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INTERNALIZED MENTAL ILLNESS STIGMA AMONG COLLEGE STUDENTS WITH JUVENILE VICTIMIZATION EXPERIENCES

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INTERNALIZED MENTAL ILLNESS STIGMA AMONG COLLEGE STUDENTS WITH JUVENILE VICTIMIZATION EXPERIENCES

A DISSERTATION APPROVED FOR THE
DEPARTMENT OF EDUCATIONAL PSYCHOLOGY

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This is dedicated to my wife, Kym and children, Amy, Andrew and Kayla. Daddy is done with his “Go OU” homework. Let’s play!

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Abstract

Mental health stigma is a serious process that negatively impacts the functioning of people with mental illnesses beyond the impacts of the mental illness itself. Mental health stigma has been found to exist among people with a variety of mental illnesses including depression, and anxiety disorders. It was hypothesized that experiences of juvenile victimization result in stigmatized views of mental illness, avoidance of mental health services, and increased levels of psychological distress among college students. It was found that most individuals experienced some type of victimization experience. In addition, it was found that rates of juvenile victimization experiences were only weakly correlated with current psychological distress.

Chapter 1: Problem Statement

> "I would do things such as standing away from others at bus stops and hiding and cringing in the far corners of subway cars. Thinking of myself as garbage, I would even leave the side-walk in what I thought of as exhibiting the proper deference to those above me in social class. The latter group, of course, included all other human beings." Kathlene Gallo reported that this was her daily experience of internalized mental health stigma (Gallo, 1994).

The above quote illustrates the difficulty an individual faces daily while living with mental health stigma. While working as a mental health counselor I regularly observed individuals with traumatic experiences so difficult that they were unable to discuss them. However, they were also unwilling to seek treatment for their distress. I hypothesized that stigma about mental illness was the cause of their refusal to seek treatment.

There are many reasons for this hypothesis. First, it is noted that a vicitimization experiences are likely to cluster together (Finkelhor, Ormrod, Turner & Hamby, 2005). Second, the current literature on child maltreatment suggests that children are more likely to experience distress if they have experienced a number of negative events rather than just one (Finkelhor, Ormby & Turner, 2009). As a result it was believed that using a very sensitive scale would allow for identification of all individuals that might have experienced polyvictimization.

In addition, the literature evaluating current barriers to treatment seeking indicated that mental health stigma is an important predictor of whether or not individuals are willing to seek mental health treatment (Corrigan, 2004). The literature regularly reports that somewhere in the neighborhood of 30 to 40 % of individuals with serious mental illness are not getting treatment due to stigma.

As a result of these two separate literatures, it was hypothesized that mental health stigma was the basis for individuals with a large number of victimization experiences failing to seek needed treatment.

Chapter 2: Literature Review

Juvenile Victimization

The Adverse Childhood Experiences (ACE) study was the first large survey study that established the relationship between a broad number of negative childhood experiences and adult health problems. The study used two waves of survey data to collect information. The adverse experiences were categorized into three separate dimensions: abuse, neglect, and household dysfunction. Abuse included emotional abuse, physical abuse and sexual abuse. Neglect included emotional neglect and physical neglect. Household dysfunction included any one of the following: parental separation or divorce, having a household member imprisoned, seeing one's mother treated violently, or other household members abusing substances or experiencing mental illness (Felitti et al., 1998). The Adverse Childhood Experiences Scale was novel because it counted the number of types of adverse experiences (e.g., mental illness in the home, or sexual abuse) instead of trying to count the total number of adverse experiences or focusing on a single category of adverse experiences. This removes the possibility of assessing differences in outcomes based on chronicity but creates a conservative estimate of exposure to maltreatment or household dysfunction that accounts for the polytrauma that often occurs. Research indicates that this method of analysis is more likely to result in under-reporting than to result in false positives (Felitti et al., 1998; Hardt & Rutter, 2004).

ACE Study findings to this point have suggested connections between health and the number of types of adverse experiences. The association between mental health and number of ACEs is particularly startling. At least three studies have looked at different aspects of the relationship between mental health and ACEs. Specifically,

both men and women with a psychiatric diagnosis were 2 to 2.4 times as likely to have experienced child maltreatment according to self-report (Edwards et al., 2003). Another study focusing on depression found that there was a dose-response relationship between adverse childhood experiences and depression. The relationship was somewhat attenuated but still significant when controlling for an adult in the home with a mental illness (Chapman et al., 2004). A third study found that individuals who reported having experienced 4 or more ACEs were 12 times more likely to engage in alcoholism, drug abuse, have depression, or attempt suicide (Felitti et al., 1998).

Limitations of the ACEs Study and related studies include the lack of comprehensiveness (Finkelhor, Hamby, Ormrod, & Turner, 2005; Saunders, 2003). Saunders (2003) also noted children exposed to one type of juvenile victimization experience (JVE) are more likely to have experienced other types of victimization. In addition, there is no accounting of peer victimization experiences (e.g., bullying) or sibling victimization experiences (e.g., assault by a sibling) (Hamby, Finkelhor, Ormrod, & Turner, 2004). Due to these and other weaknesses in existing measures, Finkelhor and colleagues sought to comprehensively catalog JVE by creating the Juvenile Victimization Questionnaire (Hamby et al., 2004). They produced a number of versions of this survey allowing for flexible data gathering methodologies ranging from self-report to more comprehensive interviews (Finkelhor, Hamby, Turner, & Ormrod, 2011).

Juvenile Victimization and Stigma

Currently there are no directly established links between stigma and juvenile victimization but there are some interesting possibilities. First, the nature of childhood

victimization is that many of the categories of victimizing events involve shame such as child sexual abuse (Coffey et al., 1996), imprisonment of a family member (Austin, 2004), or mental illness in a family member (Werner, Mittelman, Goldstein, & Heinik, 2012). In addition, children that experience maltreatment often develop greater levels of insecure relationships with others (Riggs, 2010). Some research has indicated that shame and self-blame that mediates the relationship between the abuse and long-term effects from the experiences (Coffey et al., 1996). More recent research reported cognitive schemas mediate (or at least negatively moderate) the relationship between child maltreatment and later psychological distress (Cámara & Calvete, 2012; Cukor & McGinn, 2006; Wright, Crawford, & Del Castillo, 2009). Others found that invalidating environments may have an extremely negative impact on mental health (Chaudoir & Quinn, 2010; Mountford, Corstorphine, Tomlinson, & Waller, 2007). This author has repeatedly observed people involved in counseling for some family related issue (i.e., treatment for their child or couples therapy) when they reveal that they have had some traumatic childhood experiences that they "don't want to talk about." Those individuals were often only willing to share so that the therapist could understand their reactions. At least in those cases, there appeared to be an implicit assumption that seeking treatment for these experiences will indicate some kind of personal flaw or bring up tremendous shame.

Childhood Victimization and Schema Development

There are a couple of mechanisms that may result in a negative stigma. Wright, Crawford, and Del Castillo (2009) found that there was a connection between emotional abuse and negative schemas. Using Young's Schema Questionnaire, a measure

designed to assess for 18 early maladaptive schemas (Young, 1990), they tested for each of the following classes: disconnection and rejection, impaired autonomy and performance, "other-directedness", over-vigilance and inhibition, and impaired limits. The authors found that vulnerability to harm, self-sacrifice, and defectiveness/shame were related to increased feelings of anxiety and depression. The authors chose to combine anxiety and depression together as the results were similar when evaluated separately and together.

Hierarchical multiple regressions also showed that when vulnerability to harm, self-sacrifice, and defectiveness/shame were added as predictors, the association between emotional abuse and psychological distress was reduced but not eliminated. Each one of the schemas appeared to be consistent with stigmatizing beliefs about mental illness – beliefs that would lead one to avoid treatment for fear of facing them.

The negative effects of child abuse, in particular emotional abuse, are well documented by others too. For example, van Harmelen and colleagues (2010) found that implicit thoughts about oneself were connected with explicit negative thoughts about oneself and depressive and anxious symptoms. In a review of research on childhood sexual abuse and the long-term effects in adulthood, it was found that negative sequelae are often due to negative self-esteem and low self-efficacy (Walsh, Galea, & Koenen, 2012).

In addition, research into threat awareness (Puliafico & Kendall, 2006) observed that children who were somewhat anxious were more likely to monitor for threat-related information. Bar-Haim and colleagues (2007) conducted a meta-analysis that suggested an increased bias to threat-related information, presented via the visual or auditory

pathway, in both children and adults. In addition, the bias to threat-related information is effective when presented either from within or outside of an individual's conscious awareness. Bar-Haim and colleagues also noted evidence that suggested that treatment reducing anxiety may also reduce an individual's threat-related attentional bias in their meta-analysis. This suggests a potential developmental pathway to the internalization of mental illness stigma. It is hypothesized that existing internalized schemas are "protected" by this threat-related attentional bias. That is to say, they avoid activating this existing negative schema by avoiding mental health providers.

Stigmatization

Categorical person perception is a common, nearly-automatic process that "enables perceivers to streamline cognition and increase the intelligibility of an otherwise dauntingly complex social world" (Macrae & Bodenhausen, 2001). The process is necessary to cope with a complex social environment. Unfortunately, incorrect information incorporated into categorical person perception results in stigmatization (Corrigan & Penn, 1999). Stigmatization due to mental illness has been shown to negatively impact individuals through multiple mechanisms including: increased life-stress, decreased help-seeking, and decreased social support (Livingston & Boyd, 2010). The associative effect extended beyond the individual to the family, friends who spend time with that person, and even to professionals treating those with mental illnesses (Corrigan & Miller, 2004; Gray, 2002; Sartorius, 2006; Werner et al., 2012).

Stigmatization has been divided into two different categories – societal stigmatization and internalized self-stigmatization (Corrigan, 2004). Societal or public

stigmatization is considered to be external to the individual. It is the collection of stereotypes held about individuals with mental illness. These experiences can come from society in general or from one's immediate social circles (Corrigan et al., 2006; Owen, Thomas, & Rodolfa, 2013). Internalized self-stigmatization, sometimes called self-stigmatization or internalized stigmatization, is the term used to describe the process of applying negative mental illness stereotypes to oneself (Corrigan, 2004). Many believe that societal stigmatization results from beliefs about mental illness such as personal responsibility for illness, dangerousness of those affected, and rarity of the condition, as well as from behavioral cues associated with mental illness (Clausen & Huffine, 1975; Feldman & Crandall, 2007). Evidence has suggested internalized self-stigmatization resulted from a process of both agreeing with negative stereotypes and applying those negative stereotypes to oneself (Corrigan, Rafacz, & Rüsch, 2011; Corrigan et al., 2006).

The effects of mental illness stigmatization have been increasing well documented in recent years. Some of the negative effects have included increased symptom severity and decreased hope, self-esteem, empowerment, self-efficacy, quality of life, treatment adherence, and social support (Livingston & Boyd, 2010). Corrigan (2004) attributed the low levels of treatment among individuals with serious mental illness (only about 1/3 getting treatment) to mental health stigmatization. He further noted that even those who eventually got treatment often discontinued that treatment prematurely (Corrigan, 2004). In addition to the above problems, it has been further shown that mental health stigmatization contributed to an increase in levels of depression in affected individuals (Corrigan et al., 2011).

Some authors have found that individuals with mental illness concerns live in fear that their mental illness will be revealed to others, even when they have recovered from the mental illness (Quinn et al., 2004). Adults with mental health concerns often avoid treatment in general due to stigma (Corrigan, 2004). They have greater difficulties in an academic setting due to their efforts to conceal their mental health concerns (Quinn et al., 2004; Steele & Aronson, 1995). Mental illness stigma has also resulted in clients experiencing distancing from their peers (Alonso et al., 2009) and from their health providers (Smith & Cashwell, 2010).

The literature described some mixed results related to the effects of stigmatization. Alvidrez and colleagues (Alvidrez, Snowden, & Patel, 2010) indicated that there was not a strong correlation between a person's individual perception of general mental illness stigma and their in-treatment behavior. Another interesting study looked at the interactions between case managers and those with mental illness. They found that the working alliance was only subtly impacted by the awareness of societal stigmatization (Kondrat & Early, 2010). Generally, for public stigmatization to occur, it has been found that it was in response to some distinctive behavioral patterns and it occurs in the form of social distancing (Clausen & Huffine, 1975; Corrigan, Edwards, Green, Diwan, & Penn, 2001; Corrigan, Markowitz, Watson, Rowan, & Kubiak, 2003).

Internalized stigmatization has been found to be much more negative in its effects. In fact, most of the previously noted concerns relate to some dimension of internalized stigmatization (Corrigan, 2004; Livingston & Boyd, 2010). For some it has been found that the effort to conceal the mental health diagnosis resulted in great social difficulties (Henry, von Hippel, & Shapiro, 2010). For others it was found that the

negative views an individual had toward mental illnesses resulted in greater problems (Livingston & Boyd, 2010; Mak, Poon, Pun, & Cheung, 2007). For mental health problems that resulted in fewer unusual behaviors (e.g. depression or anxiety), internalized stigmatization may be dominant mechanism of negative effects (Barney, Griffiths, Jorm, & Christensen, 2006; Kanter et al., 2008; Roeloffs et al., 2003; L. C. Rüsch, Kanter, Manos, & Weeks, 2008).

Corrigan, Watson, and Barr (2006) developed a model of stigmatization that was hierarchical in nature beginning with public stigma and eventually resulting in internalized self-stigmatization. They suggested that individuals do not necessarily suffer the consequences of stigmatization merely due to awareness of societal stereotypes. Individuals must also "agree" that the stereotypes are true, and then "apply" the stereotypes to themselves. Corrigan, Watson and Barr observed a decrement in self-esteem resulting from applying negative mental health stereotypes to oneself (Corrigan et al., 2011, 2006; Watson, Corrigan, Larson, & Sells, 2007). They suggested that internalized self-stigmatization is the source of the negative impacts (Corrigan et al., 2011; Watson et al., 2007).

Quinn and Chaudior (2009) developed a model of concealable stigmatized identities that encompassed a variety of stereotyped selves. In their model, mental illness stigmatization is a special case of a general stigmatization process. Beginning with Goffman's idea of concealable threats – those things that can be considered a mark of failure or shame and may "taint" others view of a person (Goffman, 1963), Quinn and Chaudior created a model to predict that stigmatization effects can be understood by considering the cultural stigma, anticipated stigma, centrality, and salience of the

stigmatization. Cultural stigma was defined by having peers rate how favorably or unfavorably they felt about a variety of frequently stigmatized categories such as mental illness and sexual minorities. The anticipated stigma was a measure of expected (future) behavior by others if their stigmatized identity was revealed. Identity centrality was defined as how important the stigmatized identity was to the person reporting. Finally, salience was defined by a single item that asked how often they think of their stigmatized identity.

Quinn and Chaudior completed two studies – the first using both a depression and anxiety scale and the second using just a depression scale to measure psychological distress. The results are provided in order below. Cultural stigma (this may be related to "awareness" in Corrigan's model) had a lower level of correlation with psychological distress (r = .22 or . 24 depending on population) than did anticipated stigmatization (r=.33 or .43), centrality (r=.32 or .40) or salience (r=.22 or .40). The centrality and salience components appear to be related to Corrigan and colleagues concept of internalized stigmatization (Corrigan et al., 2006; Luhtanen & Crocker, 1992; Quinn & Chaudoir, 2009).

In both models, it is the internalization of the negative stereotypes that is necessary and sufficient to predict the negative stigmatization effects such as decreased treatment adherence (Livingston & Boyd, 2010), lower treatment compliance and premature termination (B. Duncan & Miller, 2008; Livingston & Boyd, 2010; Ogrodniczuk, Joyce, & Piper, 2005). Research suggests that addressing this negative treatment indicator early in the therapeutic process could improve treatment compliance, reduce early termination, and improve treatment outcomes (Miller,

Duncan, Sorrell, & Brown, 2005; Rosenfield, 1997; Safran, Crocker, McMain, & Murray, 1990).

Having established a couple of models that may result in negative stigmatization, it is now important to consider the number of people that are negatively affected by mental health stigmatization. It appears that this varies depending upon the population studied and the questions asked. Quinn and Chaudior's study of undergraduate introductory psychology students found that about 36 % of the individuals screened reported that they possessed a stigmatized identity of some description. In their study, they began with 377 students who reported a stigmatized identity. Of those, 300 (79.6 %) of the participant responses could be coded to particular stigmatized identity. This means that approximately 29 % of those surveyed would likely have a definable stigmatized identity based upon the criteria they used (Quinn & Chaudoir, 2009).

Data for mental health stigma in particular is more varied. A study of those with severe mental illness in a model treatment program found that among people with chronic mental illness, 65 % feel that "former mental patients are not accepted by most people as friends," 53 % find them "not trustworthy," and 57 % "not intelligent" (Rosenfield, 1997, p. 655). In addition, about 50 % of those surveyed reported that they personally experienced mental health stigmatization (Rosenfield, 1997).

Help-seeking and Stigmatization

A study of Australian college students using the Kessler 10 (K10) psychological distress survey found that nearly 20 % of the nearly 6500 students surveyed had clinical levels of psychological distress. Over 67 % of the students surveyed had subsyndromal

symptoms and another 19.2 % had clinical levels of psychological distress leaving only 13.4 % of the students reporting no distress. Students falling in the traditional student ages (18-34) reported having the highest levels of psychological distress. Only about one-third (34.3 %) reported having sought help for their distress. Of those who sought help, 67 % chose a general practitioner, 30 % a counselor, 20 % a psychologist, and 9.3 % chose a psychiatrist. Furthermore, there was a strong association between a lower overall GPA and higher levels of psychological distress (Stallman, 2010) Levels of distress are far above what was found in a survey of the general Australian population. In the general population, in the same age group, only 3.5 % of females and between 2.3 and 3.3 % of males reported experiencing serious psychological distress (Australian Bureau of Statistics, 2006; Kessler et al., 2003; Stallman, 2010)

A more narrow study in Australia (Barney et al., 2006) surveyed individuals to determine their willingness to seek help from a variety of service providers. Participants reported that if they were to experience depressive symptoms, about 73 % would seek help from general practitioners (GPs), 50 % from counselors, 40 % from psychologists, 36 % from psychiatrists, and 37 % from Complementary and Alternative Medicine (CAM) professionals. While the authors reportedly did assess for stigma, they unfortunately did not report on the measure used for that assessment. In addition, the number of choices that study participants chose between was significantly smaller than found in a real-world environment.

In the United States, the U.S. Behavioral Risk Factor Surveillance System data indicated that 12.5 % of the population was either moderately or severely distressed and less than half of them are getting any kind of treatment (Dhingra et al., 2011). Corrigan

(2004) noted that individuals that have a high level of internalized stigma are likely to not seek help for mental health concerns in the first place. He estimated that 60-70% of those who are severely mentally ill are not getting treatment due to stigmatization (Corrigan, 2004).

Mills (2012) attempted to account for the treatment seeking disparity for mental health concerns between Whites, Hispanics, and Blacks. To do this, he categorized treatment choices into three different types – conventional care, psychotropic medication, and unconventional care. Unconventional care was further divided into parochial care and CAM. Parochial care was defined as "treatment that appeals to a specific religious group that is provided at no cost to the outside health delivery system." It was found that parochial care was more widely used by Hispanics and Blacks, but even including parochial care and CAM did not account for the differences in treatment-seeking behaviors between non-Hispanic Whites, Blacks, and Hispanics. (Mills, 2012, p. 142).

Complementary and alternative medicine (CAM) has been shown to account for a significant amount of treatment seeking behavior. Simon and colleagues (Simon et al., 2004) completed a study of 8933 visits to CAM providers. The providers included visits to acupuncturists, chiropractors, massage therapists, and naturopaths. Presenting complaints included anxiety, depression, psychotic symptoms, substance use disorders, sleep disturbances, situational adjustments and other concerns. Individuals who sought their services primarily for mental health concerns represented 10.7 % of the visits to acupuncturists, 0.3 % of the visits to chiropractors, 7.3 % of the visits to massage therapists, and 8.2 % of the visits to naturopaths. In addition, 22.9 % of visits to

acupuncturists, 1.2 % of visits to chiropractors, 15.8 % of all visits to massage therapists, and 17.7 % of all visits to naturopaths included mental health concerns as a secondary or lower reason for their visit. These data indicated that many individuals seek mental health services through a variety of CAM professionals (Simon et al., 2004).

The number of options available when a person wishes to treat their mental health symptoms is large. It includes a variety of sources including behavioral health professionals (counselors, social workers, psychologists), medical professionals (psychiatrists, general practice doctors, family doctors, nurses, physicians assistants), unlicensed helpers (friends, family, life-coaches, etc.), religious leaders (pastors, clerics, rabbis, medicine men, etc.), CAM professionals (chiropractors, naturopaths, massage therapists, etc.), and a variety of self-help/self-treatment modalities (prayer, self-help books, dietary supplements, meditation, yoga, internet sites, leaderless groups such as AA, etc.) (Angermeyer, Matschinger, & Riedel-Heller, 1999; Barnes, Bloom, & Nahin, 2008; Barnes, Powell-Griner, McFann, & Nahin, 2004; Farvolden, Denisoff, Selby, Bagby, & Rudy, 2005; Kaptchuk & Eisenberg, 2001a; Simon et al., 2004; Tippens, Marsman, & Zwickey, 2009). Kaptchuk and Eisenberg (2001b) organized the chaos by separating "unconventional healing practices" into two different groups – complementary and alternative medicine (CAM) and parochial medicine. In CAM they included the professional group (i.e., chiropractors, naturopaths, etc.), health reform (i.e., mega-vitamins, nutritional supplements, etc.), new age healing (i.e., crystals, spirits, magnets, etc.), mind-body (i.e., cognitive behavioral therapy, Deepak Chopra, guided imagery, etc.), and non-normative (i.e., scientific experiments, chelation, etc.).

They define parochial practices as ethno-medicine (Native American traditions, African-American rootwork, Hatian vodun, etc.), religious healing (i.e., Pentecostal churches), and folk medicine (i.e., copper bracelets for arthritis). In contrast to Mills (2012), there was no restriction that parochial services must be made at no cost to the recipient. For mental health concerns it makes sense that treatment by licensed professionals (minimally a form of supportive counseling) (D'Silva, Poscablo, Habousha, Kogan, & Kligler, 2012) would be considered convention treatment rather than CAM (Lake & Spiegel, 2007). In addition, to retain the spirit of Kaptchuk and Eisenberg, self-help treatment, or psychopharmaceuticals will also be considered to be conventional medical treatment (Den Boer, Wiersma, & Van den Bosch, 2004; Lake & Spiegel, 2007).

Purpose

The purpose of this study is to explore possible connections between juvenile victimization and internalized mental health stigma and treatment seeking behavior. This is done by assessing for psychological distress, various levels of mental health stigmatization, history of juvenile victimization experiences, and past and future treatment-seeking behaviors.

The following hypotheses are made:

1. JVE will be positively correlated with mental health stigma agreement and self-application, current and historical psychological distress, and a preference for past and future complementary and alternative medicine (CAM).

2. JVE will be negatively correlated with treatment-seeking from mental health professionals.
3. History of mental health treatment (therapy or medicine) will negatively correlate with internalized mental health stigmatization.
4. Mental health stigma will negatively correlate with planned use of medicine and planned use of therapy.
5. A higher number of types of juvenile victimization and internalized self-stigmatization will predict decreased planned treatment seeking and increased plans for future use of complementary and alternative medicine.
6. Participants reporting JVE and internalized self-stigmatization will report decreased planned treatment seeking.

Chapter 3: Methods

Participants

Male and female college students, aged 18 to 35, were recruited from the community and from a course designed to improve academic performance and increase college retention at a large southwestern United States research university. Student participants were eligible to win a $45 gift certificate from a local business with at least a 1 in 45 chance of winning. Some college students were also offered extra-credit for involvement in the survey, with alternative activities provided to the participants who choose not to participate in the research.

Measures and Procedure

The study was reviewed by the University's Institutional Review Board. Participants completed a web-based survey at a secure website. Participants provided written research consent and self-identified as being between ages 18 and 35. Study participants completed a demographics measure, the Self-Stigma of Mental Illness Scale (SSMIS) (Corrigan et al., 2006), the Kessler 10 (K10) measure of psychological distress (Furukawa, Kessler, Slade, & Andrews, 2003), the Juvenile Victimization Questionnaire (Finkelhor et al., 2011), and measures of past and future help-seeking behavior based on the work of Quinn, Kahng, and Crocker (2004). At the start and completion of the survey, individuals were given information about local counseling resources. At the completion of the survey, participants who wished to be entered into the drawing or have their names passed on to their instructor for extra credit were automatically transferred to a separate survey collection tool. This measure was established to collect contact information in a manner that would prevent any possibility that the student responses could be connected with any specific participant.

Measures

Demographics

The demographic questionnaire included the following elements: age, gender, race or ethnicity, parents' education level, and high school and college GPA.

Stigma

To evaluate the Corrigan-Watson-Barr Model of Internalized Self-stigmatization, the study participants completed the four scales (40 items total) of the Self-Stigma of Mental Illness Scale (SSMIS) (Corrigan et al., 2006; Watson et al., 2007). The instrument scales assess three components of mental health stigmatization: stereotype awareness ("I think the public believes most persons with mental illness cannot be trusted."), stereotype agreement ("I think most persons with mental illness cannot be trusted."), and self-concurrence ("Because I have a mental illness, I am unable to take care of myself."). The subscales show good to acceptable internal consistency with Cronbach's alphas of 0.89, 0.80, and 0.72 for the Stereotype Awareness, Stereotype Agreement, and Stereotype Self-Application subscales respectively (Corrigan et al., 2006). Content validity was developed through focus groups of individuals with severe mental illness (Corrigan et al., 2006). Construct validity has also been established by showing that the self-esteem decrement was not better accounted for by depression and that self-efficacy decreased in those who had higher scores on the stereotype agreement and stereotype self-application subscales but not the stereotype awareness subscale (Corrigan et al., 2006; Watson et al., 2007). Study participants responded to items on a 9 point agreement scale (1 = strongly disagree, 9 = strongly agree). Each subscale had a total score made up of the

summation of the items on each subscale with higher scores indicating higher levels of that stigma subscale. These scales were modified slightly for the purposes of this study. First, the final item of each subscale was dropped leaving a total of 9 items. The final item asked about awareness, agreement or self-application of beliefs about individuals with mental illness being dangerous. This item was removed due to concerns about the inability to respond to individuals who endorse such a belief about themselves. Since this was constructed as a research measure, the significance of levels (low, medium or high) of stereotype, awareness, agreement, or self-stigmatization has not been established.

Help-Seeking

The measure of past and future help-seeking through conventional care (e.g., psychotropic medication through a general practitioner, or therapy by a licensed professional) was derived from previous work evaluating stereotype threat among college students (Quinn et al., 2004). This measure was extended by adding a question that asks about CAM use for mental health concerns. The categories in the question are based upon a systematic categorization of CAM (Kaptchuk & Eisenberg, 2001b). The National Health Interview Survey (NHIS) included a supplementary assessment of CAM use for the first time in the 2002 survey (Barnes et al., 2004).

The questions depart somewhat from how the NHIS currently defines CAM. Tippens and colleagues (2009) reported that a large number of individuals were reporting using prayer as a CAM treatment strategy. Tippens and colleagues expressed concern that including this form of CAM was leading to spurious statistics about rates of CAM usage (as compared with other types of CAM). They reported seeing

particularly significant differences in the area of usage of CAM for physical ailments (Tippens et al., 2009). As a result, they proposed not including it among CAM treatments. Other researchers have argued that prayer appears to be a coping strategy of particular importance for some individuals (Wachholtz & Sambamoorthi, 2011). In addition, prayer is a fundamental component of many religious traditions and is sometimes accompanied by a ritual (e.g., kneeling on a prayer rug among Muslims, lighting a candle among Roman Catholics or smudging among some Native American tribes). Due to the integral nature of this treatment strategy among religious traditions, it would be difficult to separate this activity from other religious activities that have been included. This has particular salience in the United States as during the period of 1983 to 2008 69 % of individuals surveyed reported they prayed at least several times a week (reported as a part of the completion of the General Social Survey (GSS)) (Chaves, 2011). As a result, prayer was included as a CAM treatment for the purposes of this study.

Current Psychological Distress

Psychological distress was measured using the Kessler 10 (K10) psychological distress instrument. It was developed to screen for generalized psychological distress in a population – specifically as a part of the National Health Interview Survey (Kessler et al., 2002). Briefly, it was created by pooling all the items from a number of existing assessments and narrowed down to 10 items based on factor loadings. The scale consists of 10 descriptors each rated on frequency of experience ranging between 1 (none of the time) and 5 (all of the time). The scale measures the level of psychological

distress ranging from 10 (little or no distress) to 50 (significant distress) (Andrews & Slade, 2007).

Factor analytics studies initially suggested there was a single (monolithic) factor that described the scale (Kessler et al., 2002). The factorial structure was found to consist of four primary level factors (Nervousness, Negative Affect, Fatigue, and Agitation) and two second order factor solutions (depression and anxiety) in a community clinical sample (Brooks, Beard, & Steel, 2006). An earlier analysis found a single factor solution to be parsimonious (Kessler et al., 2002). A second attempt found an undefined multiple factor solution and added the critique that this scale might only measure depression and anxiety and not general psychological distress since all of the items focus on depression or anxiety (Berle et al., 2010). Sunderland, Mahoney, and Andrews (2012) completed a comparison of clinical and general population samples. They confirmed both findings noting that the unidimensional factor fit the general population and the two dimensional factor of depression and anxiety fit the clinical population (Sunderland et al., 2012).

In an Australian University population, the K10 was found to adequately identify distressed students (Stallman, 2010) and found to be useful as a depression screener in a Canadian population (Cairney, Veldhuizen, Wade, Kurdyak, & Streiner, 2007). Use of the K10 allows comparison with both the previously mentioned Australian university student psychological distress and help-seeking survey (Stallman, 2010). A shorter version is now used as a part of the National Health Interview Survey in the United States. Briefly, 4 of the items are dropped and to form the Kessler 6 (K6)

(Bratter & Eschbach, 2005). Thus, direct comparisons to existing population surveys can be made using a single measure.

In an Australian sample, the severity of distress was investigated (Andrews & Slade, 2007). It was found that 80 % of the population scored below 20 indicating no psychological distress; 7.2 % of the population scored between 20 and 24 and 35.7 % of those met criteria for a current mental illness; 2.7 % of the population scored between 25 and 29 with 58.9 % met criteria for a current mental illness; 1.3 % of the population scored between 30 and 34 with 76.3 % meeting criteria for a current mental illness; 0.5 % of the population scored between 35 and 39 with 84 % meeting criteria for a current mental illness; and 0.4 % of the population scored between 40 and 50 with 87.5 % meeting criteria for a current mental illness.

As noted above, Kessler 6 (K6) measure of psychological distress is a simplification of the K10 with 4 items removed (Kessler et al., 2002). The K6 has been shown to have good concurrent validity with blinded clinical diagnoses (Kessler et al., 2002, 2003). Based upon this, it has been used for representative samples of nearly 500,000 people each year (Kessler et al., 2010). The K6 has been shown to have little bias with regard to sex and education (Baillie, 2005). The ability of the measure to assess for severe mental illness (SMI) is also relatively stable across nationalities as well (Kessler et al., 2010). It has also been shown to be unidimensional across time and gender. The measure was found to not be tau-equivalent, meaning the relationships between items vary (Yen, 1983). However, since the correlations between weighted and unweighted scores are at the .95 level the use of weighted scores is not needed (Drapeau et al., 2010). It was also found that using mental health treatment need and

utilization as the concurrent measure resulted in good predictive validity for moderate mental distress as well. Using receiver operator characteristic curve analysis resulted in an overall sample sensitivity of 0.76, specificity of 0.75, and total classification accuracy of 0.74 with an area under the curve of 0.82 in a sample of 50,880 for scores greater than 5 and less than 13 on a 0 to 24 scale (Prochaska, Sung, Max, Shi, & Ong, 2012). Others have found it useful to stratify scores on the basis of range. One such system (Wang et al., 2007) used the 0-4 scoring system and found that individuals scoring between 0 to 7 were unlikely to have any mental illness, those scoring 8 to 12 had probable mild to moderate mental illness, and those scoring 13 and above likely were experiencing severe mental illness in the past 30 days. It is important to note the two systems rating psychological distress were not conormed. As a result, they may differ in how they describe the mental health of the participants.

Juvenile Victimization Questionnaire (JVQ)

The Juvenile Victimization Questionnaire (Finkelhor et al., 2011; Hamby et al., 2004) was developed to provide more comprehensive information about the nature of childhood victimization. It has been used extensively to gather information about exposure of children and adolescents to victimizing experiences in childhood. It was designed to be a more comprehensive method of assessing victimization. It can be administered to caregivers, children age eight and above, and to adults using a retrospective model. The revised form is the one used for the National Survey of Children's Exposure to Violence. The two forms are similar enough that the validity and reliability measures are considered to be identical (Finkelhor et al., 2011). It consists of 5 modules – Conventional Crime, Child Maltreatment, Peer and Sibling

Victimization, Sexual Assault, and Witnessing and Indirect Victimization – measuring the five general areas of victimization. These relate to many of the categories used by law enforcement (Finkelhor, Hamby, et al., 2005). The adult form of the questionnaire asks if victimization experiences occurred during the individual's childhood (ages 0 through 17).

The JVQ response rates were high even though participants were allowed to decline to answer any items. Only 16 refusals were given, a rate of .02 % across 69,020 responses. An average number of 2.63 victimization experiences were identified per participant. As the events that are being queried are often not reported to law enforcement, it is difficult to determine if they are consistent with external information – peer victimization (bullying) is an example of this (Finkelhor, Hamby, et al., 2005). The pattern of responses was as expected across developmental ages with no discontinuities. Parent reports of JVE were very similar to child reports of JVE for 8-9 year olds and 10-11 year olds. The only statistically significant differences were between parent reports and child reports of peer and sibling victimization and peer and sibling assault. Kappas for the self-report form were adequate (in the 0.5 range) and internal consistency reliability was acceptable as well (Cronbach's $\alpha = .80$). It was hypothesized that the test-retest reliability may have suffered as the participants were more aware on the second time that they would be asked follow-up questions on retest. In addition, there were expected statistically significant relationships between victimization experiences and PTSD bolstering the external validity (Finkelhor, Hamby, et al., 2005). It was also found that item endorsement resulted in a pattern of endorsement that is similar to the results found when using the original interview form

and is a better predictor of trauma symptoms (Finkelhor, Ormrod, Turner, & Hamby, 2005).

Design and Analyses

In order to address the hypotheses proposed, several analyses were completed. The proposed analyses will first be estimated using G Power 3 power analysis software (Faul, Erdfelder, Lang, & Buchner, 2007). Cohen (1992) noted that a power level of .80 is desirable for most situations. In the same article, Cohen noted that among effect sizes, his "intent was that medium ES represents an effect likely to be visible to the naked eye of a careful observer," and that it "approximates the average size of observed effects in various fields" (Cohen, 1992, p. 156). As a result, for hypotheses for which there are no available effect sizes, a medium effect size is hypothesized (this will be used throughout unless otherwise noted).

Hypothesis One

Participants' number of Juvenile Victimization Experience categories ("JVE") will not be correlated with self-reported high school ("HSGPA") or self-reported college ("CGPA") grade point averages. JVE will be positively correlated with mental health stigma agreement and self-application, psychological distress ("DISTRESS"), preference for past and future complementary and alternative medicine ("CAM"), and history of previous psychological distress ("HIS_DISTRESS"). JVE will be negatively correlated with treatment-seeking from mental health professionals. History of mental health treatment (therapy or medicine) will negatively correlate with internalized mental health stigmatization. Mental health stigma will negatively correlate with planned use of medicine and planned use of therapy. It is hypothesized that these are all directional

correlations so a one-tailed test was used. Also using the exact calculation and assuming a medium correlation of .3, G-Power reported that a sample size of 67 is required. This should be similar for other directional correlations.

Hypothesis Two

It is hypothesized that a model including the number of juvenile victimization categories ("JVE"), history of treatment with either conventional or CAM ("HIS_TREAT" and "HIS_CAM"), stereotype agreement ("AGREE"), stereotype self-application ("APPLY"), and history of previous psychological distress ("HIS_DISTRESS") and demographic factors (age, ethnicity and gender) will predict participants' current level of psychological distress ("K10"). This hypothesis will be evaluated using a linear regression analysis with history of previous psychological distress and demographic factors (age, gender, and ethnicity) entered first. The remaining variables will be entered stepwise. Current level of psychological distress will be the criterion variable.

Current Distress ("K10") ← b0 + b1("HIS_DISTRESS") + b2(age) + b3(gender) + b4(ethnicity) + b5("JVE") + b6("HIS_TREAT") + b7("AGREE") + b8("APPLY")

Hypothesis Three

It is hypothesized that a model including juvenile victimization ("JVE"), history of therapy ("HIS_THER"), stereotype agreement ("AGREE"), stereotype self-application ("APPLY"), demographic factors (age, gender, ethnicity), and history of previous psychological distress("HIS_DISTRESS") will predict future treatment planning.

Planned Treatment ("PLAN_TREAT") ← b0 + b1("JVE") + b2("HIS_TREAT") + b3("HIS_CAM") + b4("AGREE") +b5("APPLY") + b6("HIS_DISTRESS") + b7(age) + b8(gender) + b9(ethnicity)

Hypothesis Four

It is hypothesized that a model including juvenile victimization ("JVE"), history of conventional treatment ("HIS_TREAT"), stereotype agreement ("AGREE"), stereotype self-application ("APPLY"), demographic factors (age, gender, ethnicity), and history of previous psychological distress("HIS_DISTRESS") will predict plans for future use of CAM.

Planned CAM ("PLAN_CAM") ← b0 + b1("JVE") + b2("HIS_TREAT") +b3("HIS_CAM") + b4("AGREE") + b5("APPLY") + b6("HIS_DISTRESS") + b7(age) + b8(gender) + b9(ethnicity)

Hypothesis Five

It is hypothesized that, for those who have experienced psychological distress in the past, a model including juvenile victimization ("JVE"), stereotype agreement ("AGREE"), stereotype self-application ("APPLY") and demographic factors (gender and ethnicity) will predict previous use of CAM or a history of treatment.

Previous use of CAM ("HIS_CAM") ← b0 + b1("JVE") + b4("AGREE") + b5("APPLY") + b6("HIS_DISTRESS") + b7(gender) + b8(ethnicity)

Previous conventional treatment ("HIS_TREAT") ← b0 + b1("JVE") + b4("AGREE") + b5("APPLY") + b6("HIS_DISTRESS") + b7(gender) + b8(ethnicity)

Chapter 4: Results

Demographics

Demographic information was gathered from the participants using a 12-item questionnaire that the participants completed after consenting to participate in the study. Descriptive statistics were used to analyze the demographic information. Participants were invited by advertising via email to a community sample and by recruiting from students that were completing a remedial class on college study and life skills. A total of 281 individuals completed some part of the research measures. Multiple individuals completed only a small portion of the survey. Data from these participants were removed. Only data for individuals who had completed the majority of the survey were kept. This left a final number of 260 participants. The 21 participants that were removed did not appear to be significantly different from other participants.

The 260 participants ranged in age from 18.58 to 35.93 (M = 21.31, SD = 4.51). Participants were slightly more likely to be female (N = 147, 56.5 %) and single (N = 213, 81.9 %). The majority of the participants, N = 196, identified themselves as White/Caucasian (75.4 %). Others identified themselves as African-American, N = 21 (8.1 %); Hispanic, Latina, or Latino, N = 29 (11.2 %), Asian, N = 18 (6.9 %); Native American or Alaskan Native, N = 23 (8.8 %), or Other, N = 9 (0.03 %). These numbers exceed 100 % because participants were allowed to endorse multiple races or ethnicities. The majority of participants endorsed a single ethnicity (N = 231, 88.8 %). An additional 24 participants (9.2 %) endorsed 2 ethnicities, four participants endorsed three races or ethnicities, and one person endorsed five ethnicities. Table 1 provides detailed demographic information.

The participants' parents had varying levels of education: 12 (4.6 %) had mothers who did not attend high school, 5 (1.9 %) participants had mothers who completed some high school, 47 (18.1 %) had mothers who were high school graduates, 73 (28.1 %) had completed some college or technical school, 80 (30.8 %) had mothers who completed a four-year degree, and 43 (16.5 %) had mothers who had completed a master's degree or above. The participants' fathers were equally varied in their education: 11 (4.2 %) did not attend high school, 12 (4.6 %) had completed some high school, 46 (17.7 %) had completed high school, 63 had completed some college or technical school, 71 (27.3 %) had completed a four-year college degree, and 57 (21.9 %) had completed a master's degree or above. Participants were generally more educated than their parents as 78 (30 %) of participants reported they had a GED or high school diploma, 140 (53.8 %) reported they had completed some college or technical school, 21 (8.1 %) reported they were four-year college graduates, and 21 (8.1 %) reported they had completed a master's degree or above.

Participants' average performance was stronger in high school than it was in college. Participants reported high school grade point averages (GPAs) that ranged from 0.90 to 4.00 with a mean high school GPA of 3.45 (*SD* = 0.40). College GPAs ranged from 0.14 to 4.00 with a mean of 2.34 (SD = 0.88). This also means the participants' performances were more variable in college than they were in high school.

A significant portion of the population surveyed (123 or 47.3 %) reported they had experienced psychological distress in the past. Of the 47.3 % of the participants who reported they had experienced psychological problems that "significantly affected their life," 77.23 % (36.5 % of the overall population) reported use of CAM mental

health treatment and 47.98 % of those distressed (22.7 % of the overall population) reported use of conventional treatment. More significantly, of those who experienced distress, 32.5 % (15 % of the total sample) reported historical use of integrated care to deal with their psychological distress (both CAM and conventional treatment). The remaining 13 % of the population reported they experienced psychological problems that "significantly affected their life" and yet chose not to seek conventional, CAM, or integrated treatment. They may have used the technique that one participant stated, "just deal with it, really." Conversely, 8 participants (about 3 % of the total sample) denied having any serious psychological distress and reported having sought out psychological treatment.

Regarding current levels of psychological distress, participants' K10 scores ranged from 10 to 49 (nearly the full range of scoring) with an average K10 score of 20.67 (*SD* = 7.33). This score corresponds to the average person likely to have a mild disorder. The standard deviation would indicate a large amount of variability. There were 256 participants who completed the entire K10. Rating along the previously established ranges: 134 participants (52.3 %) scored between 10 and 19 indicating they are likely to be well, 21.1 % scored between 20 and 24 indicating they are likely to have a mild disorder, 14.5 % scored between 25 and 29 indicating they are likely to have a moderate disorder, 31 participants (12.1 %) scored between 30 and 50 indicating they are likely to have a severe disorder (Department of Health, State Government of Victoria, Australia, n.d.). By these calculations, 47.7 percent of the population has some kind of psychological disorder (between mild and severe; a rate consistent with the rate of previous psychological distress).

As previously noted, the K6 score is generated from a subset of the K10 items. The K6 is used within the United States to survey mental health (e.g., the National Health Interview Survey (NHIS) (Bratter & Eschbach, 2005; Lethbridge-Cejku, Schiller, & Bernadel, 2004; Pleis, Lucas, & Ward, 2009; Pratt, Dey, & Cohen, 2007)). Participants endorsed K6 scores that ranged from 0 to 23 (nearly the full range) with an average K6 score of 5.94 and a standard deviation of 4.59. Rated according to the previously established K6 categories, 192 participants (74.41 %) scored between 0 and 8 which is consistent with being unlikely to have a mental illness, 45 participants (19.3 %) scored between 9 and 12 which is consistent with mild to moderate psychological distress, and 21 participants (10.9 %) scored between 13 and 24 which is consistent with severe mental illness (Wang et al., 2007). Based upon these results, 30.2 % of the population has some kind of mental illness (mild to severe range).

Regarding the experiences of juvenile victimization, participants had a wide variety of experiences. Participants endorsed an average of 7.74 items (SD = 5.45). Dividing these experiences into categories, participants reported having the full range of categories (0 to 5 out of 5 possible categories). The average number of juvenile victimization experiences was 3 (M = 3.05, SD = 1.48). Out of 260 participants who completed the JVQ portion of the survey, 243 reported at least one form of victimization (93.5 %). Result listed numerically were: 6.5 % reported no categories of JVE, 11.9 % reported one category of JVE, 14.2 % reported two categories of JVE, 22.7 % reported three categories of JVE, 26.5 % reported four categories of JVE, and 18.1 % reported having 5 categories of JVE. The survey did not ask the number of times any of the events occurred. Looking at individual item endorsement, participants reported

having experienced nearly 8 JVE items each (*M* = 7.74, *SD* = 5.408). The category with the highest number of reported JVE was experiences of crime with 83.1 % reporting having experienced some non-violent criminal act. The mean number of types of crime reported was nearly three (*M* = 2.82, *SD* = 2.19). A full 34.2 % reported having experienced some kind of maltreatment – with an average of more than one for every two people (*M* = 0.55, *SD* = 0.87). Nearly a quarter of participants reported experiencing physical abuse with an average of nearly 2 experiences per person (*M* = 1.71, *SD* = 1.46). A much smaller number of participants reported sexual victimization – 45 % (*M* = 0.98, *SD* = 1.45). A total of 69.2 % reported witnessing JVE (*M* = 1.68, *SD* = 1.55). A caveat of these statistics is that no effort was made to determine whether the endorsed items related to a single victimization episode, a few episodes or many JVE episodes.

When asked if they had received mental health treatment in the past, 22.7 % reported having received some type of mental health treatment (5.8 % therapy only, 5.8 % medication only, and 11.2 % counseling and medication). When asked how they had dealt with psychological distress in the past, 38.5 % spoke with a friend or family member, 20.4 % consulted self-help materials, 8.8 % consulted alternative medical professionals, 11.2 % focused on health improvement, 0.8 % used New Age healing systems, 18.1 % used religious or spiritual supports, 28.1 % used physical activity, 19.6 % used prayer for relief, and 7.7 % reported other which included either no help or some type of mental health treatment (e.g., therapy and\or psychotropic medications).

When questioned about how they planned to deal with psychological distress in the future, 27.3 % of participants reported they would not seek treatment while 72.3 %

reported they would seek treatment if they experienced serious psychological distress. In the overall sample, 5.4 % reported they would not seek treatment, 7.3 % reported they would seek conventional medicine only, 22.3 % reported they would seek CAM only, and 65.0 % reported they would make use of integrated (CAM and conventional) treatment. Of those who reported they would seek conventional treatment (either with or without CAM), 32.7 % reported they would seek counseling only, 3.8 % reported they would seek medication only, and 36.2 % reported they would seek both medication and therapy. Furthermore, 88.8 % reported they would talk to a friend or family member, 43.8 % reported they would use self-help materials, 27.7 % reported they would visit an alternative medicine provider, 44.2 % reported they would use health improvement, 5.0 % reported they would use New Age healing, 42.7 % reported they would use religious supports, 69.6 % reported they would use physical activity, 47.3 % reported they would use prayer for relief, and 3.1 % answered "other" which included the following responses: religious supports and prayer, sleep, playing video games or reading, and four responses indicated "none."

As noted previously, this study included prayer as a part of CAM. The results of the study indicated very little difference in either historical use of CAM both with and without prayer ($r = .959$, $p < .001$). Planned future use of CAM with and without prayer were also highly correlated, though at a slightly lower level ($r = .833$, $p < .001$).

Hypothesis One

The first hypothesis predicted a series of single tailed correlations. Due to the nature of the data collection, the results were analyzed in two groups – items that might be correlated across all participants and items that would only be available for

participants with a history of psychological distress. The results of the Pearson's correlation analysis for all participants are displayed in Table 2. As this is a case of multiple comparisons, there is a need to control for Type I error. There are several methods of controlling for the risk of a Type 1 error when conducting multiple comparisons. The simplest and most conservative method is the Bonferroni correction wherein the α-value (in this case $p < .05$) is divided by the number of comparisons made (Dunn, 1961). Since there are 10 items being compared with each other, the number of unique comparisons is $n * (n - 1) / 2 = (10*9) / 2 = 45$ (Tabachnick & Fidell, 2000). The adjusted alpha value is then .05 / 45 = .001. This analysis results in six significant correlations – five positive correlations and one negative correlation. The positive correlations were: K10 score (psychological distress) and the number of categories of JVE ($r = .25$, $p < .001$); high school GPA and college GPA ($r = .32$, $p < .001$); stereotype awareness and stereotype agreement ($r = .47$, $p < .001$); stereotype awareness and self-application ($r = .24$, $p < .001$); and stereotype agreement and stereotype self-application ($r = .39$, $p < .001$). The sole significant negative correlation was between prior conventional mental health treatment and stereotype self-application ($r = -.19$, $p < .001$). As predicted, there was not a statistically significant correlation between the number of categories of JVE and either high school GPA ($r = .017$, $p = .394$) or college GPA ($r = -.160$, $p = .018$).

The second analysis was completed similarly but it included only those individuals reporting previous psychological distress. The items included in the correlation were Kessler 10 score, number of categories of JVE, high school GPA, college GPA, history of conventional treatment, awareness of mental health stereotypes,

agreement with mental health stereotypes, application of mental health stereotypes to oneself, planned conventional treatment for distress, and planned CAM treatment for distress. This time there were 11 items being considered so the Bonferroni correction resulted in a minimum significance value of $p < .0009$. This resulted in four statistically significant correlations – all positive. The four significant correlations are: between high school GPA and college GPA ($r = .296$, $p < .001$), between stereotype awareness and stereotype agreement ($r = .402$, $p < .001$), between stereotype agreement and stereotype self-application ($r = .404$, $p < .001$), between history of conventional treatment and planned treatment ($r = .379$, $p < .001$), and finally between history of previous conventional treatment and college GPA ($r = .379$, $p < .001$).

Stigma Awareness, Agreement, and Self-Application

In the study, the model tested was that stigma awareness for some individuals leads to stigma agreement and then stigma self-application. The correlations for individuals with prior psychological distress and individuals without psychological distress were very strong. The relationship between stereotype awareness and stereotype agreement was $r = .468$ (one-tailed, $p < .001$) for the overall sample and $r = .402$ (one-tailed, $p < .001$) for the subset with previous psychological distress. The relationship between stereotype agreement and stereotype self-application was $r = .385$ (one-tailed, $p < .001$) for the overall sample and $r = .404$ (one-tailed, $p < .001$) for the subset with previous psychological distress. Finally, the relationship between stereotype awareness and stereotype self-application is not as strong either for the overall sample $r = .235$ (one-tailed, $p < .001$) or the sample with previous psychological distress $r = .112$ (one-tailed, $p = .109$).

Attitudes toward mental illness stereotypes in the study ranged from neutral to moderately negative. Awareness of mental illness stereotypes averaged 42.74 (*SD* = 17.82) or 4.75 on the overall scale (equivalent to just barely disagreeing with the statements). Agreement with the stereotypes fell at 30.97 (*SD* = 13.27) or 3.44 on the scale (moderately disagreeing). Finally, self-application of stereotypes averaged 26.02 (*SD* = 15.05) or 2.89 (slightly stronger disagreement) on the scale.

Hypothesis Two

A linear regression analysis was conducted with history of previous psychological distress, demographic factors (age, gender, ethnicity), number of categories of juvenile victimization experiences, history of previous treatment (either conventional or CAM), stereotype agreement, and stereotype self-application as predictors. Current level of psychological distress was the criterion variable. Previous research indicates that the best predictor of future psychological distress is previous psychological distress, so this variable and the demographic factors were entered first. The remaining variables were then entered and removed stepwise with a probability of F to enter of $\leq .05$ and a probability of F to remove of $\geq .100$. These are the same settings used for all other linear regressions as well. The total model resulted in a significant prediction of current psychological distress, $R^2 = 0.228$, adjusted $R^2 = .210$ $F(6, 249) = 12.277$, $p < 0.001$. Standardized Beta weights for the model were as follows: $\beta = 0.357$ for previous psychological distress, $\beta = -.185$ for age, $\beta = -.128$ for gender (coded 0 for female, 1 for male), $\beta = -.065$ for race (coded 0 for non-white, 1 for white), $\beta = .150$ for the number of categories of juvenile victimization experiences, and $\beta = .138$ for stereotype self-application. This hypothesis was not completely supported

as stereotype agreement, and previous treatment (conventional or CAM) were not a significant predictors of current distress.

Hypothesis Three

A second linear regression analysis was conducted with number of categories of juvenile victimization experiences, history of previous mental health treatment, and stereotype agreement, stereotype self-application, history of previous psychological distress and demographic variables (age, ethnicity, gender) as predictors. Future plans to use conventional mental health services was the criterion variable. Again, as prior behavior is the best predictor of future behavior, previous mental health treatment (CAM and conventional) and demographic variables were entered first and the other variables where then allowed to enter in a stepwise fashion as well as all variables were allowed to exit stepwise. This is similar to the previous analysis.

The total model resulted in a significant prediction of future plans to use mental health services (R^2 = 0.088, adjusted R^2 = 0.074, $F(4, 254) = 6.17$, $p < .001$). Standardized Beta weights were $\beta = .174$ for age, $\beta = -.164$ for gender, $\beta = .150$ for ethnicity and $\beta = -.053$ for previous CAM mental health treatment. The hypothesis was not completely supported since stereotype agreement, stereotype self-application, previous conventional mental health treatment, previous psychological distress and number of categories of JVE did not contribute to the quality of the model. This generally means that individuals who are older, female, white, and had not previously used CAM were more likely to use conventional mental health services.

Hypothesis Four

It is hypothesized that a model including juvenile victimization ("JVE"), history of conventional treatment ("HIS_TREAT"), stereotype agreement ("AGREE"), stereotype self-application ("APPLY"), demographic factors (age, gender, ethnicity), and history of previous psychological distress ("HIS_DISTRESS") will predict plans for future use of CAM.

Another linear regression analysis was conducted with number of categories of juvenile victimization experiences, history of previous mental health treatment, stereotype agreement, stereotype self-application, history of previous psychological distress and demographic variables (age, ethnicity, gender) as predictors. Future plans to use CAM mental health services was the criterion variable. Again, as prior behavior is the best predictor of future behavior, previous CAM mental health treatment and demographic variables were entered first and the other variables where allowed to enter in a stepwise fashion and all variables were allowed to exit stepwise as previously described.

The total model represented a significant prediction of future CAM mental health treatment (R^2 = .312, adjusted R^2 = .298, $F(5, 253) = 22.926$, $p < 0.001$). Standardized Beta weights were β = .074 for age, β = -.092 for gender, β = .176 for ethnicity, β = .797 for past CAM use and β = -.818 for experiencing previous psychological problems. The model was only partially supported as stigma awareness, stigma self-application, prior conventional mental health treatment and the number of categories of JVE were excluded from the model. Results indicated individuals who

were older, female, white, and had prior use of CAM were most likely to predict future use of CAM services.

Hypothesis Five

It was hypothesized that, for those who have experienced psychological distress in the past, a model including juvenile victimization ("JVE"), stereotype agreement ("AGREE"), stereotype self-application ("APPLY") and demographic factors (gender and ethnicity) will predict previous use of CAM or a history of treatment.

The model for use of CAM was significant even though it only predicted a small effect size (R^2 = .089, adjusted R^2 = .059, F(3,119) = 3.540, p = .017). In addition, the model was only partially supported as it did not include either stereotype awareness or stereotype self-application. Compared to the other models, both standardized Beta weights were β = -.096 for gender, β = .103 for ethnicity, and β = .243 for the number of categories of JVE. This indicates that individuals who were female, white and had a larger number of categories of JVE resulted in a greater likelihood of using CAM.

Similarly, it was hypothesized that, for those who had experienced psychological distress in the past, a model including juvenile victimization ("JVE"), stereotype agreement ("AGREE"), stereotype self-application ("APPLY") and demographic factors (gender and ethnicity) will predict historical use of conventional treatment.

The model for the use of conventional treatment was also only partially supported. The model accounted for only a small part of the overall variance (R^2 = .140, adjusted R^2= .118, F(3, 118) = 6.407, p < .001). The standardized beta weights were as follows: for gender β = -.191, for ethnicity β = .211, and for agreement with stereotypes

β = -.208. This means individuals who are female, white, and who had less agreement with the stereotypes are more likely to have sought treatment in the past. In conflict with the hypothesis, JVE did not significantly contribute to the model.

Chapter 5: Discussion

Broadly speaking, this study was aimed at trying to understand the extent to which factors such as juvenile victimization experiences, and mental health stigma influence an individual's treatment-seeking behavior. It has been suggested that mental illness is a substantial burden both globally and within the United States. In their lifetimes, about 46.4 % of US residents will experience some kind of mental illness and with the rates for particular diagnoses ranging between 28.8 % for anxiety disorders and 14.6 % for substance use disorders (Kessler et al., 2005). The cost of depression alone is estimated to be in excess of 52.9 billion dollars (Greenberg et al., 2003). It is also known that individuals with higher rates of child maltreatment also have higher rates of mental illness as adults (Chapman et al., 2004; Edwards et al., 2003). The study proposed that child maltreatment predisposes individuals to experience psychological distress, agree with negative stereotypes, apply those stereotypes to themselves, avoid conventional treatment, and seek out complementary and alternative mental health treatment instead.

Participants

Rates of Juvenile Victimization Experiences

Participants experienced a greater rate of juvenile victimization experiences than was expected. A nationwide survey using a random dialing technique found that 71 % of those contacted had experienced at least one victimization experience (Finkelhor, Ormrod, et al., 2005). As noted previously, 96 % of those responding in this survey reported having a juvenile victimization experience. In addition, the mean number of victimization experience items endorsed were 4.5 in that sample and 3.1 in this sample (SD = 1.48). There are several other factors that make it difficult to directly compare the

results. First, the mean age is substantially different as Finkelhor and colleagues had a sample with a mean age of 11.4 years, while this data looks at lifetime experiences. Evidence from a larger sample completed by the same group indicated 76 percent of individuals experienced some kind of JVE (Finkelhor, Ormrod, et al., 2005). It is known that Oklahoma is more violent than many other places in the United States ("State rankings of the violent crime rate.," n.d.). However, a number of the participants may not be from Oklahoma originally. While data was not available for students on probation, the data for the freshman class as a whole was available. During the Fall 2012 school year, there were 2445 (58.09 %) Oklahoma residents, 1539 (37.19 %) from elsewhere in the United States, and 154 (3.72 %) international students for a total Freshman class of 4138 (University of Oklahoma Institutional Research and Reporting, 2013).

The rates of experiencing traumatic events can also be compared with some of the rates found in other contexts. Frazier and colleagues (Frazier et al., 2009) used a different inventory of traumatic events. They reported that 85 % of participants endorsed having experienced one or more traumatic events. They also indicated an overall rate of 2.79 traumatic events among the college students surveyed. They used the Traumatic Lifetime Event Questionnaire (TLEQ) to assess for a number of traumatic and non-traumatic events. Their findings indicated women (M = 2.93, SD = 2.45) were more likely to experience traumatic events than men (M = 2.40, SD = 2.21), a difference that was significant ($p < 0.001$). Whites (M = 2.66, SD = 2.34) tended to experience fewer traumatic events than minorities (M = 3.29, SD = 2.79), a difference that was also significant. While direct comparisons are difficult given differences in the

survey construction, the participants endorsed having experienced a mean number of 7.74 items (*SD* = 5.448). While this appears to be much higher than what Frazier and colleagues found, it is important to note that Frazier's sample assessed for independent events while the current studies participants may have endorsed multiple items that referred to a single event.

In a broad sense, the rate of JVE causes some significant questions. The data here are consistent with previous studies – 75 to 100 % of individuals experience at least one JVE. As a result, it seems that being "victimized" seems to be a routine and normative aspect of childhood. Work by Finkelhor, Ormrod and Turner (2009) indicated the number of events experienced increases with age. They argued that as the number of victimization events increase, the load results in psychological distress for the adult. These data do not support their suggestions. Instead these data suggest that the psychological effects of maltreatment cannot be accounted for by counting maltreatment events.

If the count of maltreatment events (polyvictimization) is not sufficient to explain psychological distress what is? I would argue that there is an appraisal component that must also be considered. Cognitive therapy has long suggested the way we think about things has implications for how we emotionally respond to them. Viewed from this perspective, the story that we tell about instances of maltreatment are likely to be more significant than the number of times the negative events have occurred. Incorporating appraisal of the events seems to offer a method of explaining why some individuals with a single instance of maltreatment will experience a lifetime

of distress while other individuals have a childhood filled with maltreatment and go on to experience a lifetime relatively free from distress.

Another area of concern is the implications that framing these experiences as Juvenile Victimization events. A "Juvenile Victimization Questionnaire" is expected to measure the number of times a person has been "victimized." This sets up a disconcerting cognitive frame that suggests individuals who do not look back on these events as instances of victimization are behaving inconsistently with what the psychological experts have previously discovered. The measure appears to cast a negative valence on experiences that are often considered a normative aspect of development (e.g., being hit by a sibling).

Grade Point Average

As noted previously, the participants for this study included college-aged individuals (18 to 35). The mean college GPA of 2.34 is a relatively low GPA, roughly corresponding to a grade of a "C." Previous research has found that anhedonia symptoms in particular strongly influenced GPA and completion of college credit hours (Eisenberg, Golberstein, & Hunt, 2009). No attempt was made to determine the number of credit hours attempted or completed by students in this sample. For this data, the correlation between psychological distress and college GPA had a relatively low probability ($p = .0034$) but was still not significant. As a result, it is believed that the results in this study are consistent with the negative correlations previously found.

Complementary and Alternative Medicine Use

The National Health Interview Survey assesses use of CAM every five years (Barnes et al., 2008). In 2007, the most recent time for which data is available, the

overall rate of CAM use was 16.4 % among adolescents aged 12-17 (the approximate age of the youngest participants in this study in 2007). In another study, 45% of children surveyed had an emotional, mental health, or behavioral condition and 12.5 % of those used CAM (Bethell, C et al., 2013). Overall use of CAM by adults was at 38.3 % and was according to the NHIS (Barnes et al., 2008). The rates noted above of planned use of some kind of CAM are well beyond the rates of actual use. Reported historical use of CAM is also slightly elevated but it may be due to a generally higher educational level – a correlate of high rates of CAM use (Barnes et al., 2008; Bethell, C et al., 2013).

Rates of Mental Illness

Rates of severe mental illness ranged between 10.9 % and 12.1 %. Rates of severe mental illness in all of Oklahoma are 5.04 % (95% CI 4.00 – 6.34) (Substance Abuse and Mental Health Services Administration, 2011). The rates in the survey are nearly twice those found in the state as a whole. Looking at rates of mental illness more broadly, the rate for any psychological disorder is 20.51% (95% CI 17.92 to 23.36) (Substance Abuse and Mental Health Services Administration, 2011). That is compared with rates between 30.2 % and 47.7 % found in this survey. At these rates, the rates found in this study are .5 to 2 times higher than those found in the state more broadly. These results seem even in excess of what was expected for this population of individuals. They validate previous concerns about the psychological health of individuals who are on academic probation (Eisenberg et al., 2009).

Hypotheses

Hypothesis 1

A series of hypotheses were made about correlations between variables. The first was there would not be a correlation between the number of categories of JVE and high school or college GPA. This hypothesis was supported. It appears while there are a number of correlations with JVE there is simply no evidence for a connection with high school or college GPA.

The second part of Hypothesis 1 was that JVE would be positively correlated with mental health stigma agreement and self-application. The data indicate no correlation between JVE and mental health stigmatization. There is not any known research that can be referred to account for these findings. One possibility is that the measure of mental health stigma is simply too overt for the population being studied. The SSMIS was originally developed from focus group discussions of stigmatization experienced by individuals with schizophrenia and other severe mental illnesses (Corrigan et al., 2006). As a result, it is possible that the types of attitudes that the measure assesses for are less frequently endorsed. As a result, this measure may be too face-valid to pick up on the types of mental health stigma that would likely be endorsed by individuals with this level of education. This view is consistent with the findings of previous research such as that done by Livingston and Boyd (2010). Their systematic review of 127 studies found no relationship between education and stigma for 22 of the 27 studies that evaluated those variables. Among the remaining 5 studies, 80 % found a negative relationship. The adaptive functioning of the individuals involved may play a role here as well. As the students were still in college, it is expected that they had a

relatively high level of adaptive functioning at the point when the study was completed. A second possibility is that there is simply no connection between JVE or that it only occurs in a small subset of the population. This cannot be ruled out in the current study.

The third part of Hypothesis 1 suggested that the number of categories of JVE will be positively correlated with preference for past and future plans for complementary and alternative medicine. This part of the hypothesis was not supported. Only individuals who reported previous psychological distress were asked about use of CAM. These data do not demonstrate a statistically significant correlation between the number of categories of JVE and previous use of CAM ($r = .252$, $p < .0024$). It is likely that a larger sample would have indicated a significant difference. Even in that case, the magnitude of the relationship is not large. This part of the hypothesis is rejected.

Among all participants, there is no evidence of a relationship of differences in planned use of CAM related to number of JVE. It is not clear why so many more individuals endorsed the use of CAM as a treatment for future psychological distress than reported previous use of CAM. One possibility is the issue of question interpretation. A known difficulty when doing research regarding self-report of socially desirable behaviors is that individuals are likely to report they engage in those behaviors. Sociologists find that individuals report much greater attendance of religious services on general surveys than they do when they are asked to complete an activity diary (Chaves, 2011). A parallel process may be at work here. Another possibility is some combination of the priming effect. Individuals may have been primed to consider CAM treatment strategies since they were presented to them as treatments for psychological distress. This may also play a role in the opposite direction when an

individual is depressed. It has been well-established that depressed individuals tend to have greater difficulty in generating solutions to the difficulties they are experiencing (Baas, De Dreu, & Nijstad, 2008).

The next hypothesis was that JVE would be negatively correlated with planned conventional mental health treatment. This hypothesis was not supported (r = .029, p = .319). The failure to disprove the null hypothesis in this case may again be related to the difference between planning and actual behavior.

The next hypothesis was that the history of conventional mental health treatment will negatively correlate with internalized mental health stigmatization. This hypothesis was supported, indicating that seeking treatment does tend to reduce the negative stereotypes one has about oneself and does not lead to iatrogenic stigmatization (Sartorius, 2002).

The final correlative hypothesis was that mental health stigmatization will negatively correlate with the planned use of conventional treatment. While this was not supported, the correlation is close to significant (r = -.147, p = .0089). As a result, there are indications that, given a larger sample size, this hypothesis would be supported.

One other interesting correlation that emerged was found among individuals who reported a history of previous psychological distress. It was found that those who experienced psychological distress and had conventional treatment were likely to have higher GPAs. This is an interesting corollary to research on the efficacy of treatment (e.g., (B. L. Duncan, 2010; Seligman, 1995)). Unfortunately, there is not sufficient information available within the study to eliminate potential confounds such as intelligence and socioeconomic status. This is consistent, however, with research

indicating that return to school following a medical withdrawal resulted in improved performance (Meilman, Manley, Gaylor, & Turco, 1992).

Stigmatization Awareness, Agreement and Self-Application

This model appears to be supported given the pattern of correlations. The level of agreement with the stereotypes is much lower than found among those with severe mental illness – especially for reports of society beliefs (Corrigan et al., 2011). The use of this measure with a general population sample instead of solely with individuals with severe mental illness may explain the difference.

Hypothesis Two

The linear regression identifying potential factors predicting current levels of psychological distress found that both the number of categories of JVE and negative self-stigmatization were significant predictors. This is consistent with previous research indicating that individuals who self-stigmatize are more likely to be depressed (Corrigan et al., 2006) and that JVE contributes to the psychological distress in the short term (Anda et al., 2006; Chapman et al., 2004; Edwards et al., 2003). Furthermore, it is also consistent with the role that ethnicity plays in psychological distress (in this case identifying as an ethnic minority) (Bratter & Eschbach, 2005).

Hypotheses Three & Four

These hypotheses suggested that future plans for the use of conventional or CAM mental health treatment could be predicted by evaluating past behavior and some general attitudes toward mental illness. In the first hypothesis, the use of conventional mental health treatment was not related to the attitudes toward mental illness. It was also not statistically related to the number of categories of JVE. This is a rather

profound blow to the broad applicability of the theory proposed in this paper – that is, individuals with higher rates of JVE (herein categories of JVE), are less likely to seek conventional mental health treatment due to mental illness stigma as it is applied here. The model predicting planned use of CAM does no additional favors to that theory. Instead it only serves to reinforce the lack of salience of stereotypes for those who are imagining a time they would need treatment in the future. Likewise, only previous use of CAM to treat prior distress and previous psychological distress predicts future use of CAM.

There are several possible solutions that might explain the discrepancy and preserve the theory. First, there may be a problem with the measure used to determine mental illness stigmatization. As noted earlier, the measures were developed for use among those with severe mental illness; only a small amount of the overall sample fits the range of severe mental illness (about 10.9 % to 12.1 % depending on the measure of psychological distress). It is possible that the model would be more successful among the severely mentally ill. It is also possible that the assessment is too obvious for use with a college-educated population. There is a high degree of face validity for the measure and none of the items are reverse coded. Finally, it is possible that the schema developed from JVE are personal in nature and are not associated with the development of mental illness stereotypes. Others (Cámara & Calvete, 2012) have found that early maladaptive schemas moderate the relationship between negative life events and psychological distress. In such a context, it is possible that concern about activating the early maladaptive schemas is sufficient motivation to avoid therapy by itself. The

general mismatch between planned behavior and actual behavior cannot be eliminated in this context either.

Hypothesis Five

It was hypothesized that stereotype agreement, self-application, and number of categories of JVE would predict prior use of either conventional or CAM. It was found that the model only statistically allowed for the demographic factors and categories of JVE. The model suffered from a very small predictive ability (adjusted R^2 = .059 for CAM and adjusted R^2 = .118 for conventional treatment). Despite these weaknesses, this model did support the idea that individuals who held negative stereotypes were unlikely to seek treatment. This is consistent with an article evaluating the perceived effects of social stigma and internalized stigmatization on working alliance and therapeutic outcomes (Owen et al., 2013) Specifically, the authors found that the perceived social stigma – had an effect on the session outcome and self-stigmatization had a negative effect on the working alliance. It seems that this model suggests that not only would there be a potential effect on session outcome, but they may be avoiding therapy altogether if they hold stereotyped views.

Implications

The research was hypothesized as a method to explain the clinical observation that many of those with particularly trauma-filled childhoods will avoid conventional treatment. This was only partially explained by the model looking at previous treatment behavior. The overall model was not supported within this study. However, two important aspects related to therapy were supported. First, therapy appears to have a salutatory effect on college success for those that experience psychological distress.

Furthermore, it validates the idea that individuals who are on academic probation are likely to be experiencing a significant amount of psychological distress and are likely to have experienced a number of traumatic events in their childhoods. As a result, efforts are needed to address both the psychological and academic needs of these students. Second, it appears it is not possible to identify a direct connect between JVE and mental health stigma. This finding is important for future research in the field of mental health stigma. It suggests that the negative stereotypes are not in some way connected to early experiences. Instead, the early schemas, if they do exist among this population (as research suggests they likely do) will instead only narrowly affect the person's view of themselves and not the person's view of others. The benefit of such a finding is that anti-stigma campaigns need not redress internal schemas before confronting negative stereotypes.

More importantly, this research suggests the need to more deeply consider how child maltreatment research develops. In particular, these data suggest that caution is warranted when considering what is truly a victimization event what is merely a normal developmental experience. Instead, consideration of a person's cognitive appraisal of their maltreatment experience is much more important than counting the number of times an event occurred.

Future Research

This research suggests that future explorations of reasons for treatment refusal among significantly traumatized individuals should instead shift in focus. Rather than assessing for negative stereotypes that may have developed and that interact with internalized schemas, the schemas themselves should be evaluated to determine their

impact on the decision to seek treatment. By shifting to focus on the interactions between early schemas and the decision to seek treatment, it may be possible to create an explanation that better fits the clinical data that exists.

A second important future direction is in the area of developing an adequate developmental model for the source of mental health stigmatization. In this study it was established that there is a low probability that the stigmatization in any way is related to early traumatic events – at least not for the population studied. The previous study by Corrigan's research group indicates that there is a significant amelioration of mental health stigma when individuals are provided opportunities to interact with individuals with serious mental illness. It seems possible that the errors in categorical person perception relate to early experiences that were not adequately translated into a language that the child could understand.

A third implication of the current research is that the assessment system appears to lack sensitivity among college-aged students. It will be important to design and make use of measures that more adequately address the concerns of individuals who have psychological insight enough to know the socially acceptable responses.

The forth and perhaps most significant need for future research of child maltreatment is the development of a more nuanced process of understanding negative childhood events. The history of child maltreatment literature is one that started with very severe events (e.g., sexual abuse and physical abuse) and has steadily enlarged by the consideration of less and less severe events. The measure used in this study considers nearly every event that could be considered vicitimizing. Unfortunately, by identifying so many common experiences as victimization, it is no longer possible to be

sure that any given individual considers those experiences to be negative. It is now time for the field develop an appropriate limit on what is truly "victimizing." The field will need to begin asking individual which events are truly victimizing, which are normal developmental experiences, and which are negative events that cause no current distress to the individual. By making this shift it is likely that common experiences will be identified and our ability to predict current distress from previous events will improve.

Limitations

Although this study attempted to create a developmental model of negative stereotype development, several limitations should be noted. First, the sample was predominantly of college students on academic probation. As such, it appears that the sample is more psychologically distressed than a more random sample. In addition, the sample may have higher rates of at least one category of JVE while having a lower amount of overall categories of JVE. Also, the sample was a majority white population and so any findings may not generalize to non-white minorities. Some of the key analyses of the study attempted to determine future behavior by asking the participants about their plans. This is a notoriously unpredictable endeavor and so the findings thereof should be interpreted with caution as well.

Another factor that limits this research is that many of the participants had recently received training on ways to improve or develop healthy methods of dealing with psychological distress. This training focused on developing integrated care coping strategies – strategies that included health improvement (e.g., healthy eating, exercise, etc.), relaxation techniques, and promoted use of religious and cultural coping strategies. In light of this exposure, it seems that at least some of the changes related to

the increase in students reporting an increase in plans to use both conventional and CAM approaches do dealing with their distress. Clearly a great deal of additional research is needed to address these limitations.

Conclusions

The efforts toward understanding the existing barriers to mental health treatment are important endeavors. There are many individuals who continue to suffer in quiet distress, "just ignoring" the pain that daily afflicts them – often due to negative experiences that occurred in childhood. Unfortunately, a simplistic method of counting potentially negative events is not a useful method of identifying these individuals. Instead, their individual differences need to be appreciated so that they can begin to tell the story of their individual stories of distress instead of being told by psychologists what distressing experiences they have had.

Table 1: Participant Characteristics

Gender	Frequency	Percent
Male	113	43.46
Female	147	56.54
Race/Ethnicity		
White/Caucasian	196	75.38
African-American	21	8.08
Hispanic, Latino/a	29	11.15
Asian	18	6.92
Native American or Alaskan Native	23	8.85
Other	9	0.03
Other Variables	*M*	*SD*
High School GPA	3.40	0.40
College GPA	2.34	0.88
Average number of Victimization Categories	3.05	1.48
Psychological Distress	20.67	7.33

Table 2. Correlations Between Key Study Variables

	Categories of JVE	Kessler 10 Distress Score	High School GPA	College GPA	SSMIS Stereotype Awareness	SSMIS Stereotype Agreement	SSMIS Stereotype Self Application	Planned Conventional Treatment for Distress	Planned CAM Treatment for Distress	History of Conventional Treatment	History of CAM Treatment
Categories of JVE	.165**	1	.249***	0.005	-0.078	0.08	0.011	0.055	0.029	0.005	.165**
Kessler 10 Distress Score	.166**	.249***	1	-.121*	-.207**	0.092	0.038	.113*	-.175**	-.156**	.166**
High School GPA	-0.055	0.005	-.121*	1	.319***	0.088	-0.009	-0.031	0.038	0.059	-0.055
College GPA	.215**	-0.078	-.207**	.319***	1	0.058	-.167*	-.178**	.199**	.192**	.215**
SSMIS Stereotype Awareness	0.099	0.08	0.092	0.088	0.058	1	.468***	.235***	-0.033	-0.026	0.099
SSMIS Stereotype Agreement	-.173**	0.011	0.038	-0.009	-.167*	.468***	1	.385***	-.147**	-.116*	-.173**
SSMIS Stereotype Self-application	-.194***	0.055	.113*	-0.031	-.178**	.235***	.385***	1	-0.029	-0.036	-.194***
Planned Conventional Treatment for Distress	.148**	0.029	-.175**	0.038	.199**	-0.033	-.147**	-0.029	1	.129*	.148**
Planned CAM Treatment for Distress	0.07	0.005	-.156**	0.059	.192**	-0.026	-.116*	-0.036	.129*	1	0.07
Previous Conventional Treatment	1	.165**	.166**	-0.055	.215**	0.099	-.173**	-.194***	.148**	0.07	1

Correlations at $p < .001$ are statistically significant. *** p < 0.001 (1-tailed), ** p < 0.01 (1-tailed), * p < 0.05 (1-tailed). SSMIS – Self-Stigma of Mental Illness Scale, CAM – Complementary and Alternative Medicine JVE – Juvenile Victimization Experiences

Table 3. Correlations Between Individuals with a History of Psychological Distress

	Number of Categories of JVE	Kessler 10 Distress Score	High School GPA	College GPA	SSMIS Stereotype Awareness	SSMIS Stereotype Agreement	SSMIS Stereotype Self Application	Planned Conventional Treatment for Distress	Planned CAM Treatment for Distress	History of Conventional Treatment	History of CAM Treatment
Number of Categories of JVE	1	.218**	0.113	-	0.082	-0.075	0.082	0	0.07	0.045	.252**
Kessler 10 Distress Score	.218**	1	-0.15	-	-0.022	0.025	.173*	-.204*	-0.098	-0.009	0.021
High School GPA	.113	-0.15	1	.319**	.160*	0.063	-0.054	0.054	0.026	-0.077	0.001
College GPA	-.252**	-.296**	.319**	1	-0.052	-.210*	-.260**	.276**	.296**	.379***†	0.076
SSMIS Stereotype Awareness	.082	-0.022	.160*	-0.052	1	.402***†	0.112	-0.102	0.024	0.077	-0.112
SSMIS Stereotype Agreement	-.075	0.025	0.063	-.210*	.402***†	1	.404***†	-.163*	-0.098	-.263**	-0.025
SSMIS Stereotype Self-application	.082	.173*	-0.054	-	0.112	.404***†	1	-0.02	-0.071	-.193*	0.015
Planned Conventional Treatment for Distress	0	-.204*	0.054	.276**	-0.102	-.163*	-0.02	1	.154*	.270**	0.078
Planned CAM for Distress	.070	-0.098	0.026	.296**	0.024	-0.098	-0.071	.154*	1	.181*	.607***†
History of Conventional Treatment	.045	-0.009	-0.077	.379** *†	0.077	-.263**	-.193*	.270**	.181*	1	0.011
History of CAM Treatment	.252**	0.021	0.001	0.076	-0.112	-0.025	0.015	0.078	.607***†	0.011	1

† Correlations are statistically significant ($p < .0009$), *** $p < 0.001$ (1-tailed), ** $p < 0.01$ (1-tailed), * $p < 0.05$ (1-tailed). SSMIS – Self-Stigma of Mental Illness

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Appendix A: Demographics Questionnaire

Demographic Survey Questions

From ACEs Study (Felitti et al., 1998)

1. What is your birth month?_____

2. What is your birth year?_____

3. What is your sex?

    (1) male

    (2) female

4. What is your race or ethnicity? (Please check all that apply)

    (1) Asian

    (2) Black

    (3) White

    (4) Native American, Pacific Native, or Native Alaskan

    (5) Mexican, Latino/a, or Hispanic origin

    (6) Other

5. Please check how far you have gone in school....(Choose one)

    (1) Freshman

    (2) Sophomore

    (3) Junior

    (4) Senior

    (5) Graduate Student

6. What is your current marital status? Are you now...

(1) married

(2) not married, but living together with a partner

(3) widowed

(4) separated

(5) divorced

(6) never married

7. Please check how far your mother went in school....(Choose one)

(1) Didn’t go to high school

(2) Some high school

(3) High school graduate or GED

(4) Some college or technical school

(5) 4 year college graduate

(6) Completed a master's degree or above

8. Please check how far your father went in school... (Choose one)

(1) Didn’t go to high school

(2) Some high school

(3) High school graduate or GED

(4) Some college or technical school

(5) 4 year college graduate

(6) Completed a master's degree or above

9. What is your current college GPA? _____

10. What was your high school GPA? _____

After Quinn, Kahng, Crocker (2004)

11. Have you ever experienced any psychological problems that significantly affected your life (e.g., feeling very depressed)?

(1) No

(2) Yes

12. If you have had psychological problems that significantly affected your life, did you seek relief through any of the following means? (please note all means attempted)

(1) Friend, or Family member

(2) Self-help information (i.e., books, internet, etc.)

(3) Alternative medical professionals (i.e., chiropractors, naturopaths, massage therapists, etc.)

(4) Health improvement (i.e., nutritional supplements, vitamins)

(5) New Age healing (i.e., crystals, spirits, magnets)

(6) Religious supports (i.e., church, synagogue, mosque, medicine man, etc.)

(7) Physical Activity (i.e., exercise)

(8) Prayer for relief

13. Have you ever been treated for a mental health problem (e.g., counseling or medication)?

(1) No

(2) Yes

14. If you have been treated for the mental health problem, what treatment was it (is it)?

(1) Counseling (therapy) only

(2) Medication only

(3) Both counseling and medication

(4) Not applicable

15. If you experience psychological problems in the future (e.g., feeling very depressed) will you seek treatment (e.g., counseling or medication)?

(1) No

(2) Yes

16. If you experience psychological problems in the future (e.g., feeling depressed or anxious) would you seek relief through any of the following means? (please check all that apply)

(1) Friend, family member, or college faculty or staff

(2) Self-help information (i.e., books, internet, etc.)

(3) Alternative medical professionals (i.e., chiropractors, naturopaths, massage therapists, etc.)

(4) Health improvement (i.e., nutritional supplements, vitamins)

(5) New Age healing (i.e., crystals, spirits, magnets)

(6) Religious supports (i.e., church, synagogue, mosque, medicine man, etc.)

(7) Physical Activity (i.e., exercise)

(8) Prayer for relief

17. If you would seek treatment from a mental health professional for future mental health concerns, what treatment will you seek?

(1) Counseling (therapy) only

(2) Medication only

(3) Both counseling and medication

(4) Not applicable

Appendix B: Self-Stigma of Mental Illness Scale

From: A Toolkit for Evaluating Programs Meant to Erase the Stigma of Mental Illness. (Corrigan, 2012)

There are many attitudes about mental illness. We would like to know what you think most of the public as a whole (or most people) believe about these attitudes. Please answer the following items using the 9-point scale below.

I strongly agree			Neither agree nor disagree			I strongly disagree		
9	8	7	6	5	4	3	2	1

Section 1:

I think the public believes…

1. _____ most persons with mental illness cannot be trusted.
2. _____ most persons with mental illness are disgusting.
3. _____ most persons with mental illness are unable to get or keep a regular job.
4. _____ most persons with mental illness are dirty and unkempt.
5. _____ most persons with mental illness are to blame for their problems.
6. _____ most persons with mental illness are below average in intelligence.
7. _____ most persons with mental illness are unpredictable.
8. _____ most persons with mental illness will not recover or get better.
9. _____ most persons with mental illness are unable to take care of themselves.

Section 2:

Now answer the next 9 items using the agreement scale.

I strongly				neither agree				I strongly
agree				nor disagree				disagree
9	8	7	6	5	4	3	2	1

I think…

1. _____ most persons with mental illness are to blame for their problems.

2. _____ most persons with mental illness are unpredictable.

3. _____ most persons with mental illness will not recover or get better.

4. _____ most persons with mental illness are unable to get or keep a regular job.

5. _____ most persons with mental illness are dirty and unkempt.

6. _____ most persons with mental illness cannot be trusted.

7. _____ most persons with mental illness are below average in intelligence.

8. _____ most persons with mental illness are unable to take care of themselves.

9. _____ most persons with mental illness are disgusting.

Section 3

Now answer the next 9 items using the agreement scale.

I strongly				neither agree				I strongly
agree				nor disagree				disagree
9	8	7	6	5	4	3	2	1

If I have a mental illness…

1. _____ I am below average in intelligence.

2. _____ I cannot be trusted.

3. _____ I am unable to get or keep a regular job.

4. _____ I am dirty and unkempt.

5. _____ I am unable to take care of myself.

6. _____ I will not recover or get better.

7. _____ I am to blame for my problems.

8. _____ I am unpredictable.

9. _____ I am disgusting.

The SSMIS Score Sheet

Name or ID Number_____ Date _____

Summing items from each section represents the 3 A's plus 1.

_____ Aware: (Sum all items from Section 1).

_____ Agree: (Sum all items from Section 2).

_____ Apply: (Sum all items from Section 3).

Appendix C: K10 SELF–REPORT MEASURE

During the past 30 days, about how often did you feel …	All of the Time	Most of the Time	Some of the Time	A Little of the Time	None of the Time
1. ...tired out for no good reason?	1	2	3	4	5
2. …nervous?	1	2	3	4	5
3. ...so nervous that nothing could calm you down?	1	2	3	4	5
4. …hopeless	1	2	3	4	5
5. …restless or fidgety	1	2	3	4	5
6. ...so restless that you could not sit still?	1	2	3	4	5
7. ...depressed?	1	2	3	4	5
8. …so depressed that nothing could cheer you up?	1	2	3	4	5
9. …that everything was an effort?	1	2	3	4	5
10. …worthless	1	2	3	4	5

Appendix D: K6 SELF–REPORT MEASURE

During the past 30 days, about how often did you feel …	All Of The Time	Most Of The Time	Some Of The Time	A Little Of The Time	None Of The Time
1. …nervous?	1	2	3	4	5
2. …hopeless	1	2	3	4	5
3. …restless or fidgety	1	2	3	4	5
4. …so depressed that nothing could cheer you up?	1	2	3	4	5
5. …that everything was an effort?	1	2	3	4	5
6. …worthless	1	2	3	4	5

Appendix D. JVQ-R2, Screener Summary Version, Adult Retrospective Form

These are questions about some things that might have happened during your childhood. Your "childhood" begins when you are born and continues through age 17. It might help to take a minute and think about the different schools you attended, different places you might have lived, or different people who took care of you during your childhood. Try your best to think about your entire childhood as you answer these questions.

C1) When you were a child, did anyone use force to take something away from you that you were carrying or wearing?

_____ Yes _____ No

C2) When you were a child, did anyone steal something from you and never give it back? Things like a backpack, money, watch, clothing, bike, stereo, or anything else?

_____ Yes _____ No

C3) When you were a child, did anyone break or ruin any of your things on purpose?

_____ Yes _____ No

C4) Sometimes people are attacked <u>with</u> sticks, rocks, guns, knives, or other things that would hurt. When you were a child, did anyone hit or attack you on purpose <u>with</u> an object or weapon? Somewhere like: at home, at school, at a store, in a car, on the street, or anywhere else?

_____ Yes _____ No

C5) When you were a child, did anyone hit or attack you without using an object or weapon?

_____ Yes _____ No

C6) When you were a child, did someone start to attack you, but for some reason, it didn't happen? For example, someone helped you or you got away?

_____ Yes _____ No

C7) When you were a child, did someone threaten to hurt you when you thought they might really do it?

_____ Yes _____ No

C8) When a person is kidnapped, it means they were made to go somewhere, like into a car, by someone who they thought might hurt them. When you were a child, did anyone try to kidnap you?

_____ Yes _____ No

C9) When you were a child, have you been hit or attacked because of your skin color, religion, or where your family comes from? Because of a physical problem you have? Or because someone said you were gay?

_____ Yes _____ No

Next, we are going to ask about grown-ups who take care of you. This means parents, babysitters, adults who live with you, or others who watch you. Before we begin, I want to remind you that your answers will be kept totally private. If there is a particular question that you don't want to answer, that's O.K. But it is important that you be as honest as you can, so that we can get a better idea of the kinds of things that kids your age sometimes face.

M1) Not including spanking on your bottom, when you were a child, did a grown-up in your life hit, beat, kick, or physically hurt you in any way?

_____ Yes _____ No

M2) When you were a child, did you get scared or feel really bad because grown-ups in your life called you names, said mean things to you, or said they didn't want you?

_____ Yes _____ No

M3) When someone is neglected, it means that the grown-ups in their life didn't take care of them the way they should. They might not get them enough food, take them to the doctor when they are sick, or make sure they have a safe place to stay. When you were a child, were you neglected?

_____ Yes _____ No

M4) Sometimes a family fights over where a child should live. When you were a child, did a parent take, keep, or hide you to stop you from being with another parent?

_____ Yes _____ No

P1) Sometimes groups of kids or gangs attack people. When you were a child, did a group of kids or a gang hit, jump, or attack you?

_____ Yes _____ No

P2) When you were a child, did any kid, even a brother or sister, hit you? Somewhere like: at home, at school, out playing, in a store, or anywhere else?

_____ Yes _____ No

P3) When you were a child, did any kids try to hurt your private parts on purpose by hitting or kicking you there?

_____ Yes _____ No

P4) When you were a child, did any kids, even a brother or sister, pick on you by chasing you or grabbing you or by making you do something you didn't want to do?

_____ Yes _____ No

P5) When you were a child, did you get scared or feel really bad because kids were calling you names, saying mean things to you, or saying they didn't want you around?

_____ Yes _____ No

P6) When you were a child, did a boyfriend or girlfriend or anyone you went on a date with slap or hit you?

_____ Yes _____ No

S1) When you were a child, did a grown-up you know touch your private parts when they shouldn't have or make you touch their private parts? Or did a grown-up you know force you to have sex?

_____ Yes _____ No

S2) When you were a child, did a grown-up you did not know touch your private parts when they shouldn't have, make you touch their private parts or force you to have sex?

_____ Yes _____ No

S3) Now think about other kids, like from school, a boy friend or girl friend, or even a brother or sister. When you were a child, did another child or teen make you do sexual things?

_____ Yes _____ No

S4) When you were a child, did anyone try to force you to have sex; that is, sexual intercourse of any kind, even if it didn't happen?

_____ Yes _____ No

S5) When you were a child, did anyone make you look at their private parts by using force or surprise, or by "flashing" you?

_____ Yes _____ No

S6) When you were a child, did anyone hurt your feelings by saying or writing something sexual about you or your body?

_____ Yes _____ No

S7) When you were a child, did you do sexual things with anyone 18 or older, even things you both wanted?

_____ Yes _____ No

W1) When you were a child, did you SEE a parent get pushed, slapped, hit, punched, or beat up by another parent, or their boyfriend or girlfriend?

_____ Yes _____ No

W2) When you were a child, did you SEE a parent hit, beat, kick, or physically hurt your brothers or sisters, not including a spanking on the bottom?

_____ Yes _____ No

W3) When you were a child, in real life, did you SEE anyone get attacked on purpose WITH a stick, rock, gun, knife, or other thing that would hurt? Somewhere like: at home, at school, at a store, in a car, on the street, or anywhere else?

_____ Yes _____ No

W4) When you were a child, in real life, did you SEE anyone get attacked or hit on purpose WITHOUT using a stick, rock, gun, knife, or something that would hurt?

_____ Yes _____ No

W5) When you were a child, did anyone steal something from your house that belongs to your family or someone you live with? Things like a TV, stereo, car, or anything else?

_____ Yes _____ No

W6) When you were a child, was anyone close to you murdered, like a friend, neighbor or someone in your family?

_____ Yes _____ No

W7) When you were a child, were you in any place in real life where you could see or hear people being shot, bombs going off, or street riots?

_____ Yes _____ No

W8) When you were a child, were you in the middle of a war where you could hear real fighting with guns or bombs?

_____ Yes _____ No