would rather not say

- Employment Status: Are you currently...?
 - Employed for wages
 - Self-employed
 - Out of work and looking for work
 - Out of work but not currently looking for work
 - A homemaker
 - A student
 - Military
 - Retired
 - Unable to work
- What is your current household income in U.S. dollars?
 - Under \$10,000
 - \$10,000 - \$19,999
 - \$20,000 - \$29,999
 - \$30,000 - \$39,999
 - \$40,000 - \$49,999
 - \$50,000 - \$74,999
 - \$75,000 - \$99,999
 - \$100,000 - \$150,000
 - Over \$150,000
 - Would rather not say
- Resources Utilized (Select all that apply)
 - Private Insurance
 - Medicaid
 - Medicare
 - Supplemental Nutrition Assistance Program (SNAP)/Card
 - Temporary Aid to Needy Families (TANF)
 - Social Security Disability Insurance (SSI) / Social Security Disability (SSD) / Social Security Administration (SSA)
 - VA Disability
 - Veterans' Medical

Next you will be completing the Barriers to Access to Care Evaluation (BACE-3). For some people these questions may not apply, for example, you personally may have never attempted to obtain care for a mental health problem. If that is the case, we still would like for you to complete the questions but answer them as to what you THINK might be barriers to care. Please indicate below which of those two situations applies to you:

- My answers are from personal experience
- My answers are from what I THINK other people experience

Have you taken a survey regarding the Barriers to Mental health care before?

- Yes I have taken a survey like this before.
- No, I have not taken a survey like this before.

What do you think about mental health services today?

If the need arose, would you willingly seek out mental health services? Please explain why or why not.

Appendix B – Human Subjects IRB Approval

Approval Date: 2/24/2015

Expiration Date of Approval: 2/23/2016

RE: Notice of IRB Approval by Expedited Review (under 45 CFR 46.110)

Submission Type: Initial

Expedited Category: 7.Surveys/interviews/focus groups

Study #: 15-0331

Study Title: Barriers to Mental Healthcare Across Age Groups and Education Levels

This submission has been approved by the above IRB for the period indicated. It has been determined that the risk involved in this research is no more than minimal.

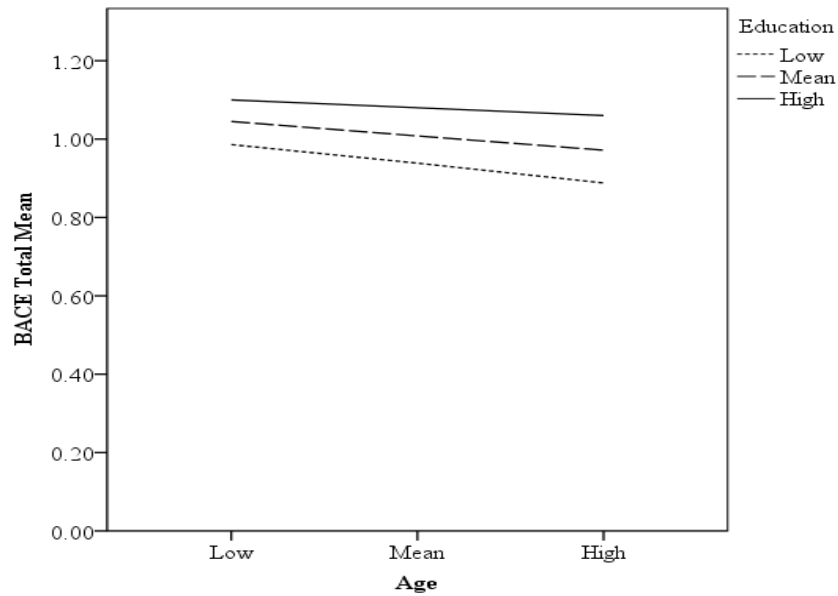
Investigator's Responsibilities:

Federal regulations require that all research be reviewed at least annually. It is the Principal Investigator's responsibility to submit for renewal and obtain approval before the expiration date. You may not continue any research activity beyond the expiration date without IRB approval. Failure to receive approval for continuation before the expiration date will result in automatic termination of the approval for this study on the expiration date.

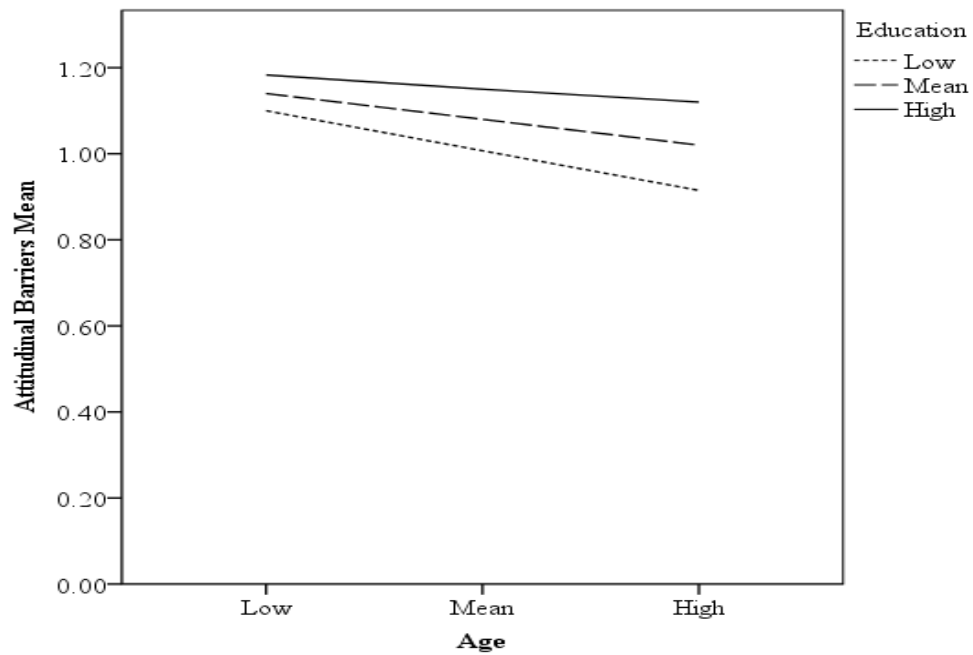
You are required to obtain IRB approval for any changes to any aspect of this study before they can be implemented (use the procedures found at <http://orc.missouristate.edu>). Should any adverse event or unanticipated problem involving risks to subjects or others occur it must be reported immediately to the IRB following the adverse event procedures at the same website.

This study was reviewed in accordance with federal regulations governing human subjects research, including those found at 45 CFR 46 (Common Rule), 45 CFR 164 (HIPAA), 21 CFR 50 & 56 (FDA), and 40 CFR 26 (EPA), where applicable.

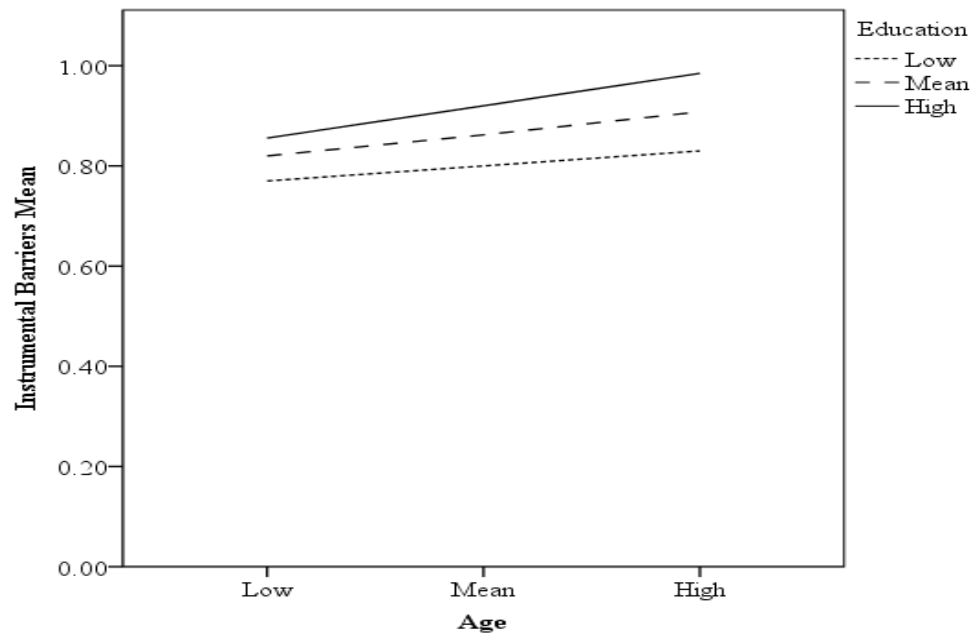
Appendix C – Interaction Graphs



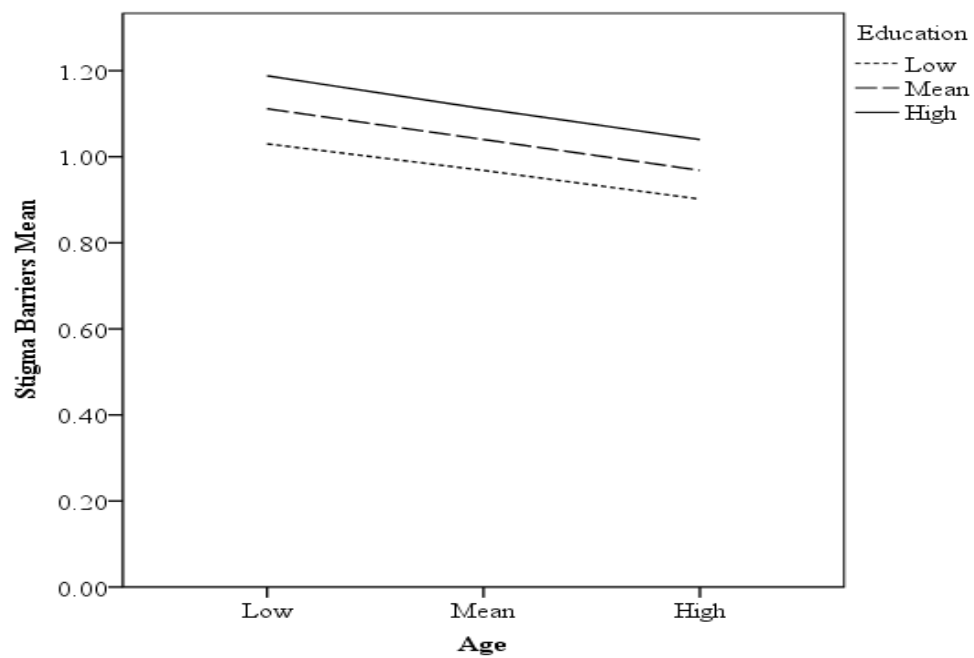
The lack of interaction of the variables age and education for BACE total scores. Interactions are marked by intersecting lines.



The lack of interaction of the variables age and education for Attitudinal Barriers. Interactions are marked by intersecting lines.



The lack of interaction of the variables age and education for Instrumental Barriers. Interactions are marked by intersecting lines.



The lack of interaction of the variables age and education for Stigma Barriers. Interactions are marked by intersecting lines.