



2017

Is Knowing Half the Battle? The Effects of Acceptance and Commitment Therapy Compared to Psychoeducation on Stigma Towards Mental Illness

Rebecca L. Fountain
Murray State University

Follow this and additional works at: <https://digitalcommons.murraystate.edu/etd>

 Part of the [Clinical Psychology Commons](#), [Counseling Commons](#), [Counseling Psychology Commons](#), and the [Experimental Analysis of Behavior Commons](#)

Recommended Citation

Fountain, Rebecca L., "Is Knowing Half the Battle? The Effects of Acceptance and Commitment Therapy Compared to Psychoeducation on Stigma Towards Mental Illness" (2017). *Murray State Theses and Dissertations*. 37.
<https://digitalcommons.murraystate.edu/etd/37>

This Thesis is brought to you for free and open access by the Graduate School at Murray State's Digital Commons. It has been accepted for inclusion in Murray State Theses and Dissertations by an authorized administrator of Murray State's Digital Commons. For more information, please contact msu.digitalcommons@murraystate.edu.

IS KNOWING HALF THE BATTLE? THE EFFECTS OF ACCEPTANCE AND
COMMITMENT THERAPY COMPARED TO PSYCHOEDUCATION ON STIGMA
TOWARDS MENTAL ILLNESS

A Thesis
Presented to
The Faculty of the Department of Psychology
Murray State University
Murray, Kentucky

In Partial Fulfillment
Of the Requirements for the Degree
Of Masters of Arts in Clinical Psychology

By Rebecca Fountain
August 2017

Abstract

Both Acceptance and Commitment Therapy (ACT) and Psychoeducation have been shown to reduce stigmatizing thoughts towards individuals with mental illness. The present study compared the effects of a 50 minute ACT and 50 minute psychoeducation workshop on levels of stigma in college students ($N = 76$). Psychological flexibility and knowledge about mental illness were examined as potential mechanisms by which the workshops generated stigma reduction. Participants were randomly assigned to either workshop with pre and post scores on the Community Attitudes Towards the Mentally Ill scale used as the primary dependent variable. Both workshops were effective in reducing levels of stigmatizing attitudes towards individuals with psychological difficulties. However, psychological flexibility and mental health knowledge did not mediate changes in stigma. Implications for clinical significance and further research directions are discussed.

TABLE OF CONTENTS

Abstract	iii
Table of Contents	iv
List of Illustrations	v
Chapter I: Review of the Literature	60
Chapter II: Methodology.....	604
Chapter III: Analysis.....	615
Chapter IV: Conclusion	61
Abstract I: IRB Approval Letter	52
Abstract II: Demographics Questionnaire.....	53
Abstract III: Acceptance and Commitment Therapy Workshop Protocol.....	54
Abstract IV: Psychoeducation Workshop Protocol.....	59
Bibliography.....	65

List of Illustrations

Figure 1. Participant Flow Diagram.....	26
Table 1. Demographic Characteristics of Sample.....	29
Table 2. Means and Standard Deviations of Study Variables	30
Table 3. Baseline Correlations Between Study Variables.....	31
Table 4. Effects of Intervention on Changes in Psychological Flexibility and Mental Health Knowledge.....	35
Table 5. Model Coefficients Examining the Indirect Effects of Treatment Condition (ACT vs. Psychoeducation) on Authoritarianism Scale at Post Test via Psychological Flexibility and Mental Health Knowledge.....	35
Table 6. Model Coefficients Examining the Effects of Treatment Condition (ACT vs. Psychoeducation) on Benevolence Scale at Post Test via Psychological Flexibility and Mental Health Knowledge.....	36
Table 7. Model Coefficients Examining the effects of Treatment Condition (ACT vs. Psychoeducation) on Social Restrictiveness at Post Test via Psychological Flexibility and Mental Health Knowledge.....	36
Table 8. Model Coefficients Examining the Effects of Treatment Condition (ACT vs. Psychoeducation) on Community Mental Health Ideology Scale at Post Test via Psychological Flexibility and Mental Health Knowledge.....	37
Figure 2. Mediation Model Predicting Post Test Authoritarianism Scores.....	38
Figure 3. Mediation Model Predicting Post Test Benevolence Scores	38
Figure 4. Mediation Model Predicting Post Test Social Restrictiveness Scores.....	39
Figure 5. Mediation Model Predicting Post Test Community Mental Health Ideology Scores.....	40

Chapter I: Review of Literature

Stigma related to mental illness

Stigma related to mental illness dates back throughout history. Stigma refers to someone being devalued by societal norms due to ascribing the individual or group of individuals with a disgraceful mark. This disgraceful mark often indicates that the mental illness is a flaw or they are not a valid part of society (Hinshaw, 2007). Terms used to describe mental illness in general include insanity, lunacy, and madness (Hinshaw, 2007). Another important aspect of stigma is the stigmatized is less powerful than the one stigmatizing (Link & Phelan, 2001). This says that the person doing the stigmatizing is put at an elevated position over the one being stigmatized.

Mental health stigma is an epidemic. A Surgeon General Report (1999) claimed that stigma was one of the largest factors that prevent progress in the mental health field, and that it affects people of all ages, genders, socioeconomic statuses, and ethnicities. It can also take many forms. The most salient remarks made or thoughts had are that these people are responsible for their mental illness or they are dangerous (Corrigan et al., 2002). A sample of 2,000 subjects who reported on their attitudes towards those who have a mental illness showed that one of the most reported attitudes was fear due to the perception of them being dangerous. The study also revealed that the sample thought that people with a mental illness were incapable of taking care of themselves and unable to make their own decisions (Brockington, Hall, Levings & Murphy, 1993).

In a sample of 100 participants with psychological disorders reporting on experiences with stigma, results reveal that the most common reported version of stigma is witnessing comments being made or depictions of psychological disorders (Wahl, 1999). Eighty percent of the participants reported hearing someone make comments that were perceived as offensive about mental illness. Over 70% of individuals reported viewing a stigmatized description of psychological difficulties through media outlets such as television shows, commercials, or magazines. Direct experiences of being stigmatized were also reported. Participants reported being avoided (60%), rejected (26%), or not receiving support from friends or family (16%; Wahl, 1999).

Participants in the study also reported experiencing discrimination due to their mental illness (Wahl, 1999). One third of the participants reported being turned away as a candidate for a job after the discovery of their mental health status. Twenty eight percent of individuals in the study reported that even after obtaining a job their coworkers and supervisors were not accommodating after learning about their mental health status (Wahl, 1999).

Sources of stigma reported from participants included work environments, family members, and health professionals. One participant reported having a son who would not speak to him because he has a mental illness. Another participant reported being watched more carefully after revealing his/her mental health status. Lastly, another individual stated experiencing rejection from a friend after revealing having a psychological disorder (Wahl, 1999). Emotional experiences reported by stigmatized remarks include feeling sad, hurt, and discouraged (Wahl, 1999).

Negative Impact of Mental Illness Stigma

Evidence supports that stigma has affected the way that people pursue treatment. Studies have shown that people typically tend to do one of two things: not pursue treatment or begin the treatment process but terminate early or not adhere with treatment requirements (Corrigan, 2004). The National Comorbidity Study showed that of the 8,098 participants who responded who had a psychological disorder, only 40% reported receiving treatment for their difficulties (Kessler et al., 2001). An additional large scale study looking at the rates of mental health service use among people who have mental disorders in a sample of 20,295 adults found that less than 30% of the people who responded with a mental illness sought treatment from a mental health professional (Regier, Narrow, Rae, Manderscheid, Locke & Goodwin, 1993).

A history of research has shown that there are empirically based treatments for a wide array of psychological difficulties (Chambless & Ollendick, 2001). However, many people still do not seek treatment. In a sample of 204 Canadian participants recruited from a train station, researchers examined the effects on gender and age on attitudes towards seeking help. Researchers showed that older adults when compared to younger adults showed more positive attitudes towards seeking services. The same was found when comparing men and women, where women were more likely to ask for help than men were. This highlights other treatment interfering variables such as gender and age (Mackenzie, Gekoski, & Knox, 2006).

Stigma has also been shown to play a direct role in utilization of mental health services. In a sample of 583 college students, authors Vogel, Wade and Haake (2006) showed evidence that stigma is a factor in why people do not seek treatment despite empirical evidence for the treatment's effectiveness. Authors showed that participants

who sought treatment for psychological difficulties reported less self-stigma than those who did not seek services (Vogel et al., 2006). This finding lends further support to the body of evidence implicating stigma as a leading factor limiting seeking of services for psychological difficulties.

In addition to stigma directed towards others, there is also self-stigma among those who have psychological difficulties. That is, the individuals with psychological difficulties often relate stereotypes and prejudices about the mental illness to themselves (Vogel et al., 2006). Self-stigma has also been shown to affect people who have mental health problems in other ways such as social opportunities and their self-esteem (Corrigan, 2004). In a study looking at the relationship between stigma and one's self-esteem, researchers found that those with mental health difficulties were seven times more likely to have a lower self-esteem than those without mental health difficulties (Link, Struening, Neese-Todd, Asmussen, & Phelan, 2001). Evidence for this study shows that if the stigma is accepted, this has the potential to decrease not only one's self-esteem, but also confidence in themselves and their self-efficacy.

The problem of stigma is especially prevalent in college aged students (i.e., ages 18-26). According to Kessler, Walters, and Forthofer (1998), close to two thirds of mental disorders have an onset before the age of 24. Also, approximately half of the United States of America's youth are now pursuing higher education, suggesting that college students may be a particular high risk for experiencing mental health stigma. In a study looking at the effects of several factors that may predict the attitudes of 311 college students pursuing mental health services, perception of stigma was found to be a major factor related to seeking services (Komiya, Good, & Sherrod, 2000). Komiya and

colleagues (2000) found that as level of perceived stigma for mental health difficulties increased, the likelihood of the students seeking services declined.

In another study, Eisenberg, Downs, Golberstein, and Zivin (2009) looked at the role of perceived public stigma and personal stigma on help seeking behaviors in 5,555 college students. Researchers found that higher levels of personal stigma (i.e., having personal stigmatized views of mentally ill) was shown to be significantly related to lower levels of help-seeking behaviors (Eisenberg et al., 2009). That is, people who had individual views that placed a stigma on those with a mental illness were themselves less likely to seek treatment for mental health problems.

Another study looking at attitudes of college students towards mental illness shows the importance of reducing stigma towards those with psychological difficulties (Phelan & Basow, 2007). Participants read three different scenarios that depicted male or female individuals with symptoms consistent with depression, substance abuse, or common stress. Participants who labeled the symptoms as defining a mental illness were more likely to view the individuals as dangerous. Labeling the vignettes as having a mental illness was also associated with a decreased desire to be friends or associated with this person (Phelan & Basow, 2007).

Response to Mental Health Stigma

Several different strategies have been employed to combat stigma towards people who have mental health problems. Corrigan and Penn (1999) categorize stigma-related programs into three categories: contact-based, protest, and education. Contact-based intervention programs are programs that allow a target population to come into direct contact with someone experiencing a mental illness. Protest based interventions take a

confrontational approach. Education-based interventions attempt to inform people in order to have more accurate views. Often, education and contact-based interventions are joined together for the population to form a more accurate view of the people they encounter. Another stigma reduction program involves Acceptance and Commitment Therapy (Masuda et al., 2007; Masuda et al., 2009; Kenny & Bizumic, 2016). The next section will explore three specific types of anti-stigma programs that have been evaluated empirically: contact-based, psychoeducation, and Acceptance and Commitment Therapy.

Contact-Based

Contact-based interventions are shown to be effective when combatting stigma surrounding mental health. For example, contact-based interventions are more effective in reducing stigma surrounding the idea that people with a mental illness are dangerous or responsible for their mental illness than in a purely education condition (Corrigan et al., 2002).

Pinfold, Thornicroft, Huxley, and Farmer (2005) examined the specific ingredients of the Mental Health Awareness in Action (MHAA) program in Europe. This program is designed to evaluate the effectiveness of mental health awareness programs and bring effective programs to specific populations in a community. The program's active ingredients were evaluated in this study. Researchers found that immediately following a workshop focusing on bringing awareness to mental health in various populations, participants were most likely to remember the education piece - that is, the pieces of information provided about the nature of the disorder. Whereas, at a 4-week follow up, participants found personal contact to be most effective with decreasing levels of stigma towards those with psychological difficulties. That is, coming face-to-face with

a person who has directly experienced a mental illness and can talk about their experiences appears to be an important factor.

Pinfold et al. (2005) attributed this effect to the fact that most people seem to be naïve of the experience of having a mental illness. It was reported that 450 million people worldwide have been effected by mental illness at some point in their life (Thornicroft & Maingay, 2002). This shows that having a mental illness is not uncommon. Although psychological disorders are common, most individuals are not aware of the unique experiences that those with psychological difficulties face (Pinfold et al., 2005). Thus, individuals may form beliefs and assumptions that are not entirely true.

Psychoeducation

Psychoeducation is based on the idea that the more knowledge the patient holds, the better the outcomes will be (Lukens & McFarlane, 2006). Knowledge that is gained by psychoeducation can be used in a proactive fashion to confront difficulties that one may experience over the course of a lifetime. Psychoeducation can be adapted for a wide array of clients including families, individuals, children, etc. (Lukens & McFarlane, 2006). Due to the flexibility of this intervention, it has often been included in many treatments, such as prolonged exposure for post-traumatic stress disorder (Rauch et al., 2009) and behavioral activation for depression (Barlow, 2014).

A recent meta-analysis performed of the literature on reducing self-stigma found the most common intervention used was psychoeducation (Mittal, Sullivan, Chekuri, Allee, & Corrigan, 2012). This analysis also showed that there are many versions of psychoeducation interventions. One version includes defining the specific mental illness, describing different medications and common side effects from those medications, and

resources for receiving help. Authors showed that Korean participants in the experimental group showed less stigma towards mental illness than the control group where receiving this form of psychoeducation (Shin & Lukens, 2002).

Other versions of psychoeducation highlighted by this meta-analysis included using only printed materials. One study sampled 1,397 participants who were experiencing symptoms related to depression and who had not previously pursued treatment for these symptoms (Hammer & Vogel, 2010). In the study participants viewed brochures with facts specific to depression symptoms that men experience. Men then answered questions regarding their personal attitudes on seeking help for psychological difficulties. Participants answered questions on stigma that they perceived accompanied seeking mental health services. Researchers found that these gender specific brochures for men with depression improved attitudes towards seeking treatment and reduced their levels of self-stigma (Hammer & Vogel, 2010).

Psychoeducation has been found to be an effective intervention for African Americans who are already less likely to seek treatment than White individuals (Snowden, 1999). It has also been shown that African American individuals are more likely to hold stigmatizing views about mental illness than the general population (Anglin, Link, & Phelan, 2006). Thus, it is likely to conclude that stigma is a treatment barrier to African American individuals.

Alvidrez, Snowden, Rao, and Boccillari (2009) examined psychoeducation's effects on stigma in African American adults. Participants were randomly assigned to be given a psychoeducational booklet or brochures. The booklet was based on advice and experiences of African American who have experience with mental health services. The

brochures included mental health services that were offered locally. Authors found no significant differences on perceived helpfulness of both types of information. Results revealed that participants who perceived themselves as having a higher need for treatment in the psychoeducation condition showed a greater stigma reduction. However, there were no significant differences between forms of information on treatment attendance.

While the majority of research has been supportive of the psychoeducation intervention, Link and colleagues (2002) found contrasting evidence showing the effectiveness of psychoeducation. When examining its effects on reducing stigma towards the mentally ill, they found that in a six-month follow-up the psychoeducation intervention did not show statistically significant reductions in stigma. That is, the experimental and control group did not differ when it came to reductions in stigmatized views towards mental illness (Link, Struening, Neese-Todd, Asmussen, & Phelan, 2002).

Acceptance and Commitment Therapy

Although the most widely used method for anti-stigma intervention programs is psychoeducation, more recently, a line of evidence on Acceptance and Commitment based anti-stigma interventions has emerged. Acceptance and Commitment Therapy (ACT) is a therapeutic intervention designed to improve psychological well-being by increasing psychological flexibility (Hayes, Luoma, Bond & Masuda, 2006).

Psychological flexibility can be defined as the ability to act in accordance with one's values in the presence of aversive thoughts and feelings (McCracken & Martinez, 2011). By increasing psychological flexibility, ACT allows the person to remain in contact with the negative thoughts or feelings rather than avoiding, changing or controlling them. For

example, people with anxiety are taught to experience it without allowing it to get in the way of values-based actions.

ACT has been shown to be effective by targeting six different processes: acceptance, cognitive diffusion, being present, self as the context, values, and committed action (Hayes et al., 2006). ACT has been shown to decrease the believability of the thoughts and feelings rather than decreasing the frequency (Masuda, Hayes, Lillis, Washio, & Twohig, 2009). ACT also emphasizes the present moment to experience their environment more fully. In part this works by changing the language used to describe what is happening rather than predicting what will happen (Hayes & Wilson, 1994).

A decrease in believability, being present in the moment, changing one's language are all ways to live a more valued life (Wilson & Murrell, 2004). This is at the core of ACT, allowing the person to live a more valued life. This happens by gradually developing more behaviors that are linked to valued behaviors. ACT works by increasing psychological flexibility, by allowing the person to be in contact with the present moment without having to change or alter the frequency of their thoughts or feelings to live a more valued life (Hayes et al., 2006).

There are several outcomes associated with increased psychological flexibility and its inverse, reduced psychological inflexibility. Psychological inflexibility is reluctance to stay in contact with uncomfortable or aversive experiences (i.e., thoughts, feelings, bodily sensations, memories, etc.). People with high psychological inflexibility also may take steps to change the uncomfortable experiences or avoid the events that precede them (Chawla & Ostafin, 2007). Higher levels of psychological flexibility correlate with lower levels of mental health problems, job performance, and job

satisfaction (Bond & Bruce, 2003). Research also shows that as one ages the more psychologically flexible one becomes. This same research showed that the higher the participants age combined with an increased psychological flexibility predicted participants reporting a higher quality of life (Butler & Ciarrochi, 2007).

Increasing one's psychological flexibility is at the core of ACT. A sample of 95 college students was recruited to participate in either an ACT or psychoeducation based workshop. According to a 2007 study, results revealed that both the ACT and education condition reduced stigma toward individuals with psychological difficulties (Masuda et al., 2007). However, participants in the education condition with low levels of psychological flexibility did not show the same amount of reductions in level of stigma as those with high levels of psychological flexibility. Individuals in the ACT condition showed reductions in stigma despite the individual's level of psychological flexibility (Masuda et al., 2007). This study shows evidence for the effectiveness of ACT in decreasing stigmatized views towards individuals with psychological disorders.

In a preliminary study performed by Masuda and colleagues (2009), psychological flexibility was explored as a mechanism of change between ACT and levels of stigma (Masuda, Hayes, Lillis, Bunting, Herbst, & Fletcher, 2009). Results showed that mental health stigma decreased in participants (N = 27). Also, psychological flexibility increased from pre to posttest which was shown to significantly correlate with decreased levels of mental health stigma (Masuda et al., 2009).

A 2016 study performed by researchers Kenny and Bizumic (2016) supports results found by Masuda and colleagues (2007). Australian college students (N = 152) were randomly assigned to either an education or ACT condition. Participants were tested

on their attitudes towards individuals with psychological difficulties and levels of psychological flexibility before and after the two workshops (Kenny & Bizumic, 2016). Results revealed that stigmatizing attitudes towards people with psychological disorders improved in both the ACT and education condition with the ACT conditions showing greater reductions. Unlike Masuda and colleagues (2007) findings regarding a relationship between treatment condition and psychological flexibility, no significant relationship was found. Results suggest that both of these conditions show decreases in amount of stigmatized attitudes towards those with a psychological disorder. However, unlike previous research, psychological flexibility did not appear to play a role.

Present Study

The present study attempts to replicate and extend Masuda and colleagues (2009) study looking at ACT versus psychoeducation's role on reducing rates of stigma towards those who have a mental illness in a college population.

This study extends Masuda et al.'s (2009) by shortening the time of the workshops from 3.5 hours to 50 minutes. Brief ACT interventions have been examined in the context of gambling. Individuals exposed to a brief one time 90-minute ACT intervention were less likely to label outcomes as near-misses than those who were not exposed to ACT (Nastally & Dixon, 2012). Decreasing the length of the workshops allows the researchers to look at the effects of short term workshops on levels of stigma. That is, can ACT or psychoeducation still impact levels of stigma in a shorter amount of time.

This study also attempts to answer the question of how the two workshops work instead of just does it work. Kazdin (2008) argued that although there is a plethora of

research that shows therapies and interventions to cause change in a variety of symptoms, most evidenced-based literature does not show the mechanism by which the change happens. This serves as the rationale for including measures of mechanisms of change in the present study (i.e., psychological flexibility and mental illness knowledge). Measures will be included to test the mechanism of change between treatment condition and changes in stigma. Based on past research and these research questions, two hypotheses have been drawn.

First, both treatment conditions will show a decrease in levels of stigma towards individuals with a psychological disorder; however, participants in the ACT condition will show greater levels of decrease in levels of stigma. Second, psychological flexibility and mental health knowledge will act as mediators between treatment condition and stigma towards the mentally ill. Specifically, psychological flexibility will act as a mechanism of change between ACT and levels of stigma. Whereas, knowledge will act as a mediator between psychoeducation condition and levels of stigma.

Chapter II: Methodology

Participants

The present study took place on the campus of Murray State University in Murray, Kentucky. Participants were recruited from an introductory psychology courses, including general psychology. Participants learned about this study through in-class announcements and SONA, an online program utilized by the Murray State Psychology program in order to make students aware of and facilitate participation in research opportunities.

Measures and Materials

Demographics. Participants answered questions about their age, sex, ethnicity/race and level of school, history of psychological diagnosis/treatment, and personal experience with mental illness (i.e., knowing someone with a mental illness or being diagnosed with a mental illness). This information was provided in order to inform a demographic description of the sample as well as to assess the relationship between demographic information and stigma.

Mental health stigma. The main treatment outcome in the study assessed participants on their attitudes towards those with a mental health diagnosis. The measure used was the Community Attitudes towards the Mentally Ill (CAMI; Taylor & Dear, 1981). The CAMI is a self-report questionnaire that assesses participants' attitudes towards the mentally ill. The CAMI is a 38 item, 5 point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*) where participants rate their amount of

agreement or disagreement with a variety of statements regarding psychological disorders and mental health and attitudes towards them. The scale itself is multidimensional. That is, the measure contains four different scales measuring authoritarianism, benevolence, social restrictiveness and community mental health ideology (CMHI; Taylor & Dear, 1981). Authoritarianism refers to the thinking of people with psychological disorders as lesser than those who do not and of needing forceful handling, with lower scores indicating a reduction in stigma on the authoritarianism subscale. The benevolence scale looks at the viewing of people with a diagnosis with compassion, with higher scores indicating a decrease in stigmatizing attitudes. Social restrictiveness refers to the stance that people with psychological disorders are a danger to society, with lower scores indicating less stigmatizing attitudes. Lastly, the community mental health ideology scale examines mental health in a medical view. That is, it measures the strength of belief that mental illness is a medical illness (Taylor & Dear, 1981), with higher scores indicating less stigmatizing views.

According to the authors Taylor and Dear (1981), internal consistency alphas have satisfactory values; *authoritarianism* ($\alpha = .68$), *benevolence* ($\alpha = .76$), *social restrictiveness* ($\alpha = .80$), and *CMHI* ($\alpha = .88$). The construct validity was assessed by performing a factor analysis. In general the scales show a high degree of correlation with validity coefficients ranging from $-.63$ (*authoritarianism* and *benevolence*) to $-.77$ (*social restrictiveness* and *CMHI*). Pre-test internal consistency coefficients ranged from moderate to good in the current study; *authoritarianism* ($\alpha = .60$), *benevolence* ($\alpha = .78$), *social restrictiveness* ($\alpha = .78$), and *CMHI* ($\alpha = .86$).

Psychological flexibility. The *Acceptance and Action Questionnaire-II* (AAQ-II) was used as a measure of participants' psychological flexibility (Bond & Bruce, 2003; Bond et al., 2011). Psychological flexibility is the ability to have thoughts and feelings in the present moment without the need to act on those thoughts or feelings. Psychological flexibility can also be defined as the ability to not change one's behavior despite having certain thoughts and feelings in certain situations in order to obtain specific goals and values (Bond et al., 2011).

The AAQ-II is a 7-item self-report measure scored on a 7-point Likert scale that ranges from 1 (*never true*) to 7 (*very true*). This scale contains several different constructs: negative evaluations of feelings, avoidance of thoughts and feelings, distinguishing thought from its referent, and ability to adjust behaviorally in the presence of adversity. Example questions on the AAQ-II are "Its OK if I remember something unpleasant" and "My thoughts and feelings do not get in the way of how I want to live my life" (Bond et al., 2011). Levin, Luoma, Lillis, Hayes and Vilardaga (2014) found the AAQ-II to have a very good level of reliability ($\alpha = .91$). According to Bond et al. (2011) high scores on the AAQ-II, related to higher levels of psychological inflexibility predicted higher levels of emotional distress (indicated by scores on the Beck Depression Inventory; BDI-II) ($r = .71$). They also indicated that higher scores on the AAQ-II related to overall poorer psychological health ($r = .34$). In regards to convergent and discriminant validity, the AAQ-II was positively related to measures of thought suppression. That is, higher scores on the AAQ-II indicating higher psychological inflexibility correlated with higher levels of thought suppression ($r = .63$). Also, the AAQ-II was not related to measures of social desirability indicating that participants did not feel as if they needed to

respond in any acceptable way predetermined by the society. This served as evidence for discriminant validity (Bond et al., 2011). At pretest the measure showed to have a satisfactory internal consistency value in the present study ($\alpha = .94$).

Psychological flexibility and stigma. *Acceptance and Action Questionnaire – Stigma* (AAQ-S) was used to understand one's psychological flexibility more fully (Levin et al., 2014). The AAQ-S was also included to look at psychological flexibility specifically with regard to stigmatizing thoughts, as it is common in ACT outcome studies to explore both psychological flexibility in general as well as within the specific domain targeted by the intervention (cf. Masuda et al., 2009). Items on this scale were partly adapted from the AAQ scales but novel items were also added to the measure (Levin et al., 2014). Similar to the AAQ participants responded to 21 items using a 7 point Likert scale ranging from 1 (*never true*) to 7 (*always true*). After a factor analysis was performed on the items in the scale, two main constructs were discovered. The first construct is psychological inflexibility with stigmatizing thoughts. Participants who endorse these items are likely to have frequent stigmatizing thoughts of others and act on them frequently. An example of an item is "The bad things I think about others must be true." The second factor is psychological flexibility with stigmatizing thoughts. This factor looked at the ability for the person to recognize the stigmatizing thoughts as just thoughts and not necessarily true. An example item includes, "It's okay to have friends that I have negative thoughts about from time to time" (Levin et al., 2014). Both scales showed respectable alpha values ($\alpha = .85$ and $.82$), respectively. Internal consistency reliability coefficients were also adequate ($r = .75$). That is they correlated significantly with flexibility and inflexibility scales. Validity coefficients for the subscales and total

score was used by comparing scores on the AAQ-S and other measures of psychological flexibility and stigma (Levin et al., 2014). Authors found that scores correlated significantly with these measures, with coefficients of (.23 and .43) such as the Bogardus Social Distance Scale (SDS; Bogardus, 1925) and the Social Dominance Orientation (SDO; Sidanius & Pratto, 2001). The AAQ-S was shown to be a better measure of stigma than a general measure of psychological inflexibility (AAQ-II; Bond et al, 2009; Levin et al., 2014). This measure was analyzed and found to have satisfactory alpha levels at pretest in the current study on total scale ($\alpha = .79$).

Mental illness information. The *Mental Health Knowledge Schedule* (MAKS) was used to assess the participant's general mental health knowledge. The MAKS is comprised of six different areas concerning mental health knowledge and stigma: help seeking, recognition, support, employment, treatment, recovery, and knowledge of mental illness conditions (Evans-Lacko et al., 2010). It is a 12 item self-report questionnaire. Participants responded on a 5 point Likert scale ranging from (1) *don't know* to (5) *agree strongly*. The scale is scored by adding together the response values (1-5). "Don't know" is scored as neutral (3) and several items are reverse scored (6, 8, and 12). Example items on the MAKS are, "Most people with mental health problems want to have paid employment; and people with severe mental health problems can fully recover." The authors found an overall test-retest reliability of .71. This indicates that participants responded moderately the same between the two time points (Evans-Lacko et al., 2010). According to the authors, the overall internal consistency of the measure was 0.65. The authors attribute this moderate reliability coefficient because it was not developed to function as a single scale; also people may have knowledge on one domain

but not another. Instead, the alpha values should be interpreted as tracking knowledge in specific areas (Evans-Lacko et al., 2010). Authors ensured the validity of the measure by having "expert" judges examine the content and face validity of the measure (Evans-Lacko et al., 2010). This measure was analyzed and found to have low internal consistency at pretest in the current study ($\alpha = .41$).

Procedure

Upon arrival, participants gave their SONA ID (i.e., unique and confidential identification numbers for each individual) to a researcher and were given a post-it note with their SONA ID in order to be used for pre test and post test measures. Once all participants arrived, participants were given written and verbal information outlining the purpose, risks, and benefits of the study, and they were also given the opportunity to ask questions. Upon providing informed consent, participants were handed pre test measures. The measures were administered in the following order: Demographics, CAMI, AAQ-II, AAQ-S, and MAKS. The questionnaire took about 20 minutes to be completed. After all participants completed the surveys, they were instructed to turn the packet over and place their pencils down. All surveys were then collected when every participant was done. Participants were then randomly assigned by the researchers to one of two workshops, psychoeducation or ACT via random selection of SONA ID numbers. Participants were randomly assigned by selecting their SONA ID numbers out of a cup. Both workshops took approximately 50 minutes to complete. After both of the workshops were over, the participants were given post test measures and were told to put their SONA ID on the ID line. This packet included the CAMI, AAQ-II, AAQ-S, and the MAKS. Lastly, the

participants were debriefed about the purpose of the study and told that their points will be assigned to them for participating in the study.

Treatment Condition

Participants were randomly assigned into two groups: a psychoeducation workshop and an ACT workshop. In each group, participants completed the same measures and were given the same informed consent and debriefing form. Both workshops used a modified version of the Masuda and colleagues (2007) protocol. The protocol was shortened and adapted for a 50-minute workshop rather than a 3.5 hour workshop. Both workshops were conducted by two trained clinical psychology graduate students. The graduate students were provided with a script and several training sessions supervised by a licensed psychologist with extensive training in ACT and psychoeducation based interventions. The psychoeducation condition had 42 participants, and the ACT condition had 41, making a total of 83 participants for the study. The group size was kept below 20 in order to ensure the nature of the workshops were kept interactive and personal. In addition, the size of the groups during all intervention sessions were recorded to allow for consideration of the role of group size on primary study outcomes.

In the psychoeducation workshop, the instructor of the workshop first defined mental illness and stigma. Along with the defining of these two terms, diagnostic classification and prevalence of common psychological disorders were provided in an instructional fashion using the Diagnostic and Statistical Manual of Mental Disorders (5th ed.) (DSM-5; American Psychiatric Association, 2013). Following the providing of this information examples of consequences of stigmatizing attitudes were provided.

Next, less stigmatizing views of common psychological disorders were given. For example, instead of thinking that someone diagnosed with Schizophrenia is "crazy," researchers presented that these people have a different brain structure and a way of seeing the world than people who do not have this disorder do. After less stigmatizing views of several common psychological disorders were provided, participants were encouraged to examine and become aware of their own psychological self and any stigmatizing views that they might have. Lastly, participants were encouraged to use the information that will be presented to form more accurate views of mental illness.

The ACT workshop began by allowing participants to notice how stigmatized and judgmental attitudes are automatic. This was done by naming a common psychological disorder and encouraging participants to examine the automatic thoughts that arise. In particular, common psychological disorders that were used for this exercise include depression, anxiety, schizophrenia, and bipolar disorder. Next, prevalence data on these common psychological disorders was given in an experiential fashion to help normalize the psychological disorders.

Participants were then asked to notice the relationship between people who have psychological disorders and their own personal reactions to them. Lastly, participants practiced an acceptance based activity. This activity asked participants to notice their own judgmental and stigmatized attitudes towards different psychological disorders and the people who experience them. This activity had participants notice these attitudes but not react to the thoughts in any way. That is, notice without thinking of these thoughts as real or telling others their thoughts. Participants practiced this with several psychological disorders (e.g. depression, generalized anxiety disorder, bipolar, and schizophrenia). This

allowed the participants to adequately learn the acceptance based strategy of handling stigmatizing thoughts (Masuda et al., 2007).

Analytic Strategy

Prior to primary analysis of the two hypotheses, descriptive statistics were calculated for demographic variables (i.e. participant age, sex, and level of school). Means and standard deviations were also calculated for the measures that were used in the study: CAMI, AAQ-II, AAQ-S, and MAKS. Correlations were run to examine the baseline relationship between study variables, including demographics. Lastly, the relationship between group size and changes in stigma were assessed. Demographic variables and group size that were significantly related to the primary study outcomes were included as covariates in subsequent analyses.

A repeated measures MANOVA was used to examine hypothesis 1. The independent variables used was treatment condition (i.e., ACT or psychoeducation workshop) variables used was scores on the measure of mental health stigma (i.e., the four CAMI subscales), and the two time points were pre-test before the workshop and post-test after conclusion of the workshop. Demographic variables that were significantly associated with stigma were entered as covariates in study models. It was predicted that the repeated measures MANOVA would reveal a significant time effect showing that levels of stigma decrease from pre to post test. It was also predicted that the repeated measures MANOVA would reveal a significant condition by time effect where participants in both conditions will show equal amounts of stigma at pre test and show decreases in stigma at post test. However, the ACT condition will show greater decreases in stigma than psychoeducation at post test. In the case that the repeated measures

MANOVA reveals significant results, individual repeated measures ANOVA were run to show where the significant differences lie for each subscale of the CAMI scale (authoritarianism, benevolence, social restrictiveness and community mental health ideology). A power analysis conducted in G Power (v 3.1.9.2) assuming a medium-large effect size, an alpha of .05, and a power ratio of .80 revealed that 94 participants were needed to adequately power this analysis. The obtained sample size of 83 is below the power estimate, indicating that the study was not sufficiently powered to detect a medium-large effect.

A mediation analysis was used to examine hypothesis two. Psychological flexibility and mental health knowledge were evaluated as potential mediators of the relationships between treatment condition and post-test scores of stigmatizing attitudes towards the mentally ill. A parallel multiple mediation model analysis was conducted. Change scores on the AAQ-II, AAQ-S, and MAKS were entered as the mediators between the independent variable (ACT and psychoeducation workshop) and outcome variable (i.e., post test measure), with the pre test measure of the outcome variable included as a covariate. Four separate models were conducted to examine effects on four CAMI subscales (authoritarianism, benevolence, social restrictiveness and community mental health ideology). The indirect effect of treatment condition on levels of stigma through psychological flexibility and mental health knowledge were also examined using the PROCESS macro for SPSS (Hayes, 2013). The present study used the bootstrapping technique to predict the indirect effect. The estimation of the indirect effect was drawn using 10,000 bias-corrected bootstrapped samples. Ninety-five percent confidence intervals were calculated, with the indirect effect estimates being considered significant if

the confidence intervals do not contain zero. A power analysis simulation conducted by Fritz and MacKinnon (2007) assuming moderate effects for both the a and b paths, an alpha of .05, and a power ratio of .80, revealed that 72 participants were needed to adequately power this analysis. The obtained sample size of 83 is above the power estimate, indicating that the study was sufficiently powered to detect a moderate mediation effect.

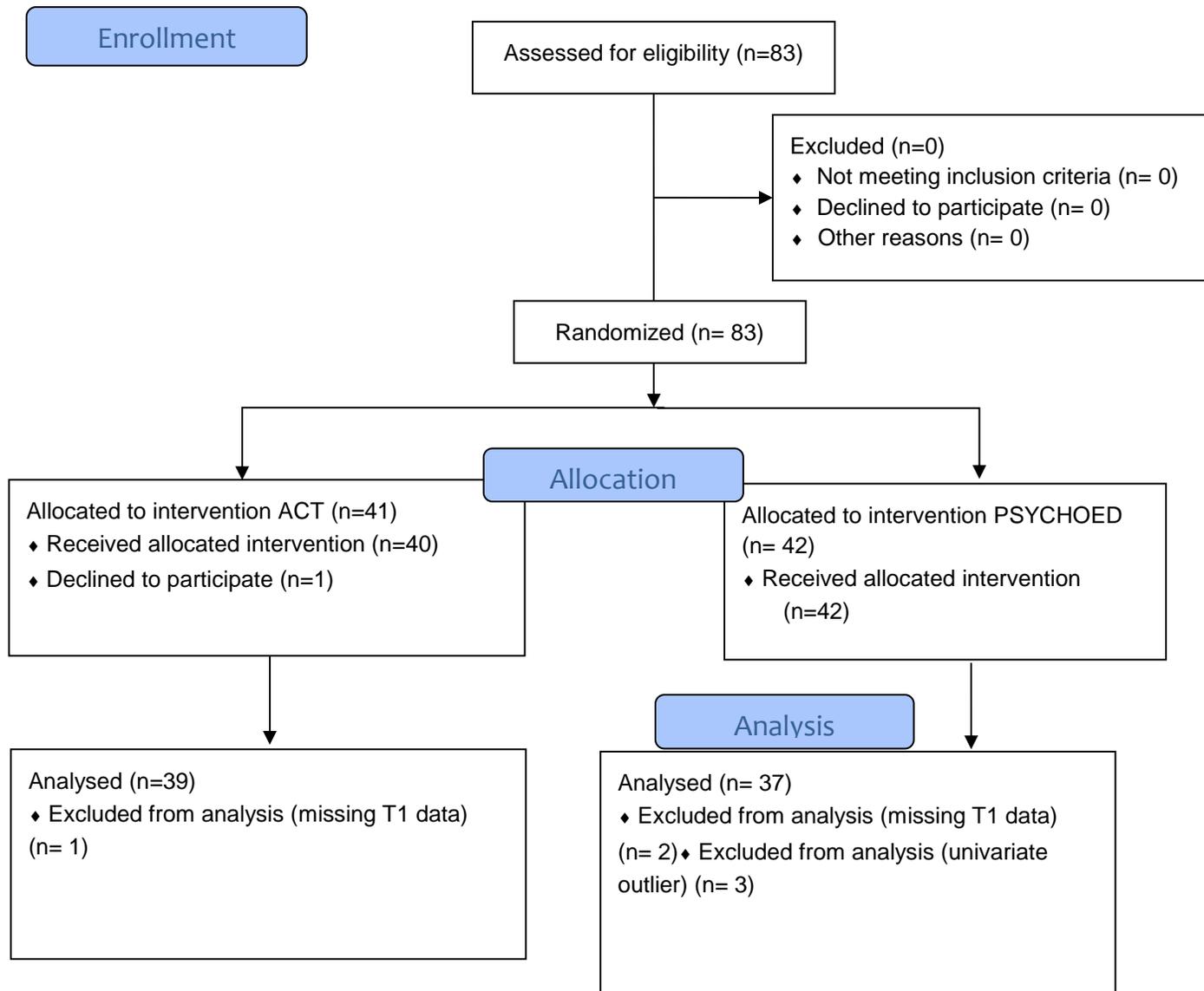
Chapter III: Analysis

Participants

Data from seven participants (8.43% of the original sample of 83) were excluded due to a decline to participate in the ACT condition ($n = 1$), missing data ($n = 3$), and for outliers on various measures ($n = 3$). Five of the excluded participants were assigned to the Psychoeducation condition and two to the ACT condition. Data from the remaining 76 participants were valid, in-range, and had no missing values. See full CONSORT diagram (Moher, Schulz, & Altman, 2001) of participant flow in Figure 1.

Regarding outliers, a univariate and multivariate outlier analysis was conducted to identify extreme values within the dataset. Three cases (3.61% of the original sample of 83) were identified as containing extreme values ($z \geq 3.29$) on study measures. One case, had higher than average values on both pre and posttest on the Authoritarianism Scale on the CAMI ($z = 3.50$ and 3.38) and pre and posttest on Social Restrictiveness Scale of the CAMI ($z = 3.70$ and 3.70). Another case responded in a way that produced a z-score that was significantly below the average score on the posttest Community Mental Health Ideology scale of the CAMI ($z = -3.43$). Lastly, another participant responded in a way that yielded values on pretest Benevolence scale of the CAMI that were significantly below the mean score ($z = -3.46$). Using a Mahalanobis distance analysis, no multivariate outliers were identified. Prior to main analysis, outliers were removed and excluded from all study analyses.

Figure 1. Participant flow diagram.



Demographic and Study Variables Baseline Analysis

Table 1 represents the demographic information of the sample, which includes gender, ethnicity, class, knowing someone with a mental health diagnosis, and having been diagnosed with a mental health diagnosis. Descriptive statistics for the sample can be found in Table 2 and include the study variables of age, CAMI, AAQ-II, AAQ-S, and MAKS. A series of chi-square tests of independence revealed that demographic variables did not differ significantly between conditions.

An independent-samples t-test was conducted to compare age in psychoeducation and ACT treatment conditions. There was not a significant difference in age for psychoeducation ($M = 19.27$, $SD = 1.37$) and ACT ($M = 19.36$, $SD = 2.64$) groups; $t(74) = -0.18$, $p = 0.86$. This suggests that average age of the participant within the group did not vary from ACT to psychoeducation condition. Participants were assigned randomly and equally (+/- one group member in the case of an odd number of participants) to the conditions during each experimental session, with group sizes ranging from 4 to 10 ($M = 7.5$, $SD = 1.9$). There was not a statistically significant difference between conditions in group size, $t(4) = .065$, $p = .55$. Given that all assessed demographic variables did not differ significantly between intervention conditions, no demographic variables were considered for entry as covariates in the primary study analyses.

Correlations between pre test dependent variables and process variables are presented in Table 3. Pretest Authoritarianism scale was moderately and negatively correlated with both the Benevolence and Community Mental Health Ideology Scale and positively correlated with the Social Restrictiveness Scale. The Benevolence scale also shows a negative moderate correlation with the Social Restrictiveness Scale and a

positive moderate correlation with the Community Mental Health Ideology Scale.

Finally, Social Restrictiveness showed a strong negative correlation with the Community Mental Health Ideology scale. AAQ Stigma total score was positively correlated with both the Authoritarianism Scale and Social Restrictiveness Scale. The AAQ Stigma total score was negatively correlated with the Benevolence Scale.

Table 1. Demographic characteristics of sample.

Characteristics	N (%)			Chi-Square
	Total	ACT	Psychoed	
Gender ^a				.965
Male	23 (30.2)	10 (25.6)	13 (36.1)	
Female	52 (68.4)	29 (74.4)	23 (63.9)	
Transgender	1 (1.3)			
Race/Ethnicity ^b				.023
American Indian or Alaskan Native	3 (3.9)	3 (7.7)	0 (0)	
Hawaiian or other Pacific Islander	1 (1.3)	0 (0)	1 (2.7)	
Asian or Asian American	1 (1.3)	0 (0)	1 (2.7)	
Black or African American	12 (15.8)	6 (15.4)	6 (16.2)	
Non-Hispanic White	59 (77.6)	30 (76.9)	29 (78.4)	
Class ^c				.963
Freshman	51 (67.1)	28 (71.8)	23 (45.1)	
Sophomore	16 (21.1)	5 (12.8)	11 (6.9)	
Junior	8 (10.5)	5 (12.8)	3 (3.8)	
Senior	1 (1.3)	1 (2.6)	0 (0)	
Know Someone with Diagnosis				.006
Yes	68 (89.4)	35 (89.7)	33 (89.2)	
No	8 (10.5)	4 (10.3)	4 (10.8)	
Diagnosed with Mental Illness				.023
Yes	17 (22.4)	8 (21.1)	9 (23.7)	
No	59 (77.6)	30 (78.9)	29 (76.3)	
Condition				
Psychoeducation	37 (48.7)			
ACT	39 (51.3)			

N = 76.

Note. ^aGender was dichotomized into male and female. One case who identified as transgender was masked to prevent an expected cell count of less than 5; ^bRace/Ethnicity was dichotomized into people of color and white due to the presence of multiple expected cell counts of <5 across several levels of race/ethnicity; ^cClass was dichotomized into two groups: freshman/sophomore and junior/senior/graduate students due to the presence of multiple expected cell counts of <5 across several levels of class.

Table 2. Means and Standard Deviations of Study Variables

Variables	Mean (SD)		
	Total	ACT	Psychoed
Age	19.3 (2.1)	19.4 (2.6)	19.3 (1.4)
Authoritarianism (CAMI)			
Pre	24.1 (4.0)	23.5 (3.9)	23.5 (4.2)
Post	22.7 (4.2)	22.6 (3.0)	22.6 (4.3)
Effect Size	0.34		
Benevolence (CAMI)			
Pre	40.3 (4.4)	39.9 (3.7)	40.7 (5.0)
Post	41.0 (4.7)	40.6 (4.5)	41.5 (5.0)
Effect Size	-0.15		
Social Restrictiveness (CAMI)			
Pre	20.9 (5.1)	22.1 (5.1)	19.7 (4.9)
Post	19.7 (5.0)	20.5 (5.2)	19.1 (4.8)
Effect Size	0.24		
CMHI (CAMI)			
Pre	37.9 (5.8)	36.7 (5.2)	39.2 (6.1)
Post	39.5 (5.2)	38.8 (4.9)	40.2 (5.4)
Effect Size	-0.29		
Psych. Flex (AAQ)			
Pre	25.4 (12.04)	23.4 (12.7)	27.4 (11.0)
Post	25.4 (13.0)	23.4 (13.6)	27.5 (12.2)
Effect Size	0		
Stigma Flex (AAQ-S)			
Pre	63.8 (14.3)	63.9 (14.4)	63.6 (14.4)
Post	63.8 (15.6)	64.8 (15.1)	62.9 (16.2)
Effect Size	0		
Knowledge (MAKS)			
Pre	22.6 (3.1)	22.08 (3.2)	22.2 (2.9)
Post	24.0 (3.2)	23.4 (3.4)	24.6 (2.9)
Effect Size	-0.13		

N = 76.

Note. CMHI = Community Mental Health Ideology. Psych. Flex = Psychological flexibility. Stigma Flex = Psychological flexibility related to stigma.

Table 3. Baseline Correlations between pretest study variables.

	1	2	3	4	5	6	7
1. Authoritarianism (CAMI)	-	-.626**	.753**	-.563**	.380**	.562**	-.370**
2. Benevolence (CAMI)		-	.702**	-.559**	-.248*	.410**	.316**
3. Social Restrictiveness (CAMI)			-	-.751**	.295**	-.443**	-.341
4. Community Mental Health Ideology (CAMI)				-	-.202	.311*	.358**
5. Psychological Flexibility Stigma (AAQ-S)					-	-.234	.157
6. Mental Health Knowledge (MAKS)						-	.420**
7. Psychological Flexibility (AAQ)							-

N = 76

* p < .05

** p < .01

Levels of Stigma across Treatment Conditions (Hypothesis One)

Prior to conducting a repeated measures MANOVA, the homogeneity of variance assumption was tested using Box's M. The Box's M value of 34.08, $p = .74$, was not significant, therefore satisfying the assumption of homogeneity of variance where the groups covariance across dependent variables did not differ significantly. Normality of data was assessed using QQ plots which revealed no evidence of violation of normality, satisfying the normality assumption. No demographic variables were added to the repeated measures MANOVA model as covariates due to no significant differences between conditions across the demographic variables.

A repeated measures MANOVA (multivariate analysis of variance) was conducted in order to examine the pattern of stigma across time points for the ACT and psychoeducation treatment condition. The model revealed a significant multivariate main effect for condition, Pilla's Trace = 0.243, $F(36, 18, 316) = 5.698$, $p < .001$, partial $\eta^2 = 0.243$. That is, there were significant changes in average scores across the four dependent variables for both conditions from pre to post test. Given the significant multivariate test, a series of univariate models for each scale of the CAMI were examined. Four repeated measure univariate ANOVAs revealed significant reductions in average scores across all four scales of the dependent variable: Authoritarianism, $F(36, 18, 316) = 17.989$, $p < .001$, partial $\eta^2 = 0.196$; Benevolence, $F(36, 18, 316) = 4.728$, $p = .033$, partial $\eta^2 = 0.060$; Social Restrictiveness $F(36, 18, 316) = 8.068$, $p = .006$, partial $\eta^2 = 0.098$; and Community Mental Health Ideology, $F(36, 18, 316) = 11.582$, $p < .001$, partial $\eta^2 = 0.135$. Results indicate that all scales moved in the desired direction, that is

Authoritarianism scores decreased, Benevolence scores increased, Social Restrictiveness scores decreased, and Community Mental Health Ideology scales increased from pre to post test. Means and standard deviations can be found in Table 2.

The repeated measures MANOVA revealed a non-significant interaction between pre and post test measures and condition, Pilla's Trace = 0.066, $F(36, 18316) = 1.254$, $p = .296$, partial $\eta^2 = 0.066$. This suggests that changes in levels of stigma did not differ significantly between ACT and psychoeducation conditions from pre to post assessment.

Process of Change (Hypothesis Two)

Three linear regression models predicting changes in psychological flexibility and mental health knowledge (i.e., AAQ-II, AAQ-S, and MAKS) using study condition as the predictor variable were not statistically significant (see table 4 for parameters).

With regard to authoritarianism outcomes, the linear regression model predicting post scores was statistically significant, $F(5, 50) = 20.67$, $R = .77$, $p < .001$ (see table 5 for all model parameters). However, there was not a statistically significant indirect effect for authoritarianism through any of the hypothesized mediators, AAQ, $a_1b_1 = 0.02$, 95% CI [-0.20, .44], AAQ-S, $a_2b_2 = .004$, 95% CI [-0.61, 0.45], and MAKS, $a_3b_3 = 0.01$, 95% CI [-0.17, 0.41]. The linear regression model also predicted statistically significant post scores for Benevolence $F(5, 50) = 29.99$, $R = 0.83$, $p < .001$ (see table 6 for all model parameters). However, there were not any statistically significant indirect effects for Benevolence through any of the hypothesized mediators (AAQ, $a_1b_1 = .008$, 95% CI [-0.26, 0.12], AAQ-S, $a_2b_2 = -0.07$, 95% CI [-0.42, 0.60], and MAKS, $a_3b_3 = -0.02$, 95% CI [-0.45, 0.41]).

With regards to social restrictiveness, the linear regression model predicting post scores was statistically significant, $F(5, 50) = 21.25$, $R = 0.78$, $p < .001$ (see table 7 for all model parameters). However, there was not a statistically significant indirect effect for social restrictiveness through any of the hypothesized mediators, AAQ, $a_1b_1 = 0.12$, 95% CI [-0.22, 0.38], AAQ-S, $a_2b_2 = 0.05$, 95% CI [-0.09, 0.45], and MAKS, $a_3b_3 = 0.02$, 95% CI [-0.33, 0.43]. Lastly, the linear regression model predicting post scores for community mental health ideology was statistically significant, $F(5, 50) = 23.33$, $R = 0.79$, $p < .001$ (see table 8 for all model parameters). However, there was not a statistically significant indirect effect for community mental health ideology through any of the hypothesized mediators, AAQ, $a_1b_1 = -0.03$, 95% CI [-0.53, 0.34], AAQ-S, $a_2b_2 = -0.15$, 95% CI [-0.66, 0.14], MAKS, $a_3b_3 = -0.03$, 95% CI [-0.49, 0.44].

Although the mediation analyses did not reveal an indirect effect, the analyses revealed several significant b paths. Specifically, changes in knowledge about mental health predicted scores on the Benevolence and Community Mental health ideology scales at post test. The results showed that increased knowledge resulted in a decrease in levels of stigma reported on these scales (See Table 6 and 8). Also, change in general psychological flexibility predicted stigmatizing thoughts on the community mental health ideology scale at post test. Specifically, participants who increased psychological flexibility reported less stigmatizing thoughts on this scale at post test (See table 8).

Table 4. Effects of interventions on changes in psychological flexibility and mental health knowledge^a.

		B	SE	<i>p</i>
AAQ	<i>a</i> ₁	-0.13	0.94	.890
AAQS	<i>a</i> ₂	1.52	1.73	.381
MAKS	<i>a</i> ₃	-.07	0.60	.904

Note. ^aAcceptance and Commitment workshop was coded as a 1 and Psychoeducation coded as 0 for analysis purposes. AAQ = Acceptance and Action Questionnaire. AAQS = Acceptance and Action Questionnaire – Stigma. MAKS = Mental Health Knowledge Schedule

Table 5. Model coefficients examining the effects of treatment condition (ACT vs. psychoeducation) on Authoritarianism Scale at post test via Psychological Flexibility and Mental Health Knowledge.

		Authoritarianism Post Test		
		B	SE(B)	<i>p</i>
IV (Condition)	<i>c'</i>	-0.85	0.64	.19
AAQ Change	<i>b</i> ₁	-0.13	0.08	.10
AAQS Change	<i>b</i> ₂	0.03	0.04	.58
MAKS Total Change	<i>b</i> ₃	-0.16	0.13	.23
Authoritarianism Pre Test		0.77	0.08	< .01**

** *p* > .01

Note. AAQ Change = Change in Psychological Flexibility from pre to post test. AAQS Change = change in psychological flexibility related to stigma from pre to post test. MAKS Total Change = Change in mental health knowledge from pre to post test.

Table 6. Model coefficients examining the effects of treatment condition (ACT vs. Psychoeducation) on Benevolence Scale at post test via Psychological Flexibility and Mental Health Knowledge.

		Benevolence Post Test		
		B	SE(B)	<i>p</i>
IV (Condition)	<i>c'</i>	-0.15	0.64	.82
AAQ Change	<i>b₁</i>	0.06	0.08	.43
AAQS Change	<i>b₂</i>	-0.05	0.04	.31
MAKS Change	<i>b₃</i>	0.32	0.13	.02*
Benevolence Pre Test		0.86	0.07	.01**

* $p < .05$

** $p < .01$

Note. AAQ Change = Change in Psychological Flexibility from pre to post test. AAQS Change = change in psychological flexibility related to stigma from pre to post test. MAKS Total Change = Change in mental health knowledge from pre to post test.

Table 7. Model coefficients examining the effects of treatment condition (ACT vs. Psychoeducation) on Social Restrictiveness Scale at post test via Psychological Flexibility and Mental Health Knowledge.

		SocialRestrictiveness Post Test		
		B	SE(B)	<i>p</i>
IV (Condition)	<i>c'</i>	-0.37	0.77	.64
AAQ Change	<i>b₁</i>	-0.13	0.09	.18
AAQS Change	<i>b₂</i>	0.03	0.05	.54
MAKS Total Change	<i>b₃</i>	-0.28	0.15	.07
SocialRestrictiveness Pre Test		0.74	0.08	.01**

** $p < .01$

Note. AAQ Change = Change in Psychological Flexibility from pre to post test. AAQS Change = change in psychological flexibility related to stigma from pre to post test. MAKS Total Change = Change in mental health knowledge from pre to post test.

Table 8. Model coefficients examining the effects of treatment condition (ACT vs. Psychoeducation) on Community Mental Health Ideology Scale at post test via Psychological Flexibility and Mental Health Knowledge.

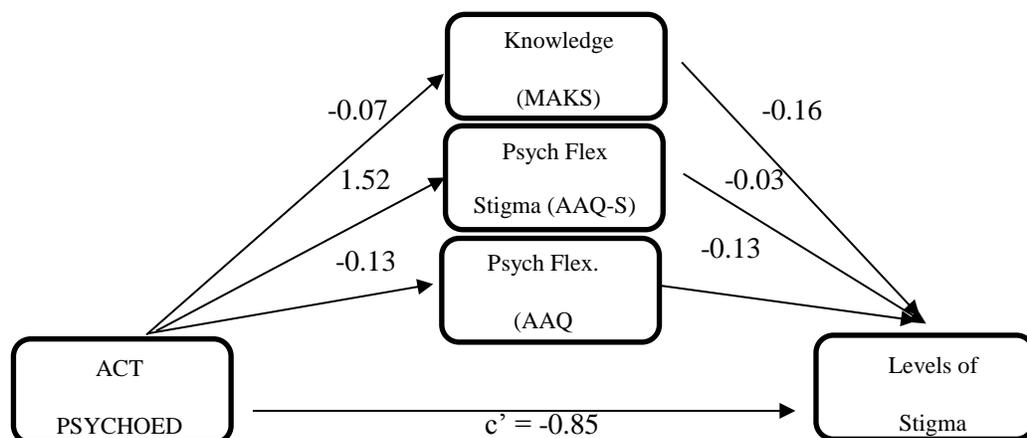
		CMHI Post Test		
		B	SE(B)	<i>p</i>
IV (Condition)	<i>c'</i>	0.48	0.77	.54
AAQ Change	<i>b₁</i>	0.20	0.09	.03*
AAQS Change	<i>b₂</i>	-0.10	0.05	.07
MAKS Total Change	<i>b₃</i>	0.35	0.16	.03*
CMHI Pre Test		0.67	0.07	.01**

* $p < .05$

** $p < .01$

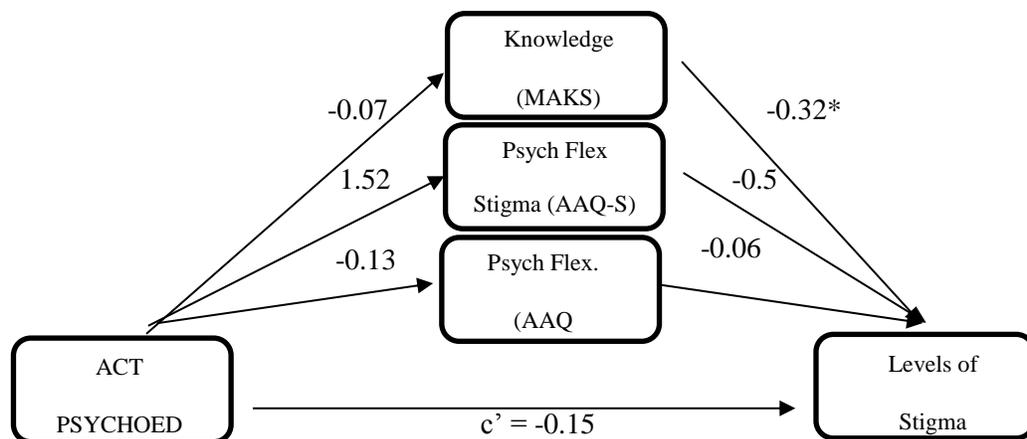
Note. AAQ Change = Change in Psychological Flexibility from pre to post test. AAQS Change = change in psychological flexibility related to stigma from pre to post test. MAKS Total Change = Change in mental health knowledge from pre to post test. CMHI = Community Mental Health Ideology.

Figure 2. Mediation model predicting post test Authoritarianism scores.



Note. Psych Flex. Stigma = Psychological Flexibility Stigma. Psych Flex. = General Psychological Flexibility. ACT = Acceptance and Commitment Therapy. Psychoed = Psychoeducation

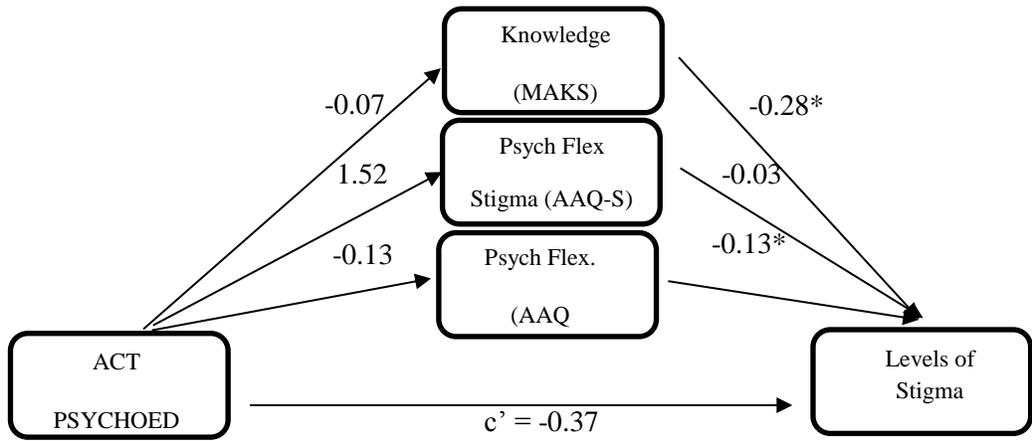
Figure 3. Mediation model predicting post test Benevolence scores.



Note. Psych Flex. Stigma = Psychological Flexibility Stigma. Psych Flex. = General Psychological Flexibility. ACT = Acceptance and Commitment Therapy. Psychoed = Psychoeducation

* $p < .05$

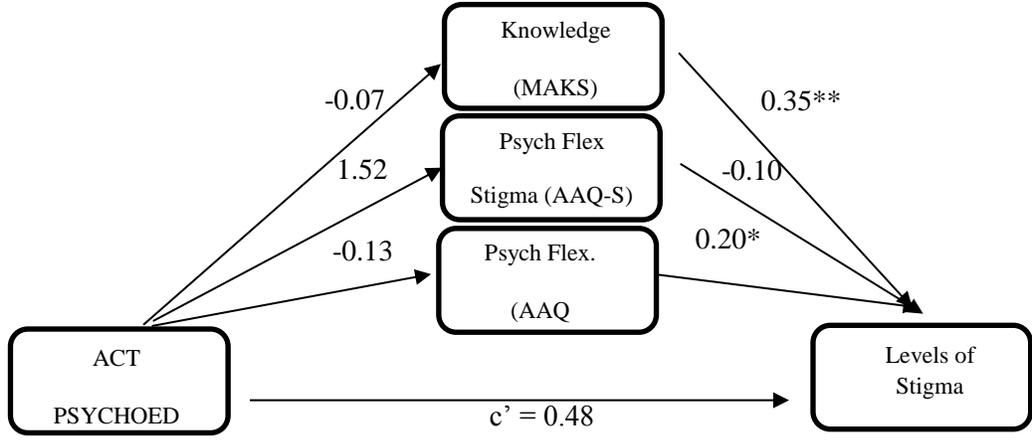
Figure 4. Mediation model predicting post test Social Restrictiveness scores.



Note. Psych Flex. Stigma = Psychological Flexibility Stigma. Psych Flex. = General Psychological Flexibility. ACT = Acceptance and Commitment Therapy. Psychoed = Psychoeducation

* $p < .05$

Figure 5. Mediation model predicting post test Community Mental Health Ideology scores.



Note. Psych Flex. Stigma = Psychological Flexibility Stigma. Psych Flex. = General Psychological Flexibility. ACT = Acceptance and Commitment Therapy. Psychoed = Psychoeducation

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

Chapter IV: Conclusions

Reductions in Stigma

The present study revealed that two separate treatment conditions (ACT and psychoeducation) were both effective in reducing levels of stigma related towards mental illness. This shows evidence to support that specifically targeting either one's knowledge regarding mental illness or one's psychological relationship with stigmatizing thoughts is a successful treatment for reducing stigma towards people who suffer from psychological difficulties. This is consistent with results from Masuda and colleagues' (2007) study showing that one treatment group did not outperform the other when looking at change in stigma related to mental illness. This finding is also consistent with past literature showing broad support for psychoeducation as a stigma reduction intervention (Mittal et al., 2012; Shin & Lukens, 2002; Snowden, 1999).

This pattern of results indicates that providing information regarding the characteristics, prevalence, common experiences, and less stigmatizing views is just as an effective treatment as encouraging individuals to expand their current view of thinking. Although ACT did not perform any better than the psychoeducation condition, ACT still produced significant reductions in levels of stigma from pre to post test. Psychoeducation is a widely included into treatments and established as a treatment for a variety of problems such as prolonged exposure for post-traumatic stress disorder (Rauch et al., 2009) and behavioral activation for depression (Barlow, 2014). ACT is a relatively new

treatment, and has shown itself to be just as effective as an established treatment for stigma reduction interventions.

While the obtained findings are broadly supportive of both ACT and psychoeducation, it is important to note that they are inconsistent with Masuda and colleagues (2009) study demonstrating the superiority of ACT in reducing stigma. A potential explanation for a failure to replicate past findings may be changes in the intervention. In the present study, the materials used were drawn from Masuda and colleagues (2009) study. However, interventions were shortened by over 2 hours. It is possible that the 50-minute intervention, (i.e., only 27% of the length of the original) was not long enough to support greater reductions in stigma from pre to post test. Additional research is needed to explore the dose of intervention needed in order to show greater reduction in stigma when compared to psychoeducation. For example, research could be performed comparing different workshop lengths (i.e., 1 hour, 2 hour, and 3 hours across pre to post test.

Another possibility for the inconsistency in results when compared to Masuda and Colleagues (2009) study is the rigorousness of the present study. The present study had a substantially larger sample than the Masuada and colleagues (2009) study: 76 up from 27. Increasing the sample size increases the chance of finding a true effect. The present study also used more advanced statistical analysis (i.e., parallel mediational analysis) to examine process of change., Further evidence is needed to parse out inconsistencies between the two studies.

Based on the analysis, statistical significant changes in stigma were observed from pre to post test in both treatment interventions. Although one condition did not

outperform the other condition in reducing rates of stigma, the present study showed evidence that a short-term intervention was enough to support reductions in stigma from pre to post test. However, effect sizes obtained from the present study were lower than those found in past research. Effect sizes of change in stigma from previous intervention studies range from (1.78 to 0.60; Masuda et al., 2009; Masuda et al., 2007). In contrast, effect sizes found in the present study range from 0 to 0.34. Past research shows the effectiveness of brief interventions on lowering levels of stigma. One possible explanation for this discrepancy is that the present workshops were too brief to generate clinically meaningful reductions in stigma. However, based on past research showing the effectiveness of brief education and ACT interventions, and the statistical significance of the present results, stigma reductions programs serve a useful purpose. For example, short term workshops may be implemented into college settings, educating faculty, student workers, or students about the role that stigma plays. Clinical significance should be explored further by including a follow up study looking at the long-term effects of psychoeducation and ACT on levels of stigma.

Mechanism of Change

Regarding the mechanism of change, the present study found that changes in psychological flexibility and education did not indirectly effect the change in stigma through the treatment received. Although previous research has shown a trend towards significant relationships between treatment condition (ACT) and changes in psychological flexibility (Masuda et al., 2007), such a conclusion is not supported in the current study. Although levels of stigma reduced across both intervention conditions, changes in stigma were not related indirectly through changes in levels of the

hypothesized mediators (i.e., psychological flexibility and mental health knowledge). However, changes in psychological flexibility according to the Acceptance and Action Questionnaire in the present study were shown to have an effect on the Community Mental Health Ideology scale on the CAMI. This shows that although overall changes in psychological flexibility did not explain why reductions in stigma occurred, that changes in psychological flexibility are related to some change in certain aspects of stigma. Specifically, the integration of mental health services in a community setting. These results show that increase in psychological flexibility may lead to an increase in less restricting thoughts on community integration of those with a mental illness, however future research is needed to explore this relationship further.

However, the broad results of the present study do not indicate psychological flexibility as a mechanism of change for reductions in stigma. A potential explanation ties into the discussion of the stigma reduction findings above. In particular, a 50-minute dosage of ACT may not be effective in influencing one's psychological flexibility. Studies looking at the role of psychological flexibility in stigma reduction programs had intervention programs up to 3 hours (Masuda et al., 2007; Kenny & Bizumic, 2016). Studies also looking at the overall effectiveness of ACT on a variety of psychological disorders show that several weeks of sessions are often needed to show improvements in quality of life of the individual participating in treatment. For example, a study that looked at the effects of ACT in older adults who had a diagnosis of Generalized Anxiety disorder, found that 12 weekly sessions at 1 hour each was sufficient to decrease symptoms of anxiety in older adults (Wetherell et al., 2011).

Similar to psychological flexibility, acquiring information regarding mental illness did not statistically predict the changes in levels of stigma. Although changes in stigma did not result through any predicted mediators, education did have an effect on certain aspects of stigma; specifically, benevolence and community mental health ideology. This suggests that educating individuals on specific characteristics and experiences of individuals with a mental illness may increase compassion towards those individuals. However, more research needs to be conducted to explore the specific effects that education may have on aspects of stigma.

Another possible explanation for the failure to replicate Masuda et al. (2009) is other intervention differences, such as the training of the interventionists. In Masuda and colleagues' (2007; 2009) studies were conducted by graduate students who had undergone several ACT training and workshops before leading the ACT workshop. Although trained, researchers conducting the intervention workshops in the current study were significantly less trained than the former researchers. That is, researchers did not undergo formal training or workshops in ACT before leading the groups in this study. However, they were guided by a trained psychologist in Acceptance and Commitment Therapies for the duration of the research. Thus, perhaps the specific skills that are needed to effectively lead a workshop in ACT were not developed enough in order to encourage a new way of thinking about stigma towards mental illness.

Another possible explanation for the discrepancy in results is potential treatment overlap. Because researchers practiced together and were trained on both psychoeducation and ACT techniques, treatment overlap may have occurred. For example, facilitation style may have overlapped from ACT to psychoeducation group or

vice versa. In future studies, in order to prevent treatment overlap and ensure no contamination in either condition, workshop facilitators should be trained separately. This will ensure that information presented in one condition will not contaminate the other treatment condition.

Finally, small changes in levels of stigma may be due to demand characteristics. That is, participants in the present study responded in a way that would produce desirable results based on understanding of the hypothesis (Nichols & Maner, 2008). Researchers found that participants in general responded in a way that produced desirable results when a confederate revealed parts of the hypothesis (Nichols & Maner, 2008). It is possible that the participants knew that the goal was to reduce levels of stigma from pre workshop to post workshop and thus responded in a way that confirmed this hypothesis. Future research should include variables that measure for knowledge of hypothesis in order to control for this possibility in analysis.

Limitations, Strengths, and Future Directions

This study when compared to Masuda and colleagues (2007; 2009) studies and the broad literature had many limitations. The first limitation is a lack of intervention adherence checks. The researchers received training over the course of 3 separate meetings for an hour and a half and a week of a graduate level psychotherapy class focused on ACT. A trained psychologist in ACT based techniques reviewed intervention scripts and materials. The trainer also practiced with the researchers before giving the interventions to participants. Researchers also learned about the specific elements of Acceptance and Commitment Therapy along with psychoeducation over the course of one week for each topic. Practicing the workshops included reading through several

elements of the workshop and receiving feedback from other facilitators and the trained psychologist. However, after the initial training there were no formal intervention checks performed to maintain treatment adherence. Future studies should include a measure of intervention fidelity to ensure that treatments differed and researchers did not overlap techniques.

One line of research offers recommendations on a number of dimensions to protect treatment fidelity. Research looking at concepts and strategies defined by the National Institute of Health Behavior Change Consortium identified five dimensions on which treatment fidelity should be looked at throughout the study. These five dimensions include, design of the study, training of providers, delivery of treatment, receiving treatment, and use of treatment skills (Belg et al., 2004). Several recommendations from this study include addressing setbacks beforehand, such as participant drop out. Other recommendations include treatment dose received is the same for each participant, treatment sessions are conducted similarly each time, and ensure participants are able to use skills taught in intervention.

Based off of these 5 dimensions, a treatment fidelity checklist has been developed (Borrelli et al., 2005). Further research comparing two active interventions should take advantage of such checklist to ensure treatment fidelity. Adherence to treatment fidelity increases confidence in the conclusions that the changes in the dependent variable were a result of the independent variable.

The measures used in this study also posed as a limitation. The version of the Mental Health Knowledge Schedule (MAKS) used contained an error, despite being obtained from an official source (i.e., the Centre for Local Economic Strategies in the

U.K.). Unknown until data entry and analysis, the Likert scale on the MAKS had reversed the third and fourth options. Instead of the options following this order for the third and fourth ratings “Disagree Slightly, Disagree Strongly” the two were reversed to say “Disagree Strongly, Disagree Slightly.” Thus, participants may not have been able to give an accurate representation of their knowledge that they had or had not obtained from the intervention. The MAKS also had low internal consistency values, however authors of the scale state that this number should not be interpreted because the measure was not developed to be used as a scale (Evans-Lacko et al., 2010). Future research should ensure the integrity of the MAKS prior to use or find a new measure of mental health knowledge. One potential measure: is the Mental Health Literacy Scale (MHLS; O’Connor & Casey, 2015). This scale has 35 total items and measures knowledge of mental illness on 6 different levels: ability to recognize specific disorders, knowledge of seeking mental health information, knowledge of risk factors and causes, knowledge of self-treatment, knowledge of help available, and attitudes that reflect help-seeking.

Another limitation was the measure used for measuring mental health stigma. This CAMI was developed in 1981 (Taylor & Dear, 1981) and its age is reflected in many of the questions used. For example, questions are included that represent a woman’s perspective but not a man’s “A woman would be foolish to marry a man who has suffered from mental illness, even though he seems fully recovered.” Thus, a more culturally sensitive measure for stigma may be more appropriate. For instance, researchers Kenny and Bizumic (2016) have developed a measure of prejudicial attitudes towards individuals with a mental illness, the Prejudice towards People with Mental Illness Scale (PPMI). This measure is also measured on a four factor scale and excellent

reliabilities ($\alpha = .91$; Kenny & Bizumic, 2016), whereas several scales on the CAMI showed moderate internal consistency values.

The obtained sample size of 76 was below the power estimated needed to detect a medium-large effect size. Adequate power is needed to discover a true effect and to prevent committing a type II error. Future research should aim at increasing the sample size in order to adequately power both analyses. This will improve confidence in the effects found, and allow for better powered exploration of possible mechanisms of ACT and psychoeducation based interventions.

Lastly, a measure of group style or group interaction should be included in future research. For example, specific group behaviors such as interaction with facilitators, interaction with other group members, and level of disagreement/agreement, could be assessed. How the members of the group interacted with each other and the behavior of the researchers leading the group were not recorded in the present study. However, differences in group interactional style may have played a role in the way information or techniques was understood and used during or after the workshops. For instance, measures of group cohesion, such as the Group Climate Questionnaire (GCQ-S) that looks at members' perceptions of group members' level of engagement, conflict, or avoidance could be used to explore group dynamics (MacKenzie, 1983). Future research may also include recording group sessions, and coding for certain behaviors such as engagement, disagreement, or avoidance.

Despite the general limitations, the present findings have implications for both ACT and psychoeducation as effective interventions for stigma reduction. A main strength of the study is that it attempted to answer "how" both interventions work.

Kazdin (2008) argued that when performing research, there is a need to explain how interventions work rather than showing that they do work to improve quality of life. Although the present data did not allude to statistically significant indirect effects through the predicted mediators, the data shows a positive trend for the impact of mental health knowledge and psychological flexibility on stigma. The study also had included an active psychoeducation control group to compare the effectiveness of two treatments and their effectiveness on stigma towards individuals with a mental illness. The inclusion of a control group allows consumers of the data to see the effectiveness of both interventions, but also compare them to each other. This allows individuals to make informed decisions about types of treatments that will be used with individuals.

Reductions in stigma show implications in the context of mental health treatment. Research shows that only 30 to 40% of individuals who report having a mental illness receive treatment for their difficulties (Kessler et al., 2001; Regier et al., 1993) and individuals who report receiving psychological services also report less self-stigma towards their own difficulties (Vogel, Wade & Haake, 2006). Thus, reducing stigma shows important implications for individuals utilizing services for their difficulties. Stigma may also be targeted not in the context of barriers towards mental health services in the context of the maltreatment of individuals with mental illness. For example, research shows that individuals with mental illness also experience difficulties with social opportunities such as criticism in the work place (Corrigan, 2004).

The present study also shows implications for programs targeting stigma reduction in college students, specifically targeted at faculty and staff of the university. Research shows that only 18% of college students with a mental illness seek treatment.

This is compared to 21% of same aged non college students who seek treatment (Eisenberg, Hunt, & Speer 2012). Stigma has been shown to be a common barrier in individuals with mental illness in college, thus, implementing stigma reduction programs in college populations may be useful. However, research also shows that factors such as perceived need for services, knowing someone who has received treatment, or culture (Eisenberg, Hunt, & Speer2012). Future research should look at the effectiveness of ACT and psychoeducation on targeting other barriers that may keep individuals from receiving mental health services. These programs to not only target stigma, but other barriers that may stop college students from receiving treatment.

Conclusion

The present research shows that both treatment interventions, psychoeducation and Acceptance and Commitment Therapy, are beneficial as interventions for reducing stigmatizing thoughts towards individuals who have a mental illness. Although the results did not show a tendency for one intervention over the other in reducing levels of stigma more or psychological flexibility and education as mediators, results showed that education gained and greater psychological flexibility had an effect on an individual's stigmatizing attitudes. This research shows the importance of combatting stigmatizing attitudes towards mental illness, and that the change in stigmatizing attitudes can occur in one 50-minute window. By actively combatting stigma towards individuals who experience a mental illness, we can increase their experience and the services utilized by those individuals.

Appendix I: IRB Approval Letter

TO: Michael Bordieri
Psychology

FROM: Institutional Review Board
Jonathan Baskin, IRB Coordinator

DATE: 2/13/2017

RE: Human Subjects Protocol I.D. – IRB # 17-101

The IRB has completed its review of your student's Level 2 protocol entitled Stigma and Mental Health Workshop. After review and consideration, the IRB has determined that the research, as described in the protocol form, will be conducted in compliance with Murray State University guidelines for the protection of human participants.

The forms and materials that have been approved for use in this research study are attached to the mail containing this letter. These are the forms and materials that must be presented to the subjects. Use of any process or forms other than those approved by the IRB will be considered misconduct in research as stated in the MSU IRB Procedures and Guidelines section 20.3.

This Level 2 approval is valid until 2/12/2018.

If data collection and analysis extends beyond this time period, the research project must be reviewed as a continuation project by the IRB prior to the end of the approval period, 2/12/2018. You must reapply for IRB approval by submitting a Project Update and Closure form (available at murraystate.edu/irb). You must allow ample time for IRB processing and decision prior to your expiration date, or your research must stop until such time that IRB approval is received. If the research project is completed by the end of the approval period, then a Project Update and Closure form must be submitted for IRB review so that your protocol may be closed. It is your responsibility to submit the appropriate paperwork in a timely manner.

The protocol is approved. You may begin data collection now.

Appendix II: Demographics Questionnaire

Please answer the following Questions:

1. Please write your age: _____

2. How do you describe yourself? (check one)
 - a. Male
 - b. Female
 - c. Transgender
 - d. Do not identify as female, male, or transgender

3. How do you describe yourself?
 - a. American Indian or Alaskan Native
 - b. Hawaiian or Other Pacific Islander
 - c. Asian or Asian American
 - d. Black or African American
 - e. Hispanic or Latino
 - f. Non-Hispanic White

4. Which class/level most closely describes you?
 - a. Freshman
 - b. Sophomore
 - c. Junior
 - d. Senior
 - e. Graduate

5. Do you know someone with a mental illness?
 - a. Yes
 - b. No

6. Have you been diagnosed with a mental illness?
 - a. Yes
 - b. No

Appendix III: Acceptance and Commitment Therapy Workshop Protocol

Group Brain Storming:

F: What kind of attitudes or reactions do people usually have towards people with psychological problems? Can you think of how you have seen friends or family members reaction to someone you know who has had an eating disorder, become depressed, had panic attacks, had a serious drug or alcohol problem, or had another disorder? How do people react to people who are acting odd on the street?

F: What happens when you see those with psychological disorders?

Stigma Defined: objectification and dehumanization of other human beings (It is about the lack of empathy toward others and self).

Stigma may be defined as the objectification and dehumanization of other individuals or even ourselves. It is almost like seeing another person as an object. We think this is related to how human beings use language and we will talk about this more later

Pervasiveness of Stigma

F: Let's go back to the definition of stigma. We define stigma as the objectification and dehumanization of other people because of our linguistic practice. Let's look at the nature of linguistic practice carefully. Language is used to categorize, label, compare, and evaluate events. When we categorize and compare events, we automatically evaluate an event a certain way. We might do the same thing in the case of stigma.

F: When are we using language? Almost all the time, right?

F: So if what we are saying here is that sometimes language is bad, why don't we just get rid of it? For instance, when we have a thought that we know is politically incorrect or unethical, why don't we just stop thinking that thought? (Giving an example of a stigmatizing thought one might want to get rid of might be good here.) This is a very common sense approach; if something is "bad" we need to get rid of it. This is how we often approach thoughts we don't like. But is this really working? We will do an exercise that captures the difficulty of eliminating and controlling thoughts we don't want, including our stigmatizing thoughts. Let's see if this is the case with another thought!

What Are the Numbers?

Suppose I tell you I have a million dollars. I'm going to tell you some numbers and if you remember them when I ask you about them later, I'll give you a million dollars. Okay, are you ready? Here are the numbers: 1, 2, 3. Did you get them? Okay, what are the numbers? Okay, do you think you would still remember these if I ran into you in the hallway next week? What about a year from now? You probably would. Okay, now forget what the numbers are. Those aren't the numbers anymore. I don't have a million

dollars. Okay, what are the numbers? But I told you to forget them! There is no million dollars. You have no reason to remember that; don't think about them. What are the numbers? It seems like once something is in our head, we can't erase it. What happened in these exercises may apply to our stigmatizing thoughts – we can't choose to erase them or get rid of them, we can't even stop thinking about them when things trigger them to come up. But if that's the case, what can we do? This is something we are going to keep talking about.

Pervasiveness and Inevitability of Psychological Difficulties

F: Here are shocking data. According to recent large-scale surveys in psychology, from *19% to 30%* of the population suffers from a diagnosable psychological disorder (including addictive disorders) in any given year.

Milk-Milk exercise:

F: Have you ever noticed that thoughts/worries that bother you might not be what they seem? Things get really sticky when we believe that our thoughts are literally what they say they are, especially thoughts about ourselves could be evaluative and judgmental. For example, "Deep down, there is something wrong with me." And we tend to think of our thoughts, of what they say, as the reality or as the criteria of the reality. For example, we often believe we are what our thoughts say we are. We usually don't even notice that words like "deep down, there is something wrong with me" are thoughts. However, are you really what your thoughts say you are?

What if I say that thoughts are simply thoughts, nothing more and nothing less, rather than what they say they are. What if I say you aren't the thoughts you have about yourself. It might be difficult to understand this point, so let's do a little exercise.

As I say, this exercise sounds silly. I'm going to ask you to say a word. Then you tell me what comes to mind. I want you to say the word, "Milk".

Participants (P): Milk.

F: Good. Now tell me what comes to mind when you said it?

P: (I have milk at home in the refrigerator).

F: O.K. what else? What shows up when we say "Milk".

P: (I picture it---white, a glass).

F: Good what else? (Can you taste it?). Can you feel what it feels like to drink a glass of milk? Cold, creamy, coats your mouth...right?

F: O.K. let's see if this fits. What came across your mind were things about actual milk and your experience with it. All that happened is that we made a strange sound — Milk -- - and lots of those things show up. Notice that there isn't any milk in this room. Not at all. But milk was in the room psychologically. You and I were seeing it, tasting it, and feeling it. And yet, only the word was actually here.

F: Now, here is another exercise. The exercise is a little silly, and you might feel embarrassed doing it, but I am going to do it with you so we can all be silly together.

What I am going to ask you to do is to say the word, "milk," out loud, over-and-over again, and as rapidly as possible, and then notice what happens. Are you ready?

F: O.K., Let's do it. Say, "milk" over and over again! (15 seconds). O.K. now stop. Tell me what came to mind while you kept repeating it?

P: (e.g., Gone)

F: Did you notice what happened to the psychological aspects of milk that were here a few minutes ago?

P: Yea, it's just a sound.

F: Right, creamy, cold, gluggy stuff just goes away. When you said it the first time, it was as if milk was actually here, in the room. But all that really happened was that you just said that word. The first time you said it, it was "psychologically" meaningful, and it was almost solid. But when you said it again and again and again, you began to lose that meaning and the words became just a sound. What I am suggesting is that... What happens in this exercise may be applied to our personal thoughts about ourselves or negatively evaluated stigmatizing attitudes toward people with psychological disorders. When you say things to yourself in addition to any meaning behind those words, isn't it also true that these thoughts are just thoughts? The thoughts are just smoke, there isn't anything solid in them. They are just words, sounds in our heads.

Observer Exercise

"We are going to do an exercise now that is a way to experience that you are more than your psychological struggles. There is no way anyone can fail at the exercise; we're just going to be looking at whatever you are feeling or thinking so whatever comes up is just right. Close your eyes, get settled into your chair and follow my voice. If you find yourself wandering, just gently come back to the sound of my voice. For a moment now, turn your attention to yourself in this room. Picture the room. Picture yourself in this room and exactly where you are. Now begin to go inside your skin, and get in touch with your body. Notice how you are sitting in the chair. See if you can notice exactly the shape that is made by the parts of your skin that touch the chair. Notice any bodily sensations that are there. As you see each one, just sort of acknowledge that feeling and allow your consciousness to move on. [pause] Now notice any emotions you are having and if you have any just acknowledge them [pause]. Now get in touch with your thoughts and just quietly watch them for a few moments [pause]. Now I want you to notice that as you noticed these things, a part of you noticed them. You noticed those sensations ...those emotions ...those thoughts. And that part of you we will call the "observer you." There is a person in here, behind those eyes, that is aware of what I am saying right now. And it is the same person you've been your whole life. In some deep sense this observer you is the you that you call you.

You have been you your whole life. Everywhere you've been, you've been there noticing. This is what I mean by the "observer you." And from that perspective or point of view I want you to look at some areas of living. Let's start with your body. Notice how your

body is constantly changing. It may be rested or tired. You were once a tiny baby, but your body grew. Your cells have died and literally almost every cell in your body was not there as a teenager, or even last summer. Your bodily sensations come and go. Even as we have spoken they have changed. So if all this is changing and yet the you that you call you has been there your whole life that must mean that while you have a body, as a matter of experience and not of belief, you do not experience yourself to be just your body. So just notice your body now for a few moments, and as you do this, every so often notice you are the one noticing. [give the participants time to do this]

Now let's go to another area: emotions and thoughts. Sometimes we are so involved in our thoughts and feelings that we don't even notice they are thoughts and feelings; they can actually seem like they are us. Notice how your emotions and thoughts are constantly changing. Sometimes you feel love and sometimes hate, sometimes you feel calm and sometimes tense, sometimes we feel happy and sometimes we feel sad. Even now you are probably experiencing emotions; interest, boredom, relaxation. Our thoughts are also constantly changing. Sometimes we think one thing, and sometimes at another time we think a totally opposite thing. Sometimes it seems like our thoughts make little sense. Think of things you have liked, and don't like any longer; of fears that you once had that now are resolved. The only thing you can count on with thoughts and emotions is that they will change. Though a wave of emotion comes, it will pass in time. And yet while these emotions come and go, notice that in some deep sense that "you" does not change. That must be that while you have emotions, you do not experience yourself to be just your emotions. And yet in some deep way the you that knows what you think is not changing. I'm not asking you to believe this, just to notice it, and to notice even as you are noticing it your thoughts continue. In the instant you notice your thoughts you can also notice there is a part of you that is standing back and watching it all that is not your thoughts. In some very important and deep way you experience yourself as a constant. You are you through it all. So just notice the thoughts and emotions you are having now for a moment and as you do notice also that there is a separate you that is noticing them [Leave a brief period of silence].

So as a matter of experience and not of belief you are not just your body...your emotions ...your thoughts. These things are the content of your life, while you are the arena...the context...the space in which they unfold. As you see that, notice that the things you've been struggling with, and trying to change are not you anyway. No matter how this war goes, you will be there, unchanged. See if you can take advantage of this connection to let go just a little bit, secure in the knowledge that you have been you through it all, and that you need not have such an investment in all this psychological content as a measure of your life. Just notice the experiences in all the domains that show up and as you do notice that you are still here, being aware of what you are aware of.

Now again picture yourself in this room. And now picture the room. Picture the [number of people] other people sitting around you, the # other people who have been picturing

different times in their lives that were difficult for them, where they had struggles. Notice that the # other people in this room are here, doing this exercise and thinking about you, in the same way that you are thinking about each of them. Notice that each of these people is noticing that you are a person who has struggled with difficult experiences and that you have felt at times that you were not enough. Notice if this feels uncomfortable, if you feel yourself moving away from noticing the other people in this room and putting up a wall between you. Notice that this is what you do all the time when someone might be able to see you, really see you, with all your difficulties and struggles. Notice how afraid you are of really letting other people see you, and notice the difficulties and struggles you are hiding from them are not you anyway.

Now notice that there are # other people in this room, who are all feeling afraid of you too. Notice that the # other people in this room also has struggles and difficulties that they think they have to hide from you, that they are afraid of you noticing. Notice that they are afraid of you knowing that at times they have felt that they are not enough. Take a minute to get that like you, each person here is a person who is not his or her struggles, his or her thoughts and his or her feelings. Notice that that isn't how we normally experience the people around us, notice that normally we experience people from what we make their behavior, their appearances and the things they say mean. Notice that these things are not the people around us, and that like you the people around you are human beings in this moment, noticing.

Now come back to noticing the whole room. Picture [describe the room]. Take a few more deep breaths. And when you are ready to come back into the room, open your eyes.

Thank and Acknowledge Participants

We hope you've noticed something about the way you think about your struggles, and the struggles of people around you.

Thank you for participating in these activities... etc.

Appendix IV: Psychoeducation Workshop Protocol

I: Introduction:

A: Introduce Ourselves (the primary researcher and a graduate research assistant):

B: Description of the workshop:

Opening Statement:

Today we will explore the effects and source of stigma. We will do this because people with psychological disorders are among the most stigmatized group in our clinics and hospitals. As you will learn today, stigma toward psychological disorders causes a number of personal and social problems. Stigma is not about things far away – it is about what we do with humans beings who are dealing with mental health problems. We want to deal with the reality of it – how pervasive it is, how easy it is, and how hard it is to untangle.

We want to make this workshop informational and interactive, hopefully you will learn a new perspective toward people with psychological disorders, often called "the mentally ill". We ~~also~~ hope that this workshop will have an impact on how you think about the mentally ill.

Confidentiality:

In this workshop, we will ask you your attitudes toward and opinions about psychological disorders. Let's keep personal opinion that comes up in the room. Of course, we can't eliminate risk. But this will help us to actively learn what is stigma, especially stigmatizing attitudes toward people with psychological disorders.

II: What is Stigma?

A. What is Stigma?

The word stigma refers to a mark or brand on Greek slaves, separating them from free men (Gray, 2002). The word signifies disgrace or defeat.

Much of the psychology literature about stigma is focused on the issue of

labeling, or **classifying the behaviors of others**, such that the stigmatized person suffers discrimination.

- **Stigma is a process of negatively evaluated attitudes/emotions/thoughts about *members* of certain groups.**
- Stigma also functions as a device that
 1. filters information and
 2. evokes particular behaviors, such as avoiding stigmatized people.

- Problem here is that stigma is our negative attitude toward a certain group or category.
- As a consequence, we are likely to ignore the individuality of a particular person.
- In other words, we see him or her **through an already established preconception**.
- Such attitudes are also likely to keep us from interacting with or knowing more about the particular person. We avoid those who, we think, are “mentally ill”.
-

A. Prevalence from large-scale surveys:

- A first step to deal with our stigmatizing attitudes toward people with psychological disorders is to have more accurate information. According to recent large-scale surveys, **19% to 30%** of the population suffers in any given year from a psychological disorder (including addictive disorders) and the lifetime prevalence of psychological disorders is nearly **50%**.
- Group Discussion
 - Do you have any reactions to these statistics?

Anxiety Disorders

Under this category, there are seven anxiety related disorders and a briefly describe the nature of these disorders.

- 1). **Generalized anxiety disorder**: difficulty controlling the worry, difficulty concentrating, feelings of restlessness, and others.
 - 12 month prevalence rate: 3.4% of the general population
- 2). **Panic disorder**: panic attack (physical reactions, sense of losing control, fear of dying).
 - 12 month prevalence rate: 2.2% of the general population
- 3). **Post-traumatic stress disorder**: Due to an event that is extremely traumatic and experienced with intense fear, terror, and/or helplessness.
 - 12 month prevalence rate: 2.6% of the general population
- 4). **Obsessive-compulsive disorder (OCD)**: recurrent obsessive thoughts and compulsive actions that are sufficiently severe to cause psychological distresses, consume considerable time, and hinder social activities.
 - 12 month prevalence rate: 2.6% of the general population

Any Mood Disorders

Under this category, there are five mood related disorders and we will briefly describe the nature of these disorders.

- 1). **Major depressive episode:** Depressed mood and loss of interest; fatigue, sleep problem, change in body weight, lack of concentration, suicidal thoughts.
- 12 month prevalence rate: 10.1% of the general population
- 3). **Bipolar disorder:** the mixture of depression and manic phases (e.g., inflated self-esteem, more talkative, decreased need for sleep).
- 12 month prevalence rate: 1.3% of the general population

Schizophrenia

There are several types of schizophrenia, but symptoms of these types are overlapped. Given this concern, we will talk about the essential features of psychotic symptoms.

- There are two types of symptoms: positive symptoms and negative symptoms.
 - Positive symptoms include delusion, hallucination, disorganized speech, and other.
 - Negative symptoms allude to restrictions of affects, thoughts, verbal production, and purposeful behavior.

12-month prevalence rate of schizophrenia is **1.3%**

Substance Abuse/Dependence

People who are diagnosed with substance abuse/dependence show tolerance, withdrawal, or a pattern of compulsiveness.

- Dependence:
 - Tolerance: tolerance is a tendency of needing markedly increased amounts of the substances to achieve effect.
 - Withdraw: negative physiological effects, or taking substance to avoid negative effects.
- Abuse:
 - Maladaptive use patterns resulting in clinically significant impairment in functioning or distress, occurring within 12 months.
 - The lack of control regarding the use of substance
 - Failure to fulfill major role obligations at work, school, or home; legal problems; injury; social consequences.

Rather, they use substance despite occupational, psychological, or physical problems. People with substance use disorder are likely to experience other psychological disorders such as anxiety and depression.

12-month Prevalence Rates of any substance use disorders

- 1). Alcohol Dependence: 9.9
- 2). Drug Dependence: 3.6
- 3). Any Substance-related disorder: 11.5

Eating Disorders

Under this category, there are three eating related disorders and we will briefly describe the nature of these disorders.

1). Anorexia:

- Refusal to maintain body weight at or above a minimally normal weight for age and height (less than 85% of expected normal weight).
- Intense fear of gaining weight
- Disturbance in the way in which one's body weight or shape is experienced (body image problems)
- 12-month prevalence rate: 0.1 to 1.0%

2). Bulimia:

- Binge eating episode
- Repeated attempts to counteract bingeing to control weight gain
 - Vomiting,
 - fasting,
 - excessive exercise,
 - misuse of laxatives, diuretics, enemas.
- A sense of lack of control over eating
- 12 month prevalence rate: 1 to 2%

3). Eating disorder that is otherwise not specified.

- Eating disorder that cannot be classified as AN or BN, but people with this disorder experiences some of AN or BN symptoms.

D: Summary Statement:

In sum, according to recent large-scale surveys, 19% to 30% of the population experiences a psychological disorder (including addictive disorders) in any given year and the lifetime prevalence of psychological disorders is nearly 50%.

VII. Breaking through the Myths

A. Danger to Others?

- Probably, one of the major reasons why we have stigmatizing attitudes toward those with psychological disorder is our notion that they are dangerous. So now let's take a look at what epidemiological studies have said about dangerousness of those with psychological disorders. They (Silver et al., 1999; Steadman et al., 1998) says that the rate of violence among person with severe mental illness to be moderately higher than in the general population. Among those with psychological disorders, only substance abuses among persons with severe mental disorder had violent rates higher than other in public.
- However, it is important to note that these studies also found that the overwhelming majority of such persons are not violent. The idea driven from these findings are that notion of dangerousness among those with psychological disorders are over-generalized.

- One other thing to note here is they are more likely to be victimized by violence than causing violence to others. Many of those with psychological disorders reported being physically abused by their partner (62.8%) and 45% of them reported being abused by their family members physically and psychologically. I would like you to remember what some of those with psychological disorders have to go through (e.g., housing problems, unemployment, lack of social support, and lower quality of life).

B. Unpredictability. People experience the sense of lack of control. Given that, people may feel the sense of unpredictability. It is not a black-or-white thing. It is a continuum tendency.

C. How People with Psychological Disorder Really Are

- A majority of those who are diagnosed with psychological disorder or those who had been diagnosed with some form of psychological disorder have spent what we call “normal life”.
- “Most people with psychological disorders have a job, family, and a social network. They may face problems linked to their psychological problems, but they also face barriers due to stigmatizing attitudes toward psychological disorders and those with psychological disorders.”

IV. Attitudes toward People with Psychological Disorders

A. Group brainstorm:

Let's list all of the pejorative terms and associates you can think of about people with psychological disorders:

- 1). What disorders/illness are categorized into the label "psychological disorders" or "mentally ill"?
- 2). Negative names or terms describing people with psychological disorders
- 3). Negative characteristics of those with psychological disorders

B. Stigma toward those with psychological disorder: Multi-dimensional views

(Crisp, Gelder, et al., 2000).

Well, thank you everyone. OK, we will now show you what psychology literature says about our stigmatizing attitudes toward psychological disorders. The literature says that those with psychological disorders have some characteristics, attributes, and marks that make them stigmatized by society. Followings are the stigmatizing characters.

- 1). Danger to others
- 2). Unpredictable
- 3). Uncontrollable
- 4). Hard to talk to (the lack of social and interpersonal skills)
- 5). Feel different ("us" vs. "others")
- 6). Selves to blame (the issue of responsibility and controllability)

- 7). Ability to pull oneself together
- 8). Not improved even if treated
- 9). Never recovered

We will go back to these concerns later in this workshop. Up to this point, we just want to point out and share what sort of stigmatizing attitudes we tend to have toward people with psychological disorders.

1. Associated Stigmatized Phenomenon

- a. Stigmatizing attitudes toward psychological disorders might be generalized to associated-phenomena. An example is **stigmatizing attitudes toward psychological services**, such as inpatient/outpatient services, psychotherapy, and counseling.
- b. An integrative review of the relevant literature reported that as many as **80% of those who experience severe psychological problems** do not seek the professional services that could ease their condition.
- c. Research has shown that social stigma toward psychological service; such as "**seeking psychological service is a sign of weakness**" and "**seeking services means that there is something fundamentally wrong with me**" appear to contribute to this negative image.

2. Self-Stigma

- a. Furthermore, these stigmatizing attitudes affect persons with psychological disorders who are stigmatized. They may accept these notions (labels) and generates stigma toward themselves. As a result, they may suffer from (a) diminished self-esteem/self-efficacy, (b) lower quality of life, (c) depression, and others. Felt stigma may also account for individuals avoiding their own psychological symptoms or those symptoms of loved ones, thus delaying treatment or not adhering to treatment regimens.

Adapted from: Masuda, A., Hayes, S. C., Fletcher, L. B., Seignourel, P. J., & Bunting, K. (2007). The impact of acceptance and commitment therapy versus education on stigma toward people with psychological disorders. *Behavior Research and Therapy*45, 2764-2772. doi: 10.1016/j.brat.2007.05.008

References

- Anglin, D. M., Link, B. G., & Phelan, J. C. (2006). Racial differences in stigmatizing attitudes towards people with mental illness. *Psychiatric Services, 57*, 857-862. doi:10.1176/appi.ps.57.6.857
- American Psychiatric Association (2013). *Diagnostic and statistical manual of mental disorders: DSM-5*. Washington, D. C: American Psychiatric Association
- Barlow, D. H. (2014). *Clinical handbook of psychological disorders. A step-by-step treatment manual*. New York, NY: The Guilford Press.
- Belg, A. J., Resnick, B., Minicucci, D. S., Ogedegbe, G., Ernst, D., Borrelli, B., ... Czajkowski, S. (2004). Enhancing treatment fidelity in health behavior change studies: best practices and recommendations from the NIH behavior change consortium. *Health Psychology, 23*, 443-451. doi:10.1037/0278-6133.23.5.443
- Bogardus, E. S. (1925). Social distance and its origins. *Journal of Applied Sociology, 9*(2), 216-226.
- Borrelli, B., Sepinwall, D., Belg, A. J., Breger, R., DeFrancesco, C., Sharp, D. L., ... Ogedegbe, G., (2005). A new tool to assess treatment fidelity and evaluation of treatment fidelity across 10 years of health behavior research. *Journal of Counseling and Clinical Psychology, 73*, 852-860. doi:10.1037/0022-0066X.73.5.852.
- Bond, F. W. & Bruce, D. (2003). The role of acceptance and job control in mental health, job satisfaction, and work performance. *Journal of Applied Psychology, 88*(6), 1057-1067. doi:10.1037/0021-9010.88.6.1057

- Bond, F. W., Hayes, S. C., Baer, R. A., Carpenter, K. M., Guenole, N., Orcutt, H. K., ... Zettle, R. (2011). Preliminary psychometric properties of the Acceptance and Action Questionnaire-II: A revised measure of psychological inflexibility and experiential avoidance. *Behavior Therapy, 42*(4), 676-688.
doi:10.1016/j.beth.2011.03.007
- Brockington, F. I., Hall, P., Levings, J., & Murphy, C. (1993). The community's tolerance of the mentally ill. *The British Journal of Psychiatry, 162*, 93-99.
doi:10.1192/bjp.162.1.93
- Butler, J. & Ciarrochi, J. (2007). Psychological acceptance and quality of life in the elderly. *Quality of Life Research, 16*, 607-615. doi:10.1007/s11136-006-9149-1
- Chambless, D. L., & Ollendick, T. H. (2001). Empirically supported psychological interventions: controversies and evidence. *Annual Review of Psychology, 52*, 685-716. doi:10.1146/annurev.psych.52.1.685
- Chawla, N. & Ostafin, B. (2007). Experiential avoidance as a functional dimensional approach to psychopathology: an empirical review. *Journal of Clinical Psychology, 63*(9), 871-890. doi:10.1002/jclp.20400
- Corrigan, P. (2004). Stigma interferes with mental health care. *American Psychologist, 59*(7), 614-625. doi:10.1037/0003-066X.59.7.614
- Corrigan, P. W., Rowan, D., Green, A., Lundin, R., River, P., Uphoff-Wasowski, K., White, K., & Kubiak, M. A. (2002). Challenging two mental illness stigmas: personal responsibility and dangerousness. *Schizophrenia Bulletin, 28*(2), 293-309. doi:10.1093/oxfordjournals.scbul.a006939

- Corrigan, P. W., & Penn, D. L. (1999). Lessons from social psychology on discrediting psychiatric stigma. *American Psychologist*, *54*, 765-776. doi:10.1037/0003-066X.54.9.765
- Eisenberg, D., Hunt, J., & Speer, N. (2012). Help-seeking for mental health on college campuses: review of evidence and next steps for research and practice. *Harvard Review of Psychiatry*, *20*, 222-232.
- Eisenberg, D., Downs, M. F., Golberstein, E., & Zivin, K. (2009). Stigma and help seeking for mental health among college students. *Medical Care Research and Review*, *66*(5), 522-541. doi:10.1177/1077558709335173
- Evans-Lack, S., Little, K., Meltzer, H., Rose, D., Rhydderch, D., Henderson, C., & Thornicroft, G. (2010). Development and psychometric properties of the mental health knowledge schedule. *Canadian Journal of Psychiatry*, *55*(7), 440-448. doi:10.1177/070674371005500707
- Fritz, M. S., & MacKinnon, D. P. (2007). Required sample size to detect the mediated effect. *Psychological Sciences*, *18*(3), 233-239. doi:10.1111/j.1467-9280.2007.01882
- Hammer, J. H. & Vogel, D. L. (2010). Men's help seeking for depression: The efficacy of a male-sensitive brochure about therapy. *The Counseling Psychologist*, *38*, 296-313. doi:10.1177/0011000009351937
- Hayes, S. C., Luoma, J. B., Bond, F. W., & Masuda, A. (2006). Acceptance and commitment therapy: model, processes and outcomes. *Behaviour Research and Therapy*, *44*, 1-25. doi:10.1016/j.brat.2005.06.006

- Hayes, S. C., & Wilson, K. G. (1994). Acceptance and commitment therapy: altering the verbal support for experiential avoidance. *The Behavior Analyst, 17*, 289-303.
- Hinshaw, S. P. (2007). *The mark of shame: stigma of mental illness and an agenda for change*. Oxford University Press, New York.
- Kazdin, A. E. (2008) Evidence-based treatment and practice: new opportunities to bridge clinical research and practice, enhance the knowledge base, and improve patient care. *American Psychologist, 63*, 146-159.
- Kenny, A., & Bizumic, B. (2016). Learn and ACT: Changing prejudice towards people with mental illness using stigma reduction interventions. *Journal of Contextual Behavioral Science, 1*-31. doi:10.1016/j.jcbs.2016.06.004
- Kessler, R. C., Berglund, P. A., Bruce, M. L., Koch, R., Laska, E. M., & Leaf, P. J. (2001). The prevalence and correlates of untreated serious mental illness. *Health Services Research, 36*, 987-1007.
- Komiya, N., Good, G. E., & Sherrod, N. B. (2000). Emotional openness as a predictor of college students' attitudes toward seeking psychological help. *Journal of Counseling Psychology, 47*, 138-143. doi:1.1037/0022-0167.47.1.138
- Levin, M. E., Luoma, J. B., Lillis, J., Hayes, S. C., Vildardaga, R. (2014). The acceptance and action questionnaire – stigma (AAQ-S): developing a measure of psychological flexibility with stigmatizing thoughts. *Journal of Contextual Behavioral Science, 3*(1), 21-26. doi:10.1016/j.jcbs.2013.11.003
- Link, B. G., & Phelan, J. C. (2001). Conceptualizing Stigma. *Annual Review of Social Psychology, 27*, 363-385.

- Link, B. G., Struening, E. L., Neese-Todd, S., Asmussen, S., & Phelan, J. C. (2001). Stigmas as a barrier to recovery: The consequences of stigma for the self-esteem of people with mental illnesses. *Psychiatric Services, 52*(12), 1621-1626. doi:10.1176/appi.ps.52.12.1621
- Link, B. G., Struening, E. L., Neese-Todd, S., Asmussen, S., & Phelan, J. C. (2002). On describing and seeking to change the experience of stigma. *Psychiatric Rehabilitation Skills, 6*, 201-231. doi:10.1080/10973430208408433
- Lukens, E. P., & McFarlane, W. R. (2006). Psychoeducation as evidence-based practice: considerations for practice, research, and policy. *Brief Treatment and Crisis Intervention, 4*(3), 205-225.
- Mackenzie, C. S., Gekoski, W. L., & Knox, V. J. (2006). Age, gender and the underutilization of mental health services: the influence of help-seeking attitudes. *Aging and mental health, 10*(6), 574-582.
- MacKenzie, K. R. (1983). The clinical application of a group climate measure. In R. R. Dies & K. R. Mackenzie (Eds), *Advances in Group Psychotherapy: Integrating Research and Practice* (pp. 159-170). New York: International Universities Press.
- Masuda, A., Hayes, S. C., Fletcher, L. B., Seignourel, P. J., Bunting, K., Herbst, S. A., Twohig, M. P., & Lillis, J. (2007). Impact of acceptance and commitment therapy versus education on stigma toward people with psychological disorders. *Behavior Research and Therapy, 45*, 2764-2772. doi:10.1016/j.brat.2007.05.008
- Masuda, A., Hayes, S. C., Lillis, J., Bunting, K., Herbst, S. A., Fletcher, L. B. (2009). The relation between psychological flexibility and mental health stigma in

acceptance and commitment therapy: A preliminary process investigation.
Behavior and Social Issues, 18, 1-17.

Masuda, A., Hayes, S. C., Lillis, J., Washio, Y., & Twohig, M. P. (2009). A parametric study of cognitive defusion and the believability and discomfort of negative self-relevant thoughts. *Behavior Modification, 33*, 250-262.

doi:10.1177/014545508326259

McCracken, L. M., & Gutierrez-Martinez, O. (2011). Process of change in psychological flexibility in an interdisciplinary group-based treatment for chronic pain based on acceptance and commitment therapy. *Behaviour Research and Therapy, 49*, 267-274. doi:10.1016/j.brat.2011.02.004

Mittal, D., Sullivan, G., Chekuri, L., Allee, E., & Corrigan, P. W. (2012). Empirical studies of self-stigma reduction strategies: a critical review of the literature. *Psychiatric Services, 63*(10), 974-981. doi:10.1176/appi.ps.201100459

Moher, D., Schulz, K., & Altman, D. G. (2001) The CONSORT statement: revised recommendations for improving the quality of reports of parallel-group randomized trials. *Annals of Internal Medicine, 134*, 657-652.

Nastally, B. L., & Dixon, M. R. (2012). The effect of a brief acceptance and commitment therapy intervention on the near-miss effect in problem gamblers. *The Psychological Record, 62*, 677-690.

Nichols, A. L., & Maner, J. K. (2008). The good-subject effect: investigating participant demand characteristics. *The Journal of General Psychology, 135*, 151-165

- O'Connor, M., & Casey, L. (2015). The mental health literacy scale (MHLS): a new scale-based measure of mental health literacy. *Psychiatry Research*, 229, 511-516. doi:10.1016/j.psychres.2015.05.064.
- Phelan, J. E., & Basow, S. A. (2000). College students' attitudes toward mental illness: an examination of the stigma process. *Journal of Applied Social Psychology*, 37(12), 2877-2902. doi:10.1111/j.1559-1816.2007.00286.x
- Pinfold, V., Thornicroft, G., Huxley, P., & Farmer, P. (2005). Active ingredients in anti-stigma programmes in mental health. *International Review of Psychiatry*, 17(2), 123-131. doi:10.1080/0954026050007638
- Rauch, S. A., Defever, E., Favorite, T., Duroe, A., Garrity, C., Martis, B., & Liberzon, I. (2009). Prolonged exposure for PTSD in a veterans' health administration PTSD clinic. *Journal of Traumatic Stress*, 22(1), 60-64. doi: 10.1002/jts.20380
- Regier, D. A., Narrow W. E., Rae, D. S., Manderscheid, R. W., Locke, B. Z., & Goodwin, F. (1993). The defacto U.S. mental and addictive disorders service system: Epidemiologic Catchment Area prospective 1-year prevalence rates of disorders and services. *Archives of General Psychiatry*, 50, 85-94.
- Shin, S. & Lukens, E. P. (2002). Effects of psychoeducation for Korean Americans with chronic mental illness. *Psychiatric Services*, 53(9), 1125-1131. doi:10.1176/appi.ps.53.9.1125
- Sidanius, J., & Pratto, F. (2001). *Social dominance: An intergroup theory of social hierarchy and oppression*. Cambridge University Press.

- Snowden, L. R. (1999). African American service use for mental health problems. *Journal of Community Psychology, 27*, 303-319. doi:10.1002/(SICI)1520-6629(199905)27:3
- Taylor, S. M., & Dear, M. J. (1981). Social community attitudes toward the mentally ill. *Schizophrenia Bulletin, 7*, 225-240. doi:10.1093/schbul/7.2.225
- Thornicroft, G., & Maingay, S. (2002). The global response to mental illness. *British Medical Journal, 325*, 475-482.
- U.S. Department of Health and Human Services (1999). Mental health: A report of the surgeon general. Rockville, MD: U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Center for Mental Health Services, National Institutes of Health, National Institute of Mental Health.
- Ustun, T. B., Chatterji, S., Kostanjsek, N., Rehm, J., Kennedy, C., Epping-Jordan, Saxena, S., Von Korff, M., & Pull, C. (2010). *Bulletin World Health Organization, 88*, 815-823.
- Vogel, D. L., Wade, N. G., & Haake, S. (2006). Measuring the self-stigma associated with seeking psychological help. *Journal of Counseling Psychology, 53*, 325-337. doi:10.1037/0022-0167.53.3.325
- Wahl, O. F. (1999). Mental health consumers' experience of stigma. *Schizophrenia Bulletin, 25*(3), 467-478. doi:10.1093/oxfordjournals.schbul.a022294
- Wetherell, J. L., Afari, N., Ayers, C. R., Stoddard, J. A., Ruberg, J., Sorrel, J. T., ... Patterson, T. L. (2011). Acceptance and commitment therapy for generalized anxiety disorder in older adults: a preliminary report. *Behavior Therapy, 42*, 127-134. doi:10.1016/j.beth.2010.07.002

Wilson, K. G., & Murrell, A. R. (2004). Values work in acceptance and commitment therapy. *Mindfulness and acceptance: Expanding the cognitive-behavioral tradition*. (pp. 120-151). New York: Guilford.