5-2014

EFFECTS OF TEACHER TRAINING ON PRESERVICE TEACHERS' KNOWLEDGE, PERSONAL BELIEFS, AND ATTITUDES

Sloan Smith Huckabee
Clemson University

EFFECTS OF TEACHER TRAINING ON PRESERVICE TEACHERS' KNOWLEDGE, PERSONAL BELIEFS, AND ATTITUDES

A Dissertation
Presented to
the Graduate School of
Clemson University

In Partial Fulfillment
of the Requirements for the Degree
Doctor of Philosophy
Curriculum and Instruction, Special Education

---

by
Sloan Smith Huckabee
May 2014

Accepted by:
Sara Mackiewicz, Committee Chair
Antonis Katsyiannis
William Bridges
Janie Hodge
Amy Milsom

ABSTRACT

This study examines the effects of the NAMI Parents and Teachers as Allies training on the Mental Health Literacy, Personal Beliefs, and Stigmatizing Attitudes of preservice teachers. A researcher developed survey was administered three times to the training group prior to, immediately following, and two weeks after the training. A nonequivalent control group was administered two surveys—a preliminary measure and a follow up measure—to provide comparison data for investigating the effects of the intervention on the group of preservice teachers receiving the intervention. Results of the study indicate the Parents and Teachers as Allies training is an inexpensive, relatively short training that positively affects preservice teachers' knowledge, personal beliefs, and attitudes about students experiencing emotional and behavioral disorders or mental health distress or illness.

DEDICATION

These last years have been challenging and rewarding in ways I could never have anticipated when I first felt the nudge to walk this path. As I near the end of this part of my life's journey, I would like thank my family who made it possible for me to do this. To my parents, Cary and Marilyn Smith, who never failed to offer whatever support and encouragement was needed as I worked toward this accomplishment. To my sister, Sara Corcoran, and her family- you all brighten the world with your presence and bring fun and laughter into my life. To my brother, Kin Smith, who isn't here to see this but would, I'm sure, have a clever and memorable way of letting me know he was proud of my determination in getting to the end of this path. To my husband, Bob, who has been steadfastly by my side through thick and thin, always supported and encouraged me when things were difficult, and helped me celebrate the good things as well. I am pretty sure I will never be able to adequately express my love and respect for you. To my children Drew, Nicholas and Brittany, each of whom I love more than I can say. You make me smile, laugh, and feel proud…..you also inspire me with your wisdom, humility, caring spirits, dedication, humor, and courage. I undertook this work in an effort to begin to find ways to make life better for students and the families of students who struggle in school and in life- this is for you. It has been, and I am sure will continue to be, a worthy endeavor. In closing, in the words of Maya Angelou, I "wouldn't take nothing for my journey now." I hope this is only the beginning.

ACKNOWLEDGMENTS

I would like to acknowledge the help and support in this process. First, my dissertation committee: Dr. Sara Mackiewicz, who served as my committee chair and always helped things seem manageable and doable; Dr. Janie Hodge whose training and high expectations set the standard for me to reach for; Dr. Amy Milsom who was more than willing to share her expertise; and Dr. William Bridges whose love of research, learning, and data always inspired me; and of course Dr. Antonis Katsyiannis who helped me "stay focused" and always encouraged me and took an interest in what I was doing and in my life. To my friends in the program that I met along the way- the thinking and talking and working together were wonderfully engaging! In particular I'd like to thank Angela Prince and Rhonda Miller for all the shared encouragement, laughter, and support- I have treasured and valued our connections for the past few years and you will certainly always be important to me! Last, I'd like to say that I was encouraged by certain people I have known professionally to pursue this goal. In particular, thanks go to Dr. Antonis Katsiyannis, Stephanie Shepherd, and Marcie Molloseau— my professor and two cohort members from the Master's program I completed. Also, I would be remiss if I failed to mention Stephanie Brucke who loved my child like her own (this goes a long way!) and always was a wonderful source of encouragement. These are four of the most dedicated and competent teachers I have encountered and I am better for knowing each of them!

TABLE OF CONTENTS

Page

TABLE OF CONTENTS (continued)

Page

LIST OF TABLES

LIST OF TABLES (continued)

LIST OF FIGURES

Figure Page

CHAPTER ONE

INTRODUCTION

The purpose of this chapter is to provide an overview of mental health distress and disorders (MHD) and emotional and behavioral disorders (EBD) in children and adolescents. Prevalence rates, characteristics of students with MHD and EBD as well as barriers to services for these groups are discussed. Finally, the significance of the problems these students experience is discussed.

Overview of Mental Health

Distress and Disorders and Emotional and Behavioral Disorders

In 2004, 2.6 million people worldwide committed suicide, 156,000 of whom were aged 10-24 years old (Mathers, Fat, & Boerma, 2008). In 2003, Costello, Mustillo, Erkanli, Keeler, and Angold reported estimates that, in any given year, nearly 20% of children in the United States experience mental, emotional or behavioral symptoms that would qualify them for psychiatric diagnosis. According to Merikangas et al. (2010) nearly one in every four to five youth in the United States meets the criteria for MHD with severe impairment sometime during their lifetime. One year prevalence rates for children and youth in a nationally representative sample in the United States were estimated to be 13.1%$\pm$0.9 for any of the identified DSM-IV disorders. Identified disorders included ADHD, Conduct Disorder, Anxiety Disorder, Generalized Anxiety Disorder, Panic Disorder, Eating Disorder, Mood Disorder (including Major Depression and Dysthymia) with the total percentage of severe impairment levels being 11.3% $\pm$ 0.9 (Merikangas et al., 2010). In 2013 Heneghan et al. reported prevalence estimates in the

United States for mental health disorders in teens as 40.3% over 12 months and 23.4% over the preceding 30 days of the time period considered for analysis.

In the United States four thousand adolescents and young adults commit suicide each year (Moskos, Olsen, Halpern, & Gray, 2007). According to the U.S. Department of Health and Human Services (1999) 90% of people who commit suicide have a diagnosable mental health condition. Kataoka, Zhang, and Wells (2002) stated that the majority of children and adolescents experiencing mental, emotional or behavioral symptoms severe enough to qualify for diagnosis are unidentified and untreated meaning that many adolescents and youth who commit suicide each year received no treatment for their mental health condition.

Educators use a federal definition from the Individuals with Disabilities Education Act (IDEA, 2004) to determine eligibility for special education services (see terms and definitions at the end of this chapter). Students identified under federal guidelines of EBD account for less than 1% of the total school-age population (Forness, Kim & Walker, 2012). Conservative estimates suggest that as many as 20% of the population of children and youth who attend school experience EBD (Chandra & Minkovitz, 2006; Chandra & Minkovitz, 2007; Forness et al., 2012; Kranke, Floersch, Townsend, & Munson, 2010; U.S. Department of Health and Human Services, 1999). Because of the difference between the number of children and youth research suggests experience EBD and the number served, it is evident that there is a gap in services for students experiencing EBD.

Due to the discrepancy between prevalence rates and service rates Gage et al. (2010) call for a change to the federal definition of what is an emotional or behavioral disturbance. According to Gage and colleagues there is a need for a definition that is more inclusive of students with a range of emotional and behavioral problems and suggest that the definition proposed by Forness and Knitzer (1992) be adopted:

Proposed Definition of "Emotional or Behavioral Disorder"

(i) The term emotional or behavioral disorder means a disability characterized by behavioral or emotional responses in school so different from appropriate age cultural or ethnic norms that they adversely affect educational performance. Educational performance includes academic, social, vocational, and personal skills. Such a disability

(A) is more than a temporary, expected response to stressful events in the environment.

(B) is consistently exhibited in two different settings, at least one of which is school-related; and

(C) is unresponsive to direct intervention in general education or the child's condition is such that general education interventions would be insufficient.

(ii) Emotional and behavioral disorders can co-exist with other disabilities.

(iii) This category may include children or youth with schizophrenic

> disorders affective disorders, anxiety disorders, or other sustained disorders of conduct or adjustment when they adversely affect educational performance in accordance with section (i). (Forness & Knitzer, 1992, p. 14)

A change such as the one referenced above would allow students to receive services when there are behavioral manifestations of any underlying emotional states. The word choices in the definition also avoid negative connotations which can be invoked when words such as disturbed as was the case in the federal definition prior to it being changed in. Further the proposed definition suggests that the focus should include educational performance and social adjustment, interpersonal skills, vocational adjustment, career skills, and those skills related to self-care and personal competence. The definition is intended to be clear enough to ensure that only those children who require intensive levels of services and supports are eligible in this category (Forness & Knitzer, 1992).

Characteristics

In order to be eligible for special education services, students with must have both academic and behavioral deficits which adversely affect their educational performance according to the IDEA federal definition (refer to table at the end of this chapter for the complete definition).

In *Mental Health: A Report of the Surgeon General* (U.S. Department of Health and Human Services, 1999) mental illness is defined as "health conditions that are characterized by alterations in thinking, mood, or behavior (or some combination thereof) associated with distress and/or impaired functioning." Given the overlapping areas in

which children and youth with MHD and those with EBD experience difficulty in functioning it is reasonable to consider that these two populations are similar in terms of their school experiences, although it would not necessarily be appropriate to use the terms interchangeably. The terms might reasonably be paired together and used to discuss needs of both groups in terms of knowledge that preservice teachers have about the groups, stigma (both experienced and perceived) of these children and youth, teacher perceptions of their readiness for supporting and meeting the needs of such students. Throughout this paper these groups of students are referred to together when considering the outcomes, needs, experiences, and effectiveness of the study conducted regarding the Parents and Teachers as Allies training and its effects on preservice teachers Mental Health Literacy, Perceived Behavioral Control, and Stigmatizing Attitudes.

Behaviors demonstrated by students with EBD which may include students with diagnosed mental health disorders including children or youth with schizophrenic disorders (included in the federal definition of EBD) and affective disorders, anxiety disorders, or other sustained disorders of conduct or adjustment as indicated in the definition proposed by Forness and Knitzer (1992) are typically categorized as internalizing or externalizing behaviors (Lane, Parks, Kalberg, & Carter, 2007). Externalizing behaviors are more prevalent in this group of students with male students engaging in these behaviors more frequently than females. Students identified with EBD, including those with psychiatric diagnoses receiving services under IDEA, are most often male and minorities and are over-represented in this disability category (Anderson, Kutash, & Duchnowski, 2001; Greenbaum et al., 1996; Wagner, Kutash, Duchnowski, &

Epstein, 2005). These students initially perform better academically than their counterparts with learning disabilities (LD) and they make fewer academic gains over time than students with LD (Anderson et al., 2001).and in addition to academic deficits, students with EBD and the group of students identified as such due to a psychiatric diagnosis (MHD) experience difficulty with appropriate social interactions with peers and these difficulties tend to increase over time (Lane & Carter, 2006). Students with EBD are more frequently retained than their general education peers and counterparts with LD (Anderson et al., 2001), are more likely to be involved with law enforcement (Anderson et al., 2001; Lane & Carter, 2006; Wagner et al., 2005), and often have repeated contact with law enforcement. Students with EBD dropout of school more than any other group of students (Duchnowski & Kutash, 2011), participate in post-secondary education less frequently than other students with disabilities (SWD), and have lower rates of post-school employment (Anderson et al., 2001; Lane, Carter, Pierson, & Glaeser, 2006; Lane et al., 2007; Wagner & Davis, 2006). Students with EBD take general education courses at a similar rate as students with LD but spend more time in special education settings (Anderson et al., 2001; Wagner et al., 2006). In addition, their academic performance remains level or worsens as they progress through school (Anderson et al., 2001; Lane et al., 2007).

Barriers to services

Researchers have identified practices that improve outcomes for SWD and students with EBD in particular (Carter, Lane, Crnobori, Bruhn, & Oakes, 2011; Horner, Sugai, & Anderson, 2010; Wright, Russell, Anderson, Kooreman, & Wright, 2006). The

quality indicators for research help in identifying the best of these practices (Gage et al., 2010). Often studies are reported in professional journals and read only by other researchers (Gage et al., 2010).

Promising practices for these students have been identified. In order for them to be more widely implemented in schools they need to be made available in forums that are friendly to administrators and teachers (e.g., practitioner journals, practitioner- focused conferences, laboratory schools) through collaboration between researchers and practitioners (Brownell, Ross, Colon, & McCallum, 2005; Gage et al., 2010). A concerted effort has to be made by researchers to make effective practices more accessible to the practitioners who need to use them (Gage et al., 2010; Lane & Carter, 2006). In addition to providing training to teachers and administrators, support should be provided for implementation and data collection regarding intervention results on the classroom and school level (Gage et al., 2010; Lewis, Jones, Horner, & Sugai, 2010). Another barrier to implementing effective practices for students with EBD is a lack of collaboration between and among agencies (Gage et al., 2010; Wright et al., 2006).

Further, there are barriers in general to implementing practices that improve outcomes for students with EBD. One consideration is the notion that people have about the role of choice in behaviors. According to Gage et al. (2010) many people perceive students with EBD as choosing to engage in maladaptive behaviors and consequently not in need of receiving procedural safeguards that are granted to other students identified as having disabilities. Gage et al. (2010) refer to this as a "conceptual bias" and credit this bias with accounting for why the widely understood discrepancy between those with

EBD and known prevalence rates is tolerated (Gage et al., 2010). Policy changes will be required if this service gap is to be addressed.

Students with emotional and behavioral disorders (EBD) represent a small portion (less than 1%) of the students being served in special education under IDEA (Forness, et al., 2012). Some experts in the field of EBD believe that this number is actually an underrepresentation of how many students actually experience EBD and that the actual prevalence rates are closer to 20% (Chandra & Minkovitz, 2006; Chandra & Minkovitz, 2007; Forness et al., 2012; Kranke, Floersch, Townsend, & Munson, 2010; U.S. Department of Health and Human Services, 1999). In order to identify students for special education services, educators use the federal definition of EBD from the Individuals with Disabilities Education Act (IDEA, 2004) to determine eligibility for these services (see terms and definitions at the end of this chapter). This definition includes schizophrenia which is a mental health disorder found in the Diagnostic and Statistical Manual of Mental Health Disorders, 5th edition (DSM-V). The National Institute on Mental Health identifies mental disorders as having their beginnings in childhood or adolescence. Students are routinely served for Attention Deficit/Hyperactivity Disorder (ADHD) and Autism Spectrum Disorder (ASD) under IDEA and these are also mental health disorders included in the DSM-V. According to testimony before Congress, Dr. Mary Ann Davis (a Psychologist, associate professor in the Department of Psychiatry at the University of Massachusetts Medical School, and researcher focusing on transition aged youth with MHD) there are 2- 3.5 million transition aged youth who have serious MHD in the United States. Half of these students

drop out of high school and by the time they reach the age of 25, 50% of these individuals are unemployed, have developed substance abuse disorders and 65% of them have been arrested (Examining mental health in children and youth, 2004). The term "emotional disorders" is used by NICHCY to describe mental health disorders on its Emotional Disorders Fact Sheet (Emotional Disorders Fact Sheet, 2010). This designation is purposefully used to create a connection between mental health disorders and EBD as defined by the federal government under IDEA (Emotional Disorders Fact Sheet, 2010). It would not be appropriate to assert that all students with mental health disorders qualify to be served under IDEA in the disability category EBD; however, there are many students who experience MHD who are identified as EBD. Problems arise when decisions are made not to engage in learning about mental health disorders because of the stigma attached to the topic. Some experts estimate that as many as one in five school age students experience MHD disorders in any given year (Costello, Mustillo, Erkanli, Keeler, & Angold, 2003; Merikangas, He, Brody, et al., 2010). Consequently, there are many students experiencing MHD in need of support in schools. Further, there are many students that are unidentified and not served—both for EBD and MHD. Calls for promoting knowledge and awareness about mental illness in the form of a public health campaign (much like those promoting awareness of heart disease and cancer) have come from the Surgeon General (U.S. Department of Health and Human Services, 1999) and from the President's New Freedom Commission on Mental Health (2003). Another way to improve services and outcomes for students with MHD is greater detection through improved education of professionals who work with children such as teachers.

Given the high prevalence rates of EBD and MHD among children and youth and the negative outcomes they experience it is necessary to address factors that affect these students and their success in school. Societal factors that affect these students include low levels of mental health literacy in the general population (Highet, Luscombe, Davenport, Burns, & Hickie, 2004; Pescosolido et al., 2008) and widely held stigmatizing attitudes (Jorm, 2012; Moskos et al., 2007; Scheerder et al., 2010; U.S. Department of Health and Human Services, 1999). US government reports including *Achieving the Promise: Transforming Mental Health Care in America* (President's New Freedom Commission on Mental Health, 2003) and *Mental Health: A Report of the Surgeon General* (U.S. Department of Health and Human Services, 1999) identify the need for addressing these societal factors in order to better the outcomes of children and youth with MHD.

There is evidence that teachers, both preservice and in-service, identify the population of students with EBD and MHD as the population they feel least equipped to serve (Cook, 2002; Heflin & Bullock, 1999; Kamens, Loprete, & Slostad, 2000; Maag & Katsiyannis, 1999; Rose, Howley, Fergusson, & Jament, 2009; Sawka, McCurdy & Manella, 2002). Preparing teachers to effectively teach and support students with MHD and EBD may decrease the likelihood of the negative outcomes described in this chapter. The training needs of teachers for these populations have been described extensively in the literature (Delport 2012; Fink & Janssen, 1993; Kamens et al., 2000; Maag & Katsiyannis, 1999). There is a need for teachers who have students with EBD and MHD in their classes to be better prepared to meet the needs of these students (Delport 2012; Fink & Janssen, 1993; Kamens et al., 2000; Maag & Katsiyannis, 1999). Training needs

for teachers and the perceived self-efficacy of teachers of serving students with EBD and MHD are discussed in the next chapter.

In addition to the training needs of preservice and inservice teachers (Delport 2012; Fink & Janssen, 1993; Kamens et al., 2000; Maag & Katsiyannis, 1999) preservice and inservice teachers' own perceptions of being ill-prepared to include these populations (Cook, 2002; Heflin & Bullock, 1999; Kamens et al., 2000; Maag & Katsiyannis, 1999; Rose et al., 2009; Sawka et al., 2002), low mental health literacy rates (Highet et al., 2004; Pescosolido et al., 2008) and widely held stigmatizing attitudes (Jorm, 2012; Moskos et al., 2007; Scheerder et al., 2010; U.S. Department of Health and Human Services, 1999) are identified in the literature as impediments to meeting the needs of children and youth in schools experiencing MHD. According to Jorm (2012) explanations for unwillingness to seek treatment include stigma and a lack of knowledge about mental health issues. Knowledge about mental health issues and stigma are related—as people know and understand more about the causes of mental health disorders stigmatizing attitudes decrease (U.S. Department of Health and Human Services, 1999).

This study examine the effectiveness of a program that targets the identified training needs of preservice and inservice teachers to increase knowledge and teacher self-efficacy and decrease stigmatizing attitudes. Even though these needs have been identified in the literature, little has been done in the field related to investigating the effectiveness of specific training programs and procedures.

One further observation made by Gage and colleagues (2010) is that there is no strong advocacy group acting on behalf of students with EBD, in particular a parental

advocacy group and that this lack of advocacy on behalf of students with EBD is understandable given the negative view taken by society of those with EBD both as students and in post-school settings.

Purpose of the Study

The purpose of this study was to measure the effects of the National Alliance on Mental Illness *Parents &Teachers as Allies* training on preservice teachers' mental health literacy, perceived self-efficacy in meeting the needs of students with EBD and MHD, and stigmatizing attitudes.

The intervention for this study was a training provided by NAMI called *Parents and Teachers as Allies* (P & T as Allies training). The training included information about signs and symptoms of emerging mental health disorders in children and adolescents presented by a NAMI trainer. Also, as part of the training, participants heard the perspectives of an educator with experience dealing with mental health distress and disorders in school-aged children, a parent of a child who experienced symptoms of mental health distress while in school, and an individual with a diagnosed mental health disorder which had its onset while the individual was in school. This training was provided to preservice teachers at varying stages in their teacher education program. In order to measure the effects of the intervention on knowledge of mental health distress and disorders, symptoms of mental health distress and disorders, stigmatizing attitudes, and teacher efficacy, pre and post training surveys were administered. Additionally, follow-up surveys were administered to measure the effects of the training two weeks

later. A group of preservice teachers at similar points in their teacher training programs who did not receive the intervention but completed surveys acted as a control group.

Significance of the Study

In order to examine outcomes for students with EBD the Florida Mental Health Institute's Research and Training Center for Children's Mental Health conducted a descriptive study over a period of seven years known as the National Adolescent and Child Treatment Study (NACTS). In 1996, Greenbaum et al. found that in wave 7 of NACTS participants had major academic deficits (75.4% were below their appropriate grade level in reading and 96.9% were below their appropriate grade level in math) and 40.4% were not enrolled in school and did not have a GED or high school diploma. Less than 60% of participants were working or looking for work in their communities and there was heavy involvement with the criminal justice system for this group (Greenbaum et al., 1996).

Two additional longitudinal studies were analyzed by Wagner et al. (2005), the Special Education Elementary Longitudinal Study (Blackorby et al., 2005) and the National Longitudinal Transition Study-2 (Wagner, Newman, Cameto, & Levine, 2005). These studies reported post-school outcomes, as well as adult services and interventions, and provided nationally generalizable information for children and youth aged 6-26 years of age. Findings from SEELS and NLTS-2 indicate that children with emotional disturbances have the poorest outcomes of all disability groups and that they are the fastest growing disability category under IDEA (Wagner et al., 2005).

The impact of the dropout problem on students and society is significant and because of this available data concerning student outcomes (both for general education students and SWD) after leaving high school have been analyzed for decades. According to the U.S. Department of Education (2011), nearly 45% of students with EBD drop out of high school annually. Dropping out of high school is related to lower wages (Rouse, 2007), lower employment rates (U.S. Department of Labor, Bureau of Labor Statistics, 2010), and poorer health (Pleis, Ward, & Lucas, 2010). Additionally, there are increased costs to society due to dropouts including an average of $240,000 over one's lifetime related to lost tax contributions, reliance on Medicaid and Medicare, criminality, and welfare (Levin & Belfield, 2007).

The studies include information about students identified with EBD and who receive services. Students with MHD, who are often not identified as EBD and do not receive services in schools, are not included in the samples of the above mentioned studies. Kataoka, Zhang, and Wells (2002) estimate that a majority of the children and adolescents experiencing mental, emotional or behavioral symptoms severe enough to qualify for diagnosis are unidentified and untreated; further, students experiencing mental health distress or disorders are often in need of services they do not receive due to limitations of the federal definition of EBD (Forness et al., 2012), and the unwillingness of most people to seek help (Jorm, 2012).

Research Questions

The purpose of this study was to measure the effects of the National Alliance for Mental Illness (NAMI) *Parents and Teachers as Allies* training on preservice teachers'

mental health literacy, perceived self-efficacy in meeting the needs of students with EBD and MHD, and stigmatizing attitudes. Specifically, this study examined the following research questions:

1. Was the P&T as Allies training effective in increasing preservice teachers' mental health literacy?
2. Were increases in mental health literacy generated by the P&T as Allies training sustained two weeks after the intervention?
3. Was the P&T as Allies training effective in increasing preservice teachers' sense of self-efficacy in identifying and assisting students exhibiting signs and symptoms of mental health distress/mental disorders?
4. Were increases in preservice teachers' sense of self -efficacy generated by the P &T as Allies training sustained two weeks after the intervention?
5. Was the P&T as Allies training effective in decreasing preservice teachers' stigmatizing attitudes toward mental illness?
6. Were decreases in preservice teachers' stigmatizing attitudes towards mental illness generated by the P & T as Allies training be sustained two weeks after the intervention?

Terms and Definitions

Terms and their definitions used in this study are presented in the following section. Terms are included to ensure understanding of nomenclature used throughout this study.

Diagnostic and Statistical Manual of Mental Health Disorders, 5th edition, (DSM-V):

psychiatric disorders organized with diagnostic criteria for each disorder, 2013 edition of reference manual (American Psychiatric Association).

IDEA Federal Definition for Emotional and Behavioral Disorders: (i) [a] condition exhibiting one or more of the following characteristics over a long period of time and to a marked degree that adversely affects educational performance:

(A) An inability to learn which cannot be explained by intellectual, sensory, and health factors;

(B) An inability to build or maintain satisfactory interpersonal relationships with peers and teachers;

(C) Inappropriate types of behavior or feelings under normal circumstances;

(D) A general pervasive mood of unhappiness or depression; or

(E) A tendency to develop physical symptoms or fears associated with personal or school problems.

(ii) Emotional disturbance includes schizophrenia. The term does not apply to children who are socially maladjusted, unless it is determined that they have an emotional disturbance under paragraph (i) of this section. (P.L. 108-446, 20 C. F. R. §300.8[c] [4]).

Mental Health Disorder: diagnosable illnesses described in the DSM-IV (DSM-V available May 2013; Jorm et al., 2006).

Mental Health Distress: sub-clinical symptoms of mental health disorders (Jorm et al., 2006).

Mental Health Literacy: knowledge about mental health (Jorm et al., 2006).

National Alliance on Mental Illness: mental health organization which advocates for

access to services, treatment, supports and research for those suffering from mental health disorders (retrieved from http://www.nami.org/template.cfm?section=About_NAMI).

Perceived Behavioral Control: The beliefs people have about whether they have the knowledge or skills to perform a behavior.

Personal Beliefs: Beliefs regarding a behavior which account for a person's attitude towards a behavior.

Stigma: the idea that individuals possessing characteristics viewed as undesirable are treated as tainted and less than whole and valuable people (Link, Yang, Phelan, & Collins, 2004).

Subjective Norms: A person's perceptions about the expectations of important others regarding performance of a behavior.

Teacher Efficacy: Teacher beliefs regarding his or her ability to recognize and meet students' learning and behavioral needs (Gibson & Dembo, 1984).

Summary

In summary, helping students receive the support they need to be successful in school is necessary to avoid the dismal outcomes described in this section. This study measured the effects of NAMI's P&T as Allies training program on preservice teachers' mental health literacy, sense of self efficacy in meeting the needs of students with EBD, and MHD and stigmatizing attitudes.

Chapter 2 provides a review of the literature important to this study and Chapter 3 provides a description of the methodology to be used in the study. Chapter 4

summarizes the results of the intervention. A discussion of the findings as well as implications for future research is provided in Chapter 5.

CHAPTER TWO

REVIEW OF THE LITERATURE

This section of the paper includes a literature review of the areas of mental health literacy, stigma, teacher preparation, and teachers' perceptions of their preparation for inclusion of students with EBD and MHD in their classes. Further, the theoretical framework upon which the study is based is described.

The first step of this review was to identify the strands related to the topic of interest. The identified strands included mental health literacy, stigma, and teacher preparation for serving students with EBD and MHD, and teacher perceptions of their preparation for serving this population. Additionally literature reviewing the Theory of Planned Behavior and its application in education settings, investigations related to the effectiveness of NAMI trainings, and survey methodology was sought. The researcher conducted a selective search of the literature based on the strands identified using key terms in databases available through the Clemson University library including Academic OneFile, Academic Research Complete, Education Research Complete, Google Scholar, and PsychTests. As articles were identified for inclusion ancestral searches using the references cited were also conducted.

Mental Health Literacy

Research conducted in countries including Australia, Canada, India, Japan, Sweden, the United Kingdom, and the United States regarding individuals' knowledge about mental health (Highet et al., 2004; Pescosolido et al., 2008) find that under-recognition of MHD is common. Jorm et al. (1997) introduced the term, mental health

literacy, which refers to knowledge about mental health and the ability of a person to link that knowledge to action benefitting the mental health of one's self or others. Research has demonstrated that one compelling reason for improving mental health literacy is that willingness to seek mental health treatment increases as knowledge about mental health increases (Highet et al., 2004; Jorm et al., 2006; Jorm, 2012). Mental health literacy has five components including, (a) knowledge of mental health prevention measures, (b) recognition of developing mental health disorders, (c) knowledge of options for seeking help and treatment, (d) self-help strategies for milder problems, and (e) first aid skills for people developing mental health disorders or who are in a mental health crisis (Gulliver, Griffith, Christensen, & Brewer, 2012; Jorm et al., 1997).

Many countries, including the United States, have conducted national surveys regarding mental health and indicate high prevalence rates of people experiencing symptoms of mental health disorders and low treatment rates (Jorm, 2012). These surveys indicate that there is a delay between onset of symptoms and treatment that ranges from one to fourteen years (for mood disorders), three to thirty years (for anxiety disorders), and and six to eighteen years (for substance abuse disorders). The duration of untreated illness is related to the outcomes experienced by those with mental health disorders. The longer illness is left untreated the poorer the outcomes are. Further, individuals experiencing sub-clinical levels of symptoms are at higher risk of developing clinical disorders and attempting suicide (Jorm, 2012).

Often these illnesses manifest before people who experience them have attained much knowledge about mental health disorders and they do not recognize what is

happening to them (Gulliver, Griffiths, & Christensen, 2010). According to Jorm (2012) those experiencing symptoms of mental health disorders do not seek help until their level of distress is severe. Many people, and especially people in the range of 15 to 24 years of age, have negative attitudes toward receiving mental health treatment. One third of respondents surveyed in six European countries believe that getting professional help for mental health disorders is worse than having a mental health disorder (Scheerder et al., 2010). People also express the belief that psychiatric medications are more harmful than helpful even though clinical practice guidelines recommend their use (Jorm, 2012).

Often mental health illnesses have their first onset in adolescence (Gulliver et al., 2010). This can be particularly dangerous according to Gulliver and colleagues (2010) because adolescents lack knowledge and experience to obtain help with such problems and young people are unlikely to involve responsible adults when there is risk of suicide. Jorm (2012) gives compelling reasons for improving mental health literacy including, (a) an increase in willingness to seek help as knowledge about mental health increases, (b) the significant contribution to disability that mental health illness contributes in the world population, (c) the impact that mental illness has on young people, and (d) the value of prevention in keeping subclinical mental health issues from becoming fully developed mental health disorders. Studies included in this section are summarized in Table A-1 and can be found in Appendix A.

In an effort to address the lack of mental health literacy of adolescents, Tacker and Dobie (2008) piloted a program developed for use with middle school students designed to increase knowledge about mental health. The participants in the program

were from a school where nine percent of sixth graders were identified with depression screenings as being in need of referral for help. The program was implemented over a 6 week time period for 80 minutes and included 30 eighth grade students. Researchers used a mixed methods design with a pre and post program survey which included quantitative scales and space for qualitative comments. There was also a twelve question program evaluation and weekly teacher assessments. The program included instruction—group and peer to peer, written exercises, discussion, individual assignments, and opportunities to ask anonymous questions. The research indicated that students provided more accurate and complete answers on their exit surveys indicating a growth in knowledge of mental health issues. Students showed increases in coping mechanisms for strong emotions, identifying supportive resources, the ability to identify signs of depression, and identifying appropriate actions to take if the students thought someone was at risk of suicide. Six of the eight topics covered were ranked greater than a 4 on a 5 point interest scale by the students indicating high interest in the topics included in the program. According to the authors, differences in the pre and post surveys were not significant but may have been with a larger sample.

Another problem related to a lack of knowledge about mental health disorders is people often do not recognize when they or others are experiencing mental health distress nor do they know what to do when this is occurring (Highet et al., 2004). Following the implementation of a national campaign in Australia to raise awareness about MHD, Highet and colleagues (2004) conducted a study to investigate the association between recognizing and responding effectively to depression with exposure to depression-related

materials. "*beyondblue: the national depression initiative"* was funded by the Australian government for its initial 5 year period. The objectives of the initiative were to increase community awareness of depression and reduce stigma through awareness and education, promote research into causes and treatments of depression, and promote training of community members and health service providers to ensure prompt and effective forms of treatment (Hickie, 2001). Additionally, the initiative was undertaken as a public health campaign.

Highet et al. (2004) conducted a telephone survey including 3200 respondents. A representative community sample of 400 was taken from each Australian state/territory. The survey was composed of 37 questions with 10 additional questions asked of a subset of respondents. Items included questions regarding awareness, knowledge, attitudes, and behaviors of Australian adults 18 years of age and older. Researchers used chi square tests to examine the results and found that 45.4% of respondents identified depression as a major mental health issue. This identification was more likely to be made by women, respondents with post-secondary education, those with training in health or mental health, or those having had personal experience with depression. Results also varied by geographic region and metropolitan areas with those regions having high exposure to the *beyondblue* initiative having higher levels of awareness. This variation was also found among individuals with those most familiar with the *beyondblue* initiative having higher awareness levels.

When participants in Highet and colleagues' study were asked to identify major health problems only 1.3% identified depression with actual prevalence rates

underestimated or unknown by respondents. Among respondents, those with awareness of the *beyondblue* campaign were more accurate in estimating prevalence rates of depression and aware of the debilitating nature of depression. These findings suggest that campaigns such as *beyondblue* raise awareness and increase knowledge about depression. In addition national education campaigns may lead to improved attitudes and help seeking/offering behaviors.

Mental health disorders are not well recognized by the public and this lack of knowledge of disorders may lead to delays in seeking help as well as to inappropriate help-seeking behaviors (Jorm et al., 2006). Additionally, there is a gap between public and professional beliefs about treatment for mental health conditions. As mentioned previously, research has shown that many individuals believe that getting help for MHD is worse than having an MHD and that a lack of knowledge in the public, non-health professional community about treatments for MHD results from the low rates of mental health literacy (Scheerder et al., 2010). Knowledge about appropriate treatments for depression and schizophrenia is an example of these gaps in knowledge. Public misunderstanding about the need for medication in both conditions and hospitalization in the case of schizophrenia (Jorm, Christensen, & Griffiths, 2006b) may lead to a lack of help-seeking as well as to lower rates of adherence to treatment for those experiencing these MHDs. Low rates of mental health literacy are not the only barrier to help-seeking behaviors for individuals with MHD. Stigma is also a factor in the willingness of individuals to seek appropriate treatment for MHD.

According to Moskos et al. (2007) and *Mental Health: A Report of the Surgeon General* (U.S. Department of Health and Human Services, 1999), societal stigma is a significant barrier to seeking treatment for mental health disorders. Additionally, internalization of the negative attitudes that lead to stigma by those experiencing MHD also may cause individuals to self-stigmatize and experience perceived stigmatization, both of which may reduce the likelihood of seeking professional help (Barney, Griffiths, Jorm, & Christensen, 2006a). Stigmatizing attitudes and first aid skills, or appropriate ways to respond to mental health disorders or crises, can both be improved by increased knowledge. To increase knowledge and reduce stigma it is recommended that population-wide initiatives be put in place to promote knowledge about risk factors, prevention, and early identification as has been done for other disabling conditions such as heart disease and cancer (U.S. Department of Health and Human Services, 1999; President's New Freedom Commission on Mental Health, 2003).

There are population -wide initiatives and individual training programs that show promise for improving mental health literacy. In Australia, where the population-wide education initiative *beyondblue* was implemented, mental health literacy has improved (Jorm et al., 2006a, 2006b). In order to determine the effect of mental health literacy campaigns population-wide monitoring of attitudes, help seeking behaviors, mental health, and knowledge about mental health needs to be done.

Stigma

Another construct of interest in the current study is stigma. The Surgeon General (U.S Department of Health and Human Services, 1999) has identified stigma as the

primary barrier to help seeking by those experiencing MHD. This section provides a definition of stigma, addresses stigma towards children and adolescents with MHD, and identifies practices which reduce stigma.

Stigma is a concept addressing the idea that individuals possessing characteristics viewed as undesirable are treated as tainted and less than whole and valuable people (Link et al., 2004). According to Link and colleagues (2004), in order for stigma to exist four things must happen. First, human differences are distinguished and labeled. Second, cultural beliefs lead to negative stereotypes of labeled persons. Third, a degree of separation is established between the labeled persons and others creating an "us" and "them". And fourth, the labeled persons experience a loss of status and discrimination that leads to unequal outcomes. When persons become labeled and are subsequently stigmatized by having that label they experience disapproval, rejection, exclusion and discrimination (Chandra & Minkovitz, 2007; Kranke et al., 2010; Martin, Pescosolido, Olafsdottir, & McLeod, 2007; Moses, 2010; Schomerus et al., 2012).

Stigma may be described as one of two types of negative reactions to some sort of identified negative trait a person possesses. There is public stigma, or the stigma that is experienced when society discriminates against persons with undesirable traits. There is also self-stigma which is when a person internalizes the public stigma and experiences shame, attempts to hide undesirable traits, and limits interaction with others (Corrigan et al., 2010). Individuals typically are influenced by and to a certain degree adopt the norms and values of the culture in which they live. Addressing self-stigmatizing behaviors will be extremely difficult to do as long as public stigma persists (Barney et al., 2006). Mental

health stigma often includes perceptions that individuals experiencing mental health illnesses are weak, flawed, dangerous, and socially incompetent (Chandra & Minkovitz, 2007; Martin et al., 2007).

In *Mental Health: A Report of the Surgeon General* (U.S. Department of Health and Human Services, 1999), stigma is identified as an impediment to the treatment and potential wellness of those experiencing MHD. The report goes on to say that MHDs are real medical conditions with a biological basis that benefit from treatment. One way to measure how institutionalized stigma is in a society is to consider laws governing the treatment of those experiencing stigmatizing conditions. A mental health parity law was passed in 1996 by Congress requiring insurance benefits not be subject to annual or lifetime dollar limits for mental health treatments. Some states still allow for legal exclusions of treatment on the basis of diagnoses being related to mental health care (Barry & Busch, 2007). More than a decade after the Surgeon General's Report (U.S. Department of Health and Human Services, 1999) public stigma concerning mental health is a persistent part of American society. According to *Mental Health, A Report of the Surgeon General* (U.S. Department of Health and Human Services, 1999) the primary consequence of stigma in regards to mental health is that more than half of people who need treatment for mental health disorders do not seek help.

Stigma Toward Children and Adolescents with Mental Illness

The prejudices and discrimination experienced by individuals with mental health disorders is not limited to adults. Public stigma causes damage to reputations and leads to degradation for the bearer of the stigma due to stereotyping and discrimination

(Mukolo, Heflinger, & Wallston, 2010) and these processes are further complicated when considered for youth because as the child or adolescent experiences stigma the parents/caregivers and family members of the child also experience stigma.. This experience of stigma by the parents/ caregivers can lead to the child experiencing stigmatizing attitudes from family members as well as the rest of society (Moses, 2010).

Another way that young people experience stigma is in terms of gender roles and expectations. "Acceptability" of problem behaviors is sometimes associated with gender roles and in turn, influences help-seeking behaviors of boys and girls over the childhood years (Chandra & Minkovitz, 2006). Additionally adolescence is a time of rapid change and development for individuals where attitudes and beliefs are shaped. This phase of life can be quite stressful as young people experience such rapid physical and psychological change. The period of stress can serve as a trigger for emotional or behavioral problems with mental health illnesses often having their first onset in adolescence (Chandra & Minkovitz, 2007). Because young people are unlikely to involve responsible adults there is an increased risk of suicide (Jorm, 2012). According to Moskos et al. (2007) suicide is the cause of death for 4,000 adolescents and young adults every year. This is more than the combined number of deaths for that same age group caused each year by cancer, heart disease, AIDS, birth defects, pneumonia, influenza, and chronic lung diseases (Moskos et al., 2007).

The majority of young people who commit suicide have mental health diagnoses which could have been treated. Moskos et al. (2007) found that respondents in their study (270 individuals categorized as parents, siblings, friends, other relatives, and "other

person" connected to adolescents whose deaths had been determined to be the result of suicide) overwhelmingly cited beliefs by the decedent that "seeking help was a sign of weakness" and the majority also responded that decedents were "reluctant to get help" and "too embarrassed to get help." Most also believed "that nothing could help" them get better. These responses provide a picture of the cultural beliefs surrounding the stigma associated with seeking treatment for mental illness in the United States (Moskos et al., 2007). Clearly there is a need to find ways to reduce the stigma associated with mental illness and the stigma experienced by those seeking treatment for MHD. Table A.2 in Appendix A provides an overview of studies included in this section of the literature review.

Practices for Reducing Stigma

Researchers concerned with the prevalence of EBD and MHD experienced by school-age children and youth have identified potential practices that may be helpful in addressing problems in school experienced by student with and at risk for developing emotional and behavioral or mental health disorders (Brownell et al., 2005; Carter et al., 2011; Cheney et al., 1996; Gage et al., 2010; Horner et al., 2010; Lane & Carter, 2006; Lewis et al., 2010; Rose et al., 2009; Sawka et al., 2002; Wright et al., 2006). Since stigma serves as a barrier to help-seeking behaviors for students who experience mental health distress (U.S. Department of Health and Human Services, 1999), methods are needed to reduce stigma for more students to access the help they need to be successful in school and to experience positive post school outcomes. Public health campaigns in the United States to raise awareness of the causes and symptoms of mental health disorders

similar to those conducted in Australia and New Zealand (Jorm, 2012) have been called for by both the President's New Freedom Commission on Mental Health (2003) and the Surgeon General (U.S. Department of Health and Human Services, 1999).

Yamaguchi, Mino, and Uddin (2011) conducted a review of 40 studies with interventions designed to reduce stigma and increase awareness about mental health problems of young people. The studies included participants who were university or college students (21), children and adolescents less than 18 years of age (18) and a mix of school-age (under 18) and college students. The research indicated that there are some effective strategies for reducing stigma and some preliminary (though weak) evidence for long term effects and changes in behaviors in most of these studies. Interventions were composed of (a) education about mental health problems, psychiatric services, or causes of mental illness (12); (b) videos or other media instruments that introduced persons with mental illness and showed their lives (11); and (c) opportunities for participants to have contact with persons with mental health problems (18). Outcomes were described in terms of having a positive change in knowledge and stigmatizing attitudes, no change, or a negative change in knowledge and attitudes.

Yamaguchi et al. (2011) found that educational information along with contact with individuals who have MHD have the largest effect on reducing stigma and changing negative attitudes. Other researchers have obtained mixed results concerning the efficacy of knowledge-contact programs in improving attitudes and reducing stigma about mental illness. Pinto-Foltz, Logsdon, & Myers (2011) found no decrease in stigma but did find an increase in mental health literacy following use of *In Our Own Voice*, a curriculum

produced by the National Alliance on Mental Illness (NAMI) and presented by NAMI trained mental health care consumers. The researchers did indicate that the sample size (n=156 high school girls) might have limited the power of the intervention. Corrigan et al. (2010) found that the NAMI program, *In Our Own Voice* was effective in reducing stigma with college students (n=200). The 30 minute version was found to be just as effective as the 90 minute version and both versions of the *In Our Own Voice* intervention were more effective than a 30 minute educational program (Corrigan et al., 2010).

In another study, Spagnolo, Murphy, and Librera (2008) implemented an intervention using modules created and presented with the collaboration of persons with mental illness and found that the intervention significantly affected the attitudes of adolescents towards people with mental illness with decreases in stigmatizing views across seven of the nine factors measured (n=426 high school students). Additionally, in a study involving contact with individuals with MHDs, Bizub and Davidson (2011) found that college students who befriend a person with mental illness (even as a requirement for class) can increase empathy and dispel misunderstandings about people who have MHDs. Empathy and knowledge are both important elements in reducing stigma.

In studies using interventions not including personal contact with persons with MHD results are mixed. Brown, Evans, Espenchade, and O'Connor (2010) implemented a study using two different interventions with college students (n=143). They found that the intervention using filmed contact with persons who have MHDs led to decreases in stigma measures immediately following the intervention and 1 week after the

intervention. Brown et al. found that the second intervention they tested, exposing college students to a simulation of auditory hallucinations similar to those persons with MHDs might experience, resulted in increased stigma.

Romer and Bock (2008) designed a study to test the effects of a communication strategy in reducing the harmful stereotypes associated with mental illness in young people (n=1,258 in a national survey). Study participants were presented with either a person treated and successfully recovering from depression or a person who had not received treatment and who was experiencing depression. Participant responses indicated lower levels of unfavorable stereotype expectations and reduced stigma towards individuals with treated depression versus individuals with untreated depression. Results indicate that messages focusing on persons who have been successfully treated for mental illness are part of a promising strategy for reducing stigma of mental illness (Romer & Bock, 2008).

Although the research base regarding stigma reduction is still emerging, the studies included here indicate that there are practices that help in reducing the stigma associated with mental illness. Some of these practices are promising for use with school-age children. In order to increase the help seeking behavior of children and adolescents it is important to continue exploring ways to reduce stigma and increase mental health literacy. One strategy for improving mental health literacy and reducing stigma is to bring these efforts together as a part of expanding school based mental health as recommended by the Surgeon General (U.S. Department of Health and Human Services, 1999) and the President's New Freedom Commission on Mental Health (2000).

Table A.3 includes summaries of the studies included in this review concerning reduction of stigma.

An important step in implementing school-based mental health awareness and intervention is to consider those who work with these students each day. According to Maag and Katsiyannis (2010) there are a variety of funding sources to make school-based mental health services available to students. The authors suggest that public school can help to combat stigmatizing attitudes by campaigning to increase public awareness of the importance of mental health in schools through websites and newsletters. Further, Maag and Katsiyannis (2010) suggest that by addressing psychological wellness rather than focusing on mental illness (although they are the same thing) may help in overcoming the stigma that is associated with mental illness.

Teachers of Students with EBD/ MHD

This section examines teachers of students with EBD as well as those experiencing MHD. Literature concerning teacher preparation for teaching and managing students with EBD and in their classrooms will be discussed. Additionally, the literature regarding perceptions of teachers about their preparation for students with EBD and will be examined.

In addition to exploring the perceptions teachers have about their training and preparation for teaching students with EBD the educational context of standards and accountability in which these students presently attend schools will be considered.

With the National Commission on Excellence in Education's publication, *A Nation at Risk* (Gardner, 1983) many became concerned about the state of education in

the United States. Since that time there has been much discussion about the report overstating the problems facing American education, but the idea that our system is not adequately preparing students for the roles they take on as adults persists.

School reforms over the last 25 years have focused largely on producing a competitive workforce for the United States in the global economy of the 21st Century. Fueling these reforms are data indicating that students in the United States are falling behind those from other nations on measures of achievement, particularly in math and science. In the years between the publication of *A Nation at Risk* (Gardner, 1983) and today, states have passed legislation to improve education by creating standards of learning for each grade, testing students for achievement on those grade level standards, requiring students to take high school exit exams, and improving teacher preparation and professional development.

The movement toward standards and accountability based education was consolidated on the national level by The No Child Left Behind Act (NCLB; US Department of Education, 2002). It includes requirements that all students perform to high standards of achievement, achieve higher graduation rates, and be taught by highly qualified teachers using evidence-based instructional practices. Also included in NCLB are accountability measures designed to ensure that these goals are met including provisions for firing principals and teachers in underperforming schools and districts and allowing for the takeover of schools, districts, or state education systems failing to progress towards meeting standards.

Following NCLB in articulating the need for high standards in education is the reauthorization of the Individuals with Disabilities Education Improvement Act (IDEA) in 2004 which outlines the requirements for provision of a quality education for students with disabilities. One important provision included is that students be educated with their same age peers to the maximum extent possible. As a result of the requirements that students with disabilities be tested on grade level tests, meet the same graduation requirements as their typically achieving peers, and that they be taught by highly qualified teachers in those subject areas more students receiving special education services are being educated in regular classes than ever before (Heflin & Bullock, 2010).

How prepared are teachers to deal with students identified with EBD MHD in their classrooms? In order to address this issue, teacher preparation for students with EBD and teacher perceptions of their preparedness for teaching students with EBD will be discussed in the following sections.

Teacher preparation for teaching students with EBD. Delport (2012) administered surveys to and conducted interviews with participants identified as experts in EBD, teachers who are expert in EBD, and M.Ed. graduates specializing in EBD regarding their perceptions of necessary competencies were for teachers of students with EBD. In addition to analyzing results of his participants' responses, Delport (2012) compared the competencies considered highly valuable for teachers of students with EBD to those competencies identified as valuable in the literature since 1957. Results of the comparison indicate that the competencies identified by the experts he surveyed generally were aligned with the competencies identified as valuable in the literature (Deport, 2012).

Additionally, Delport's experts identified areas of teacher preparation that might be improved to increase teacher competency in the areas they identified including strategies for making functional behavior assessments and behavior plans simpler and less time consuming, improving behavior management at the preservice level, and strengthening and affirming affective attributes that successful teachers of students with EBD possess.

In another study examining teacher preparation needs for teaching students with EBD Kamens et al. (2000) surveyed general education teachers about what they considered should be included in teacher preparation programs for teachers to be able to include students with special educational needs in their classrooms. The results of this survey indicated that participants reported the following content should be included in teacher preparation programs: (a) behavioral strategies, (b) conflict resolution, (c) social skills, (d) identification of students with special needs, (e) adaptation of the curriculum and materials, (f) adaptations of instructional strategies, (g) legal regulations, (h) individual education programs, (i) co-teaching, (j) teaming, and (k) collaboration. Similar to Delport's (2012) findings, behavior management was rated highly. Teaching social skills was another area of need identified by both Deport (2012) and Kamens et al. (2000).

Maag and Katsiyannis (1999) found the most frequently listed competencies identified for special education teacher preparation programs that were also included in Council for Exceptional Children (CEC) competencies were instructional content and practice, assessment, behavior management, and characteristics of EBD. Additional competencies (Maag & Katsiyannis, 1999) that programs required were math/reading

methods, language development, vocational/career issues, and child/educational psychology. Their findings indicated that most teacher education programs offered generic special education certification with EBD specific preparation occurring at the graduate level. In addition, few programs offered EBD certification or field placement in clinical or residential settings (Maag & Katsiyannis, 1999). These findings indicated that preservice teachers in undergraduate programs received little training specific to students with EBD.

Fink and Janssen (1993) found in a review of the literature and from 22 direct service providers identified as experienced, knowledgeable professionals that behavior management and social skill development are the two competency clusters most relevant for teachers of students with EBD. The direct service providers also identified establishing a structured classroom environment, developing a levels system, identifying the nature and source of behavior problems, identifying needed social skills and teaching social behaviors as relevant competencies. According to several studies (Delport 2012; Fink & Janssen, 1993; Kamens et al., 2000; Maag & Katsiyannis, 1999) teachers of students with EBD require a specialized set of skills. These EBD specific skills were not generally addressed in undergraduate teacher preparation programs for students preparing to be generalized special education teachers (Maag & Katsiyannis, 1999). Further, according to Delport's (2012) survey results preservice teachers are still in need of this specialized training.

Considering that NCLB requires that all but a very few children be tested on grade level, that special education students must meet state requirements in order to

receive a diploma, and the IDEA requirement that students be in the least restrictive environment appropriate there are increasing numbers of students with EBD placed in general education settings. A better understanding of this population across teachers and teacher candidates seems appropriate. One area identified in the literature (Maag & Katsiyannis, 1999) as an important competency for teachers of students with EBD is the ability to conduct assessments (e.g., functional behavioral assessments) in order to identify the function of students' behaviors. Additionally, as a part of the assessment piece, teachers need to be able to recognize signs and symptoms of emotional and behavioral disturbances in order to provide adequate supports to these students to improve educational and functional outcomes. Kamens et al. (2000) found that 34% of experienced general education teachers (participants had an average of 19.7 years teaching experience and 67% held master's degrees) expressed the ability to identify students with special needs as a critical component of teacher preparation programs.

Maag and Katsiyannis (1999) identified shortages of teachers prepared to teach students with EBD as a problem. Henderson, Klein, Gonzalez, and Bradley (2005) included findings that indicate that the shortage of teachers qualified in the area of EBD persists. The findings of Henderson et al. (2005) reveal a less than promising picture of the preparation of teachers working with students identified as EBD. They are less likely to have master's degrees than other special education teachers, twice as likely to be certified through an alternative route as other special education teachers, less likely to be fully certified in their teaching area, and more likely to be working under an emergency certificate than other special educators (Henderson et al., 2005). Included studies

focusing on teacher preparation for teaching students with EBD/MHD are summarized in Table A.4.

Teacher perceptions regarding preparation for and teaching of students with EBD. Research indicates that teachers feel least prepared for and most anxious about teaching students with EBD (Cook, 2002; Heflin & Bullock, 1999; Kamens et al., 2000; Maag & Katsiyannis, 1999; Rose et al., 2009; Sawka et al., 2002). Both special and general educators express concerns about their ability to appropriately identify behaviors that are related to MHD and EBD (Cook, 2002; Heflin & Bullock, 1999; Kamens et al., 2000; Rose et al., 2009; Sawka et al, 2002). This includes difficulties due to attributing behaviors to known disabilities rather than recognizing them as symptoms of possible MHD; for example, not being adequately prepared to differentiate generalized anxiety disorder (GAD) or obsessive/compulsive disorder (OCD) behaviors from common elements of disorders on the Autism spectrum or ADHD (Rose et al., 2009).

Further, general education teachers indicate that they need additional training in including students with disabilities (particularly those identified as EBD), adjusting their curricula so that all students can benefit, managing escalated behaviors, and teaching social competencies (Heflin & Bullock, 2010). According to their research, both general education and special education teachers felt the need for more training for inclusion and collaboration. Teachers indicated a belief that inclusion of students with special needs was often not the best placement for students with special needs but was required due to the movement towards full inclusion (Heflin & Bullock, 2010).

In another study of teacher perceptions of their preparedness to teach students with EBD, Cook (2002) found that general education teachers felt significantly more capable of teaching students with learning disabilities, multiple disabilities, and intellectual disabilities than they were teaching students with EBD in an inclusion setting. Preservice teachers' attitudes towards inclusion varied according to severity and type of disability with students with EBD being the category they were least open to having in inclusive settings (Cook, 2002). Teachers also had the perception that their programs of study had not prepared them to adequately teach students with disabilities, that inclusive settings are least appropriate for students with EBD, and that general education teachers are not adequately prepared to maintain classroom management when the inclusive setting was for students with EBD (Avramidis, Bayliss, & Burden, 2000; Cook, 2002; Heflin & Bullock, 2010; Kamens et al., 2000). Significantly, no participant in Cook's (2002) study identified instructional techniques or the ability to make curricular adaptations as strengths they possessed, but rather reported as strengths their personal characteristics and experiences unrelated to their teacher preparation.

Preparation that teachers receive for working with students with EBD is in need of improvement (Delport, 2012; Kamens et al, 2000; Maag & Katsiyannis, 1999). This is an especially important consideration in light of the high achievement standards that have been set for students to meet grade level standards and eventually earn high school diplomas. Further, with the high prevalence rates of EBD and MHD among school-age children (Chandra & Minkovitz, 2006; Chandra & Minkovitz, 2007; Forness et al., 2012; Kranke et al., 2010; U.S. Department of Health and Human Services, 1999) many general

education teachers will find themselves teaching these students with very little preparation for effectively doing so. In addition to research conducted by teacher educators concluding that preparation for teaching students with EBD is not yet where it needs to be, reviews of studies examining teacher perceptions of their preparation for working with students with EBD indicate that in-service teachers do not feel adequately prepared to support these students in the classroom (Cook, 2002; Delport, 2012; Heflin & Bullock, 1999; Kamens et al., 2000; Maag & Katsiyannis, 1999; Rose et al., 2009; Sawka et al., 2002). There is a need to better prepare preservice teachers for their roles in increasingly inclusive classrooms as well as to provide training to in-service teachers to enable them to more effectively serve the students with EBD in their classrooms. Table A.5 includes summaries of the studies included concerned with teacher perceptions of their preparation for teaching students with EBD/MHD.

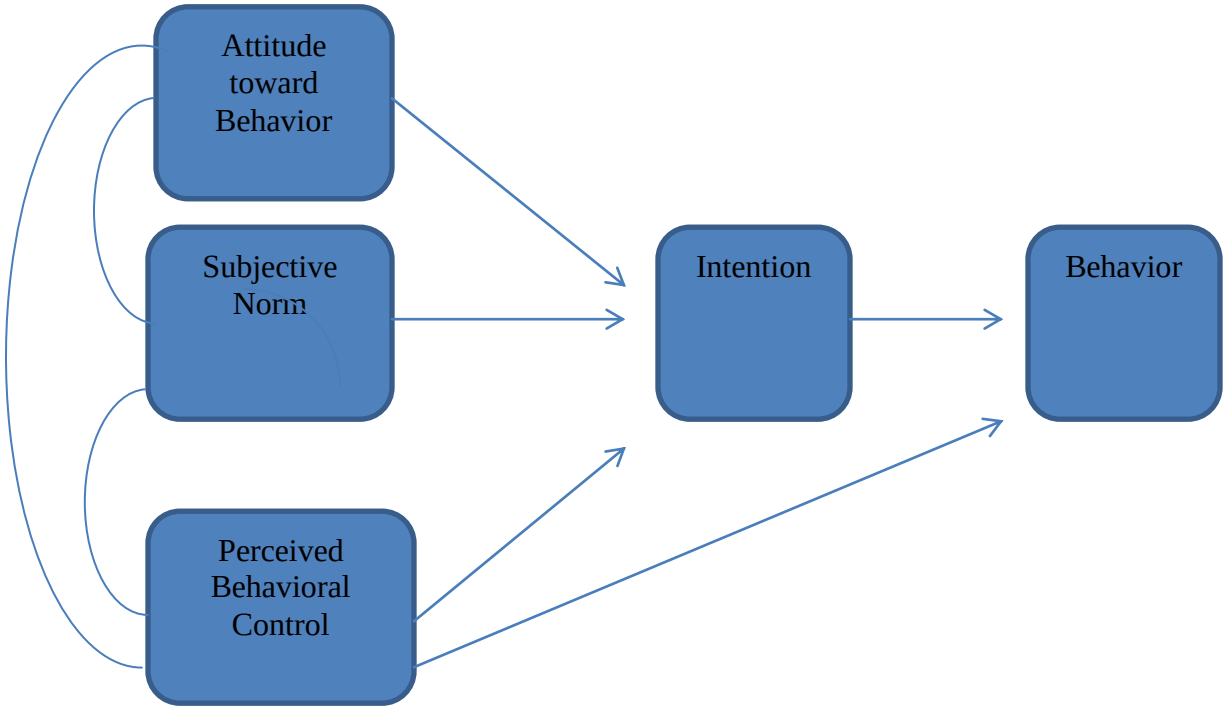
Theoretical Framework

The Theoretical framework underlying this study is Ajzen's (1991) Theory of Planned Behavior (TPB). TPB addresses the factors that contribute to a person engaging in certain behaviors (see a representation of Ajzen's model in Figure 1.1). According to Ajzen (1991), behaviors may be reliably predicted by intention to engage in a behavior of interest when volitional control of engaging in the behavior is not an issue.

According to the TPB, components that influence a subjects' intention to engage in certain behaviors are attitudes, subjective norms, and perceived behavioral control (PBC). PBC is analogous to self-efficacy, or a person's belief about whether they have the knowledge or skills to perform a behavior. Albert Bandura established the construct

of self-efficacy as the belief a person has about their ability to perform a task (Schunk, 2011) based on their knowledge or skills. It has been shown to be a reliable predictor of task performance (Bandura, 1982; Bandura, Adams, & Beyer, 1977). In the present study the attitude component is represented by preservice teachers' mental health literacy, subjective norms are represented by the stigmatizing beliefs and attitudes preservice teachers hold about students with MHD, and PBC is represented by the preservice teachers' feelings of preparedness for dealing with students experiencing MHD. When considered together, attitudes, subjective norms, and PBC serve as reliable predictors of the performance of a behavior (Campbell, 2010). The components that influence intention include attitudes toward the behavior, subjective norms with respect to the behavior, and perceived control over the behavior. Personal beliefs regarding a behavior account for a person's attitude towards a behavior (Campbell, 2010; Davis, Ajzen, Saunders, & Williams, 2002).

Figure 1.1 Theory of Planned Behavior (Ajzen, 1991)



Attitude toward behavior= mental health literacy measures, knowledge
Subjective norm= stigma measure
Perceived behavioral control= teacher sense of efficacy in identifying symptoms of mental health distress and/or disorders

For the purpose of this study, the teachers' feelings about whether or not they are prepared to include students with EBD and MHD in their classroom settings are the personal beliefs to be examined and correspond to the PBC component of Ajzen's model. Subjective norms refer to a person's perceptions about the expectations of important others regarding performance of the behavior. In the present study, the expectations of society will be considered as the "important other" with stigmatizing and stereotyping attitudes formed by societal norms examined. In the case of this study the mental health literacy of the teachers (indicating their ability to recognize signs and symptoms of EBD and MHD) and their feelings of ability to work with these students correspond to the attitude component of Ajzen's model. Studies regarding TPB included in this chapter are summarized in Table A.6.

The Theory of Planned Behavior has been used in a variety of studies and disciplines in order to account for changes in behavior. In one study, Choi (2012) used components of TPB to explain creative effort by students at a North American business school. Creativity and creative self-efficacy were influenced by attitude toward the behavior and both were significant predictors of creativity intention. In another study Spink, Wilson, and Bostick (2012) found that perceived behavioral control was a significant predictor of intention to exercise with attitude and subjective norms positively relating to intention as well. Teo (2012) found in a study of preservice teachers that attitude toward the use of technology by preservice teachers was the strongest determinant of behavioral intention to use technology in the classroom.

A meta-analysis of studies using the TPB was conducted by Armitage and Conner (2001) on 185 studies carried out through the end of 1995. The purpose of the analysis was to test the overall efficacy of the TPB, assess the predictive validity of the TPB in relation to observed or self-reported behavior, to consider differences in the conceptions of intentions, and to assess for discriminant validity between the constructs of the TPB. Additionally, the authors examined the role of perceived behavioral control (PBC) compared to self-efficacy or perceived control over behavior as well as the potential interaction between intention and PBC. Armitage and Connor (2001) also examined measurement adequacy as a moderator of the subjective norm-intention relationship.

Further, Armitage and Conner (2001) found a large (R=.52) multiple correlation of intention and PBC (using Cohen's q statistics). They also found a large effect for the multiple correlation of attitude, subjective norm, and PBC (R=.63) and a medium effect (R=.43) for the PBC-intention correlation. The variance in behavior explained by TPB was significant for both observed behaviors and self-reported behaviors (qs-.14, p>.01). Self-efficacy and PBC have comparable levels of correlation with intention (both R=.44). Both self-efficacy and PBC seem to be useful predictors of intention and behavior. Evidence supports the efficacy of TPB for predicting intention and behavior explaining up to 20% of the variance in prospective measures of actual behavior (Armitage & Conner, 2001). The addition of PBC to the TPB framework seems useful because the research shows that PBC is independently predictive of intentions and behaviors.

Research Pertaining to NAMI Educational Curricula

In this section of the paper a selection of recent research that has been conducted using educational curricula written by the National Alliance for Mental Illness (NAMI) are reviewed. First, Lucksted, Stewart, and Forbes (2008) examined NAMI's *Family to Family* Education program using semi-structured interviews. In this study there were 31 participants, 23 were women and 19 of the 31 were parents of individuals with MHD.

The *Family to Family* training program includes information about mental health illnesses, normal responses to traumatic events that may be experienced by those with an ill family member, and lived experiences of others who have ill family members as well as those of a person with a MHD. *Family to Family* is a free, self-help resource for family members of someone with a MHD. The program lasts 12 weeks and is designed to increase coping skills and improve perspectives so that more adaptive skills can be used by families dealing with a loved one with a MHD.

Data analysis was conducted using grounded theory to uncover information emerging from the data through comparisons of data across participants. The authors focused on experienced change and outcomes for class participants including improved self-care, well-being, communication and relationships within their families, participation in a support group, improved/ increased advocacy for ill family member, and improved/ increased coping skills and problem solving strategies. The researchers found that there were proximal (better coping and problem solving and increased confidence, less tension, exhaustion, and frustration, increased acceptance, and better relating to ill family members) and distal (quality of life increases, increased empowerment and advocacy, and

decreases in depression and despair) benefits for *Family to Family* participants who were interviewed.

In another study, Lucksted, McNulty, Brayboy, and Forbes (2009) used a pre and post survey to examine the effects of the *Peer to Peer* curriculum on individuals' knowledge and management of their illnesses, levels of confidence and empowerment in themselves and their ability to cope with their illnesses, and their connection with others. The *Peer to Peer* training consists of nine two-hour sessions facilitated by two trained mentors who themselves have MHDs. During the course of the training participants learn about mental illness, triggers for and signs of relapse, acquiring information about medications, coping techniques, stress management, and how to create an advance directive.

One hundred thirty-eight participants in the study included 81 women and 57 men. Eighty-seven percent were white, 6% were African American, and 7% identified themselves as being from other racial or ethnic groups. The mean age was 43.0 $\pm$ 12.8 with a range of 18 to 77 years. Of the participants 20 % had a high school diploma or less, 63% had some college or an undergraduate degree, and 15% had attended graduate school. Participant living arrangements included living independently, with a peer or alone (60%), with parents (20%), and in a supervised program (11%), homeless (4%), and other living arrangements (4%). Most had one psychiatric diagnosis with some reporting two, three, or more diagnoses. Participants were diagnosed with bipolar disorder (49%), depression (30%), schizophrenia (13%), and schizoaffective disorder (13%) with other diagnoses reported at lower frequencies.

The authors found that there were significant, positive changes in 6 of the 14 outcome items included on the survey instrument. There were no significant changes for the other eight items; however, there were no pre-post changes in a negative direction. The findings from this pilot study indicate that the *Peer to Peer* program participants benefited from their participation in areas directly tied to the curriculum.

Pinto-Foltz et al. (2011) also utilized a NAMI educational curriculum in a study. The intervention they used was *In Our Own Voice* in order to examine the effects of a knowledge/contact program on the knowledge and stigmatizing attitudes of adolescent girls on those experiencing mental health illness and/or mental health distress. The authors found initial positive data on feasibility, acceptability, and initial efficacy of mental health knowledge contact programs. Pinto-Foltz and colleagues (2011) found that stigma measures did not change with adolescents in the same manner in which they did with older students in previous studies. This change may be attributable to the ways in which mental health disorders are conceptualized by younger participants. Additionally, these stigma measures may have been more similar to those in other studies if participants had experienced prolonged or further interaction with the trainers who themselves had mental health disorders thereby helping to create new cognitive schemas for the adolescent participants.

Finally, Brister, Cavaleri, Olin, Burns, and Hoagwood (2012) describe results from evaluation of *NAMI Basics* which is a peer-delivered family educational program for families of children and adolescents with mental illness. The purpose of NAMI Basics is to provide information about mental illness and treatments, family

communication skills training, and advocacy support. Outcome measures were obtained by administering pre, post and follow up intervention questionnaires to participants. Participants were predominantly female and white but included African-Americans and one Hispanic respondent, married, divorced, and widowed parents, grandparents, and adoptive and step parents. The mean age of participants was 39 years of age. Identified children were predominantly male (60%), first received their diagnosis at 5.5 years of age (SD= 4.05). Fifty-five percent of children had one diagnosis and 23% had diagnoses that included two disorders. Attention Deficit Hyperactivity Disorder was the most common diagnosis with mood disorders being the next most common diagnosis. Brister et al. (2012) found that participants reported improved self-care and empowerment as well as a reduction in inflammatory communication. The study seems to offer preliminary support for the provision of peer-delivered family education for families of children with mental health conditions.

Synthesis of Findings

Mental Health Literacy and Stigma

The Surgeon General's Report on Mental Health (1999) and The President's New Freedom Commission on Mental Health (2003) call for an emphasis on mental health well-being and early intervention for those with emerging disorders. Additionally, both reports identify stigma as a major barrier to help seeking behavior which can often lead to an increase in severity and duration of symptoms. Stigmatizing attitudes towards those experiencing symptoms of or seeking treatment for mental health disorders is widespread. With stigma serving as a deterrent for seeking early intervention for mental health

distress many early manifestations of mental health distress develop into full blown mental health disorders due to lack of treatment (Moskos et al., 2007; President's New Freedom Commission on Mental Health , 2003; U.S Department of Health and Human Services, 1999).

Societal and personal costs of MHD are significant in terms of decreased productivity, increased disability rates, and shortened lifespans due to health complications related to the disorders and their treatment as well as increased instances of completed suicide (Jorm, 2012). Mental illness is a serious a public health issue like heart disease and cancer as well as a significant cause of disability in the world population (Jorm, 2012). Suicide is responsible for the deaths 4,000 adolescents and young adults each year—more than the combined number of deaths for that same age group caused each year by cancer, heart disease, AIDS, birth defects, pneumonia, influenza, and chronic lung diseases (Moskos et al., 2007). In order to address widespread and serious health concerns such as mental health disorders efforts to provide for early intervention, programs for increasing mental health literacy, and strategies for reducing stigma and increasing help seeking behaviors need to be implemented.

Research indicates that stigmatizing attitudes may be reduced (Bizub & Davidson, 2011; Brown et al., 2010; Corrigan et al., 2010; Romer & Bock, 2008; Yamaguchi et al., 2011) through educational programs including videotaped interviews and lessons, developing a friendship, having personal contact with those with MHD and learning that people with MHD can recover and live relatively normal lives.

Teacher Preparation for Teaching Students with EBD

Students with EBD and MHD have poor educational attainment. Dropout rates are high for these groups and the costs—for these students and to society as a whole—are great. In addition to improving mental health literacy and reducing stigmatizing attitudes to better serve students with EBD and MHD, research indicates that teachers need preparation for teaching students with EBD. Particular competencies have been identified as important for teachers of students with EBD. Maag and Katsyiannis (1999) identified these competencies as behavioral strategies, conflict resolution, social skills, and adaptation of curriculum, materials, and instructional strategies, as well as training in identification of students with special needs. In addition, teachers should be knowledgeable about legal regulations, individual education programs, collaboration, co-teaching, teaming, and collaboration. In 2012, Delport found many of the same competencies identified as important in his research including a review of the literature and feedback from an expert panel of educators of students with EBD.

Teacher Perceptions of their Preparation for Teaching Students with EBD

Research indicates that teachers feel least prepared to teach students with EBD and that this group of students is a source of anxiety for teachers (Cook, 2002; Heflin & Bullock, 1999; Kamen et al., 2000; Maag & Katsiyannis, 1999; Rose et al., 2009; Sawka et al., 2002). These concerns are shared by both general and special educators. Educators indicate concerns including difficulties due to known disabilities as well as difficulties students may be having that may be due to disabilities which have not been identified. In general, special education and general education teachers feel significantly

more capable of dealing with the needs of students from any disability category other than EBD.

Summary and Conclusions

Lack of effective preparation for teachers to successfully serve these students is a persistent concern. Reports from the Surgeon General (1999) and the President of the United States (2003) call for early identification and intervention for students experiencing MHD to avoid negative outcomes of untreated MHD. The poor outcomes and high rates of disability experienced by those experiencing MHD coupled with recent high profile horrific events, such as mass shootings in public places by young people with EBD and MHD, clearly demonstrate the need for facilitating early identification and intervention for individuals struggling with EBD and MHD (Anderson et al., 2001; Eaton et al., 2008; Forness et al., 2012; Greenbaum et al., 1996; Lane et al., 2006; Mathers et al., 2008; Merikangas et al., 2010; Moskos et al., 2007).

NAMI has several education programs (Brister et al., 2012; Lucksted et al., 2008; Lucksted et al., 2009; Pinto-Foltz et al., 2011) that show promise for improving outcomes for those with MHD and increasing effectiveness of those working with individuals experiencing MHD. Considering that the school setting is a place where individuals experiencing MHD could be easily identified and connected to interventions that may minimize the effects of MHD investigation into the effects of adding training about signs and symptoms of mental health disorders to preservice teacher training should be conducted. This study will examine the efficacy of a NAMI educational program "*Parents and Teachers as Allies*" for improving mental health literacy of educators,

decreasing stigmatizing attitudes held by educators, and increasing educators' sense of self efficacy in recognizing mental health distress. Educators with competency in these areas may be able to have a positive impact on the course of emerging MHD in the children and adolescents with whom they work. Current research indicates that despite the identified training needs of teachers serving students with MHD and EBD teachers feel unprepared to address the needs of these students in their classrooms (Cook, 2002; Heflin & Bullock, 1999; Kamen et al., 2000; Maag & Katsiyannis, 1999; Rose et al., 2009; Sawka et al., 2002). The P &T as Allies training has the potential to address the need for preservice teachers to increase their mental health literacy, feelings of preparedness to support students with MHD and EBD, and improve stigmatizing attitudes.

CHAPTER THREE

RESEARCH METHODOLOGY

Students with EBD and MHD are at increased risk for school failure and poor outcomes as adults (Anderson et al., 2001; Lane & Carter, 2006; Mathers, Fat, & Boerma, 2008; Merikangas, He, Brody, et al., 2010; Merikangas, He, Burstein, et al., 2010; Wagner et al., 2005). A review of the literature concerning prevalence rates and the gaps in service provision for students with EBD and MHD indicate a need for better identification and service for these students (Forness et al., 2011; President's New Freedom Commission on Mental Health, 2003; U.S. Department of Health and Human Services, 1999). Considering the negative post-school outcomes for students with EBD and MHD and that conservative estimates of the prevalence of these challenges indicate there are many students who are not served for the emotional, behavioral, and mental health needs they experience (Chandra & Minkovitz, 2006; Chandra & Minkovitz, 2007; Forness et al.,2011; Kranke et al., 2010; U.S. Department of Health and Human Services, 1999), training that may improve identification of students needing services and increase teacher efficacy for this group is needed. There are barriers to students receiving the help they need including stigma, a general lack of knowledge about mental health disorders, and teacher perceptions of their preparation for identifying and dealing with students struggling with these issues (Chandra & Minkovitz, 2007; Cook, 2002; Heflin & Bullock, 2004; Kamens et al., 2000; Martin et al., 2007; President's New Freedom Commission on

Mental Health, 2003; Reid, Gonzales, Nordness, Trout, & Epstein, 2004; Rose et al., 2009; Sawka et al., 2002; U.S. Department of Health and Human Services, 1999).

In this chapter the methods used to conduct this study are described. The information is provided in the following sections: (a) research hypotheses, (b) research design, (c) setting, (d) participants, (e) researcher, (f) interventionists, (g) instrumentation, (h) dependent variables, (i) data collection procedures, (j) intervention procedures, (k) reliability of data entry, and (l) data analysis.

Research Hypotheses

Students with EBD, including those with mental health disorders and emerging mental health disorders, are at an increased risk of school failure and dropout. The purpose of this study was to measure the effects of the Parents & Teachers as Allies training on preservice teachers' mental health literacy, perceived self-efficacy in meeting the needs of students with EBD and MHD, and stigmatizing attitudes. Specifically, this study addressed the following research questions and hypotheses:

- Question 1: Is the P&T as Allies training effective in increasing preservice teachers' mental health literacy?
- Hypothesis 1: The P&T as Allies training will increase preservice teachers' mental health literacy.
- Question 2: Will increases in mental health literacy generated by the P&T as Allies training be sustained two weeks after the intervention?
- Hypothesis 2: Preservice teachers will demonstrate sustained increases in mental health literacy two weeks following the intervention.

- Question 3: Is the P&T as Allies training effective in increasing preservice teachers' sense of self-efficacy in identifying and assisting students exhibiting signs and symptoms of mental health distress/mental disorders?
- Hypothesis 3: The P&T as Allies training will increase preservice teachers' sense of self-efficacy in identifying and assisting students exhibiting signs and symptoms of mental health distress/mental illness.
- Question 4: Will increases in preservice teachers' sense of self-efficacy generated by the P & T as Allies training be sustained two weeks after the intervention?
- Hypothesis 4: Preservice teachers' will demonstrate sustained increases in their sense of self-efficacy in identifying and assisting students exhibiting signs and symptoms of mental illness two weeks following the P & T as Allies training.
- Question 5: Is the P&T as Allies training effective in decreasing preservice teachers' stigmatizing attitudes toward mental illness?
- Hypothesis 5: The P & T as Allies training will decrease preservice teachers' stigmatizing attitudes toward mental illness.
- Question 6: Will decreases in preservice teachers' stigmatizing attitudes towards mental illness generated by the P & T as Allies training be sustained two weeks after the intervention?
- Hypothesis 6: Preservice teachers will demonstrate sustained decreases in stigmatizing attitudes toward mental illness two weeks following the P & T as Allies training.

These research hypotheses rest on the theoretical framework of this study by examining the constructs that contribute to the likelihood of engaging in certain behaviors. Specifically, these questions examine the effects of training on perceived behavioral control, personal beliefs, and subjective norms. According to the TPB (Ajzen, 1991) individuals' variance in behavior is accounted for by perceived behavioral control (addressed through the knowledge construct), personal beliefs (addressed through examining the beliefs teachers have about their preparedness to manage and support students with EBD/MHD), and subjective norms (addressed by stigmatizing beliefs held by individuals). The purpose of this study was to measure the effects of the NAMI P&T as Allies training on preservice teachers' mental health literacy, perceived self-efficacy in meeting the needs of students with EBD and MHD, and stigmatizing attitudes. If the hypothesized changes are observed, then according to the TPB, variance in teacher behavior towards students experiencing EBD/MHD can be predicted from the changes observed in the responses provided on a researcher-developed survey which will be used to assess teacher knowledge and attitudes about student mental health distress/ and mental health illness. The survey and the development process are described in detail in the instrumentation section.

Research Design

This exploratory study used a quasi-experimental pretest- posttest nonequivalent control group design to examine effects of the NAMI P & T as Allies training. Groups of participants were assigned to the treatment or control condition and administered surveys as described in the research procedures section. This design was chosen to address

questions about the impact of the intervention that could not be answered without a control group. The dependent variables were teacher knowledge, personal beliefs of teachers regarding their level of preparedness for teaching and effectively managing and supporting students experiencing MHD, and teacher subjective norms (stigmatizing attitudes). The independent variable was the mental health knowledge training called Parents and Teachers as Allies conducted by a NAMI training team. Experimental units of interest in this study were preservice teachers receiving the NAMI P & T as Allies Training. Preservice teachers who did not receive the training served as the control group.

Setting and Participants

The P&T as Allies training was implemented as part of the preservice teachers' regular course of study. All components of the intervention took place on the campus of Clemson University during regularly scheduled class meetings or seminar sessions in which students in teacher preparation programs participate. Clemson is in the northwestern part of South Carolina and is a publicly funded university. There are approximately 800 undergraduates and 600 graduate students in the teacher education program (Clemson University, 2013b). The Early Childhood Education, Elementary Education, Secondary Education, and Special Education programs are accredited by the National Council of Teacher Education (NCATE) and national specialized professional organizations including the National Association for the Education of Young Children, the National Council of Teachers of English, the National Council of Teachers of

Mathematics, the National Council for the Social Studies, and the International Council for Exceptional Children. (Clemson University, 2013a).

Intervention group 1. The first intervention training occurred in a class of preservice teachers who were junior-level Elementary Education majors. This class was in a small classroom and the tables were arranged in a u-shape with students seated around the tables. The NAMI training included use of a projector and a power point presentation that was provided by the NAMI trainers. There were 16 members of the class and all preservice teachers completed informed consent forms and responded to the pre, post and follow-up surveys.

Intervention group 2. The second intervention training occurred in a class of senior-level Special Education majors completing their student teaching field placements. The class included 21 preservice teachers in a medium-sized classroom with the preservice teachers seated at tables. The power point presentation used for the first training was also used by the NAMI training group for this intervention. One preservice teacher was absent for that class meeting and one preservice teacher entered class after the training had already begun (this person received the training but did not complete surveys). One student was absent from the session when follow-up data was collected. Eighteen preservice teachers from this class completed informed consent forms and responded to the pre, post, and follow up surveys.

Intervention group 3. The third intervention training occurred in a class of junior-level Early Childhood Education majors. The class was held in a small classroom with the tables in rows and the same power point was used to present the training

information. The class included 22 preservice teachers each of whom completed informed consent forms as well as pre, post and follow-up surveys.

Control group 1. The first control group occurred in a class of senior-level secondary math and English majors. Individuals were seated at tables in a small classroom. The class included 17 preservice teachers 16 of whom completed informed consent forms as well as pre, post, and follow-up surveys.

Control group 2. The second control group occurred in a class of junior-level elementary, early childhood, and special education majors. Class members were seated at tables in groups of three to four and completed the surveys at the beginning of class. The class included 24 preservice teachers, all of whom completed pre and post surveys.

Control group 3. The third control group occurred in a class of sophomore and junior-level elementary, early childhood, and special education preservice teachers. Members of this class were seated at tables in groups of three to five students. The class included 31 preservice teachers, 26 of who completed pre and post surveys.

Participants

The population of interest in this study is preservice teachers. The participants for this study were a convenience sample of students majoring in special education and general education. Participants included preservice teachers at various stages in their teacher preparation classes. Demographic characteristics of the control and experimental groups can be found in Table 7.

Table 3.1

Demographic Characteristics of Participants

Demographic Variable		Control Frequency n=41	Experimental Frequency n=56
Sex			
	Male	5	2
	Female	35	53
	Missing	1	1
Age			
	18-19	0	0
	20-21	23	41
	21-24	15	14
	25-30	2	0
	>30	0	1
	Missing	1	1
Race/Ethnicity			
	Latino/Hispanic	0	2
	Caucasian	40	50
	African American	1	1
	Asian American	0	1
	Other	0	1
	Missing	0	1
Level of Education			
	Freshman	0	0
	Sophomore	0	0
	Junior	22	35
	Senior	18	20
	Bachelor's Degree	0	1
	Missing	1	0
Area(s) of Planned Certification			
	Early Childhood	11	21
	Elementary	0	16
	Middle Level	0	0
	Secondary	7	0
	Special Education	11	8

Related Arts/ Other (PE, Music, Art, etc.)	0	0
Missing	12	11
Preferred Grade Level to Teach		
P-K-2nd	4	29
3rd-5th	10	18
6th-8th	5	3
9th-12th	18	5
Post-Secondary	0	0
Missing	4	1
Academic Status		
Freshman	0	0
Sophomore	1	0
Junior	16	26
Senior	24	29
Graduate	0	0
Missing	0	1
Number of Field Experiences		
0	1	1
1-2	2	2
3-4	7	5
5-6	13	19
>6	18	29
Missing	0	0
Knowing Someone with Mental Health Diagnosis		
Yes	36	41
No	5	15
Missing	0	0

Demographic data was coded according to responses provided by participants. Missing data points are due to questions on surveys for which respondents selected more than one response. These answers were left blank in the coding and account for missing data points. Additionally, one member of the experimental group skipped the page with

demographic information, and as a result, all demographic data for this student was missing.

In order to identify participants for this study, emails briefly describing the intervention were sent to professors prior to the spring semester. A request to meet and discuss the possibility of having students in their classes participate in the study was made at this time. Five professors responded to the original email sent by the researcher. The researcher met with those five professors. One of these classes was meeting in Greenville, SC rather than on the Clemson campus and was not included because it was off campus. There were four professors with classes being held on the Clemson campus which then were considered for inclusion. One of these classes consisted of all secondary education student teachers and a group of professors. All professors could not come to a consensus about how to incorporate the NAMI training into the student teaching semester so this class was not included in the intervention. The remaining three classes were included in the NAMI training used as the intervention for this study during the spring semester. A total of 57 preservice teachers were included in the intervention group.

In addition to the preservice teachers receiving the NAMI training intervention, there were groups of participants similar in number, characteristics, and stage in the teacher preparation program who served as control groups. Control groups for the study were identified by following up with four of the professors originally contacted about the research training but which would not be participating in the training. These classes were comparable to the classes included in the intervention group. Preservice teachers in the control group did not receive the training but completed the same survey as the

participants in the intervention training and then completed an identical survey again two weeks later. One part of the control group completed the follow up surveys four weeks after the initial survey administration due to plans made previously by the professor. The surveys were administered to all control groups during the same six week time period in which the training intervention and surveys were given to the intervention groups. Control group responses were used for comparison with responses of preservice teachers who received the NAMI training. A total of 42 preservice teachers completed surveys for control group purposes.

Researcher

The researcher is a doctoral candidate in Curriculum and Instruction, Special Education program in the teacher education department of the College of Health, Education, and Human Development at Clemson University. She has nine years of general education teaching experience in social studies and language arts on the middle and high school levels. During that time she was an inclusion ELA and social studies teacher for three years. She then earned a Master of Education degree in Special Education with an emphasis in the area of Emotional and Behavioral Disorders. For two years she served as one of two certified teachers in a Rehabilitative Behavioral Health Services middle school classroom. Her role in this study was to (a) administer pre and post measures, (b) arrange and facilitate administration and collection of follow-up measures, (c) arrange intervention sessions, and (d) analyze and interpret data.

Interventionists

A team of trainers from NAMI implemented the P & T as Allies training as the intervention for this study. The training team consisted of a NAMI trainer, an educator who serves as a facilitator for the training, a parent of an individual who experienced the emergence of mental health illness as a student, and the experiences of an individual with a mental health diagnosis who experienced mental health symptoms and distress as a student. The NAMI trainer as well as the educator and parent have family members who experience mental illness. In the case of this team the individual who has a mental health diagnosis also has family members with mental illness. During all three trainings for this study the training team member with a mental health diagnosis was symptomatic and unable to participate in the training. Her part was been dictated and read by the NAMI trainer. In the second and third trainings the educational facilitator was unable to participate and the facilitator and parent role were completed by the same person in accordance with NAMI training standards.

All participants on the training team have received training from a NAMI trainer from a local NAMI affiliate for the P & T as Allies Educational presentation. The NAMI trainer has received training from the national NAMI organization and therefore, is a qualified state and national trainer for NAMI and conducts training for participants at a statewide and national level. The person who fills the role of facilitator is a retired teacher and administrator with more than 30 years' experience in education, including special education. The parent role is filled by a woman whose son experienced the onset of a mental health disorder in late high school/ early college. Each of the previously mentioned team members is qualified to fill the roles of both facilitator and parent. The

team member with a mental health disorder is retired from a career in the State Department of Mental Health and experienced childhood onset of the disorder with which she is diagnosed. All trainers have family members with diagnosed mental health conditions.

NAMI provides national "train the trainer" events which provide opportunities for individuals to become state level trainers. At these training sessions participants are provided with program manuals and given instruction in providing training in the various NAMI programs to individuals in their home states. Program components, fidelity of implementation, and effective group leadership and communication are focal points of these "train the trainer" events. All participants in training programs or classes offered by local NAMI affiliates are then trained by the NAMI trainers. In order to become a State trainer individuals must have taught or facilitated local NAMI training programs. (http://www.nami.org/Content/NavigationMenu/Intranet/Education_Helpdesk/FAQs_Education_Programs_2011). To become a local NAMI trainer, individuals must participate in the class or program and then assist in facilitating the class or program and receive training from a state level trainer (personal communication, Michelle Ready, 2012).

Instrumentation

The Survey of Teacher Knowledge, Beliefs and Subjective Norms (TKBS; see Appendix C) was developed for this study. The TKBS survey is a researcher-developed survey which was used to assess preservice teacher knowledge and attitudes about student mental health distress/ and mental health illness. The survey includes items

addressing three themes or constructs including (a) Mental Health Literacy, (b) Perceived Behavioral Control, and (c) Stigmatizing Attitudes.

Survey development. A search of the database PsycTests was conducted using the key words *stigma*, *mental illness*, *knowledge*, *depression*, *schizophrenia*, and *mental health* which yielded three individual instruments and one set of instruments. The instruments retrieved from PsycTests include: *Toolkit* (Corrigan & Calabrese, 2005); *Schizophrenia Attitude Scale* (Ritterfield & Jin, 2006); *Knowledge about Schizophrenia* (Ritterfield & Jin, 2006) and *Attitudes To and Stereotypes of Mental Health Measure* (Aromaa, Tolvanen, Tuulari, & Wahlbeck, 2011). An email request was sent to Dr. Douglas Cheney for a copy of the *Teacher Knowledge and Skills Survey for Positive Behavior Supports* (2004) which was provided. Additionally, the researcher received permission to use the *Attitudes about Child Mental Health Questionnaire* (*ACMHQ*) which is a stigma survey developed by Brannan and colleagues (personal communication with Dr. Brannan, March 25, 2013) for measuring stigma in relation to children and teenagers.

A new survey was developed because existing instruments did not address all constructs of interest in the current study. Rather than combining surveys addressing the constructs of interests existing instruments were examined and used as references in creating an instrument for the current study. The surveys retrieved from PsychTests as well as the surveys provided by Drs. Cheney and Brannan were reviewed for exemplar items to be used in the creation of the TKBS. Additionally, before the survey was created the researcher identified two processes for survey creation and used both to guide in the

survey development. The process used to create the survey items was based on recommendations for survey development by Ajzen (2001), Creswell (2005), and Hasson, Keeney, and McKenna (2000). All sources call for the participation of a group of people with experience in the area of focus to whom questions may be posed and from whom feedback can be collected as constructs are refined and items are developed. Further, both Ajzen, (2001) and Hasson et al. (2000) provide guidance to collect feedback from the initial respondents concerning appropriateness and clarity of survey items.

Phase one. During phase one, items were developed for the TKBS survey referencing guidance provided regarding item development by Ajzen (2001), Creswell (2005), and Hasson, Keeney, and McKenna (2000). Recommendations followed by the researcher in developing the survey for the present study included identifying the research problem, justifying the topic and method, conducting a review of the literature, collecting information from a panel with expertise in the area of inquiry (teachers' preparation for teaching students with MHD and EBD, mental health literacy, and stigmatizing attitudes), analyzing data from each round of responses from the panel, and reaching consensus to create a questionnaire.

The researcher used this process to collect and use input from a group of certified teachers. During phase one of the survey development exemplar surveys were reviewed and the researcher prepared questions for a panel of six PhD students in curriculum and instruction (see Appendix A for questions). All participants hold teacher credentials and have teaching experience in the PK-12 setting during the last four years. Two had teaching experience as social studies teachers on the middle school level. One participant

had been a secondary and middle level math teacher. Another had teaching experience on the secondary level as a Spanish teacher and on the elementary level as a teacher of English Language Learners. Another of the panel members served as a self-contained special education teacher for students with intellectual disabilities. The final member of the panel had been a special education teacher on the elementary and secondary level. Panel participants contributed from their own teaching experiences what their knowledge, self-efficacy, and stigmatizing attitudes are and their perceptions of their preparation for serving these students. Their input was sought regarding what they as classroom teachers knew about mental health literacy, how well they felt they were prepared to teach students with mental health distress/disorders, and how they feel about students with mental health distress/disorders.

Response items posed to the panel of teachers included:

(1) What do you know about mental health distress/ illness?

(2) Please share opinions and beliefs you have about people with mental illness, particularly teaching students with mental illness.

(3) What concerns or worries would you have about having students with mental illness in your class? Think along the lines of how it might affect the rest of the class. The nature of the students, and whether you think they should be in classes with other, not mentally ill students.

(4) Consider your training for teaching. How prepared do you think that you were (are) to meet the needs of students with mental illness in the classroom?

(5) What would you identify as skills teachers need for dealing with students with mental illness in the classroom?

Feedback was provided in two rounds in order to reach consensus regarding the responses and experiences shared. These steps were conducted to ensure that the researcher understood the thoughts, experiences, and perspectives shared by respondents.

After responses to the questions were received by the researcher from the panel of teachers, the responses were reviewed and screened for themes. The identified themes were developed into statements related to the areas addressed by the surveys. These statements were then returned to the panel for review in order to check for understanding on the part of the researcher. After clarification of any misunderstandings on the part of the researcher about the feedback from the panel members, the feedback from the panel of teachers was then used along with identified questions from existing survey measures to formulate the survey questions.

Additionally, during phase one of the survey creation process Dr. Anna Maria Brannan provided feedback on the instrument development. Dr. Brannan, a researcher from Indiana University, has experience developing tools to assess family variables and also conducts research in the areas of children's mental health, satisfaction with mental health provision, and caregiver strain for caregivers of children with serious emotional disturbance and children with mental health disorders. Her current research focuses on mental health services provided through schools and understanding the experiences of families caring for children with autism spectrum disorders. Dr. Brannan provided feedback related to survey items. These suggestions included changes in wording of the items and format of the survey. Based on feedback from Dr. Brannan questions were reworded in order to be neutral and not influence the responses that participants would

choose. Additionally, titles separating the different constructs were left out to keep the section titles from influencing participant responses.

Phase two. During phase two of the instrument development process initial forms of the surveys were given to inservice teachers taking classes in the Educational Leadership program at Clemson University. These teachers were asked to complete the survey and respond to the questions on a feedback form (see Appendix B) regarding any confusing items as well as any other observations about the survey instrument. Respondents suggested that it would be helpful to have a choice of having "no knowledge" for questions in the mental health literacy section. The feedback from these teachers was used to provide additional choices for responses.

Phase three. After revisions to the survey were complete the resulting 35 item survey was administered to a group of teachers at a local middle school for the purpose of conducting initial item reliability tests. Cronbach's alpha was calculated for each item and each construct (i.e., Knowledge, Personal Beliefs, and Subjective Norms). Cronbach's alpha coefficient is often used in research to establish the reliability of survey instruments (Teo & Fan, 2013). Cronbach (1951) developed the idea of the alpha coefficient as a means by which researchers can test the reliability of their instruments without having to test and retest the instrument. Cronbach found that α, which measures an index of inter-item homogeneity, is equivalent to the mean of all possible split-half correlation coefficients among items. The α measure is generally considered an appropriate measure of reliability for instruments which are divided into distinct subtests measuring different areas of a common subject (Cronbach, 1951; Teo & Fan, 2013).

Cronbach's alpha was used to derive initial reliability scores. Further analysis was conducted and items clearly not correlated with the other items were removed. Each construct was examined and items with alpha coefficients higher than the average alpha coefficient for the entire set were removed.

For the knowledge set of items the initial score was $\alpha = 0.5642$. Items K1, K2, K9, and K13 were removed resulting in a coefficient of $\alpha = 0.6844$. Items K7 and K12 were removed and resulted in a coefficient of $\alpha = 0.7090$. Items K3 and K10 were removed resulting in a coefficient of $\alpha = 0.7481$. Item K5 was removed resulting in a coefficient of $\alpha = 0.7742$.

The initial coefficient for the personal beliefs section was $\alpha = 0.774$. Items PB5 was removed was resulting in a coefficient of $\alpha = 0.8048$. Removal of other items did not improve the alpha score so the final resulting coefficient was $\alpha=0.8048$.

The initial coefficient for subjective norms was $\alpha = 0.6214$. Items SN1, SN3, and SN7 with a resulting coefficient of $\alpha = 0.8334$. Item SN 5 was removed resulting in a coefficient of $\alpha = 0.8506$. Items SN10 and SN 11 were removed resulting in a coefficient of $\alpha = 0.8666$. Items SN 2 and SN 9 were removed resulting in a coefficient of $\alpha = 0.9200$. Finally, item SN 6 was removed and a coefficient of $\alpha = 0.9302$.

The analyses resulted in final α coefficients as follows: Knowledge $\alpha = 0.7742$; Personal Beliefs $\alpha = 0.8048$; and Subjective Norms $\alpha = 0.9302$. According to Cronbach (1951) and Teo and Fan (2013) ratios ≥ 0.70 are considered "good" reliability scores.

Phase four. Phase four of the instrument development involved further field testing of the survey. A group of 33 preservice teachers in their student teaching

semester completed the revised 16 item survey and reliability scores were again calculated. Reliability measures for the surveys completed by student teachers were as follows: Mental Health Literacy $\alpha = 0.7252$; Perceived Behavioral Control $\alpha = 0.9214$; Stigmatizing Attitudes $\alpha = 0.7402$. All coefficients measured ≥ 0.70 indicating that the survey is a reliable instrument for measuring the constructs considered in this study. All Cronbach's alpha coefficients were performed by entering survey responses and using the multivariate analysis option of JMP.

Phase five. Phase five of the instrument development involved examining content validity of the instrument. Content validity is concerned with how well the content of the test represents the area of interest. Generally, content validity is based on the judgment of people with expertise in the domains being considered (Messick, 1990). During phase five of the survey development process input was sought from researchers with extensive experience in survey research and mental health research.

Dr. Windsor Sherrill, a Clemson University professor, whose areas of scholarship include medical and health management education, health finance and policy, and the evaluation of health services and health education programs for underserved groups was consulted. Upon her recommendation the knowledge questions were changed from likert-type items to response specific items and the responses "always" and "never" serve as the first and last responses for these items.

In addition, Dr. Krista Kutash lent her expertise in helping to ensure that the survey was a quality instrument. Dr. Kutash has clinical experience as a social worker and an earned a doctorate in Educational Measurement. She served as a faculty member

at the University of South Florida in the department of Child and Family Studies and also worked for 25 years at the Florida Mental Health Institute (FMHI) where she currently serves as professor emeritus since retiring in 2012. Her research expertise is in community-applied research methodology, applying these methods in researching publically funded children's mental health services, school-based mental health, and parent-support programs. Her feedback on the survey content was sought and received via personal communication by email (September, 2013). She reviewed the survey questions and responded that she thought the questions would serve as valid measures for the constructs of interest.

***Phase six*.** With the adjustments made to the instrument based on mental health and measurement expert feedback, the survey was once again field tested to establish reliability. A group of 38 preservice teachers enrolled in an introduction to special education course completed the surveys and measures for reliability were again established for the instrument. Reliability measures for the individual construct scales were as follows: Mental Health Literacy $\alpha = 0.3861$; Perceived Behavioral Control $\alpha = 0.9444$; Stigmatizing Attitudes $\alpha = 0.9798$. The alpha coefficient for the Mental Health Literacy measure decrease was attributable to the change in the questions from likert-type items which are scored as continuous variables to response specific items. In order to test the reliability of the knowledge items on the survey test-retest measures were examined for 42 respondents who completed one version of the same instrument twice within one hour and fifteen minutes between administrations. The participants for the test retest measures were in an undergraduate education class at Clemson University. Test-retest

reliability measures resulted in Least Squares Student's *t* test scores of the first measure of 3.1285 for the first measure and 3.1214 for the second measure. A Least Squares Student's *t* test conducted with JMP statistical software indicated that the two levels (measure one and measure two) were not significantly different. All Cronbach's alpha coefficients and test-retest measures were performed by entering survey responses and using the multivariate analysis option of JMP. The survey was used with the NAMI trainings conducted for this study (see Appendix C).

Dependent Variables

A description of how the individual parts of the surveys relate to the dependent variables in this study follows. The pre, post, and follow-up administrations of the survey measured changes in these variables in relation to the independent variable (the NAMI training program). Questions are included in Appendix A for review.

Mental health literacy. The first portion of the survey measured the knowledge, or mental health literacy, of participants. The items prompted responses concerning the knowledge that preservice teachers have about causes and symptoms of mental illness and mental health distress in children and adolescents. Participants completed this section by responding to items on a five point scale, indicating how true they think each item is about mental health disorders in children (1) never or almost never, (2) some of the time, (3) about half of the time, (4) most of the time, (5) always or almost always. Examples of questions in the knowledge portion of the survey include (a) children with mental health disorders should have medical as well as psychological care and (b) failure to care about personal appearance can be a sign of an adolescent mental health disorder.

Perceived Behavioral Control. Preservice teachers' personal beliefs about self-efficacy for teaching and supporting students with MHD, or their perceived behavioral control, were measured in part two of the survey. Items related to preservice teacher's perceptions of how prepared they are to deal with student behavior problems stemming from MHD, recognizing symptoms of MHD in students, and how to assist students with MHD. Additionally, the questions measure teacher beliefs about their ability to communicate their concerns with parents of students they believe may be exhibiting characteristics of MHD. Participants completed these items by responding on a six point Likert-type scale indicating (1) strongly disagree, (2) moderately disagree, (3) mildly disagree, (4) mildly agree, (5) moderately agree, or (6) strongly agree. Examples from the personal beliefs portion of the survey include (a) I can identify the reasons for a student's behavior problems and (b) I have received enough training to deal with almost any behavior problem.

Stigmatizing Attitudes. Part three of the survey includes questions designed to measure stigmatizing attitudes may hold about individuals with MHD which give an indication of their subjective norms. Respondents complete these items by selecting responses on a six-point Likert-type scale indicating (1) strongly disagree, (2) moderately disagree, (3) mildly disagree, (4) mildly agree, (5) moderately agree, or (6) strongly agree. Examples of questions from the subjective norms portion of the survey include (a) persons with mental health disorders cannot lead normal lives and (b) when children have problems with their mental health it is because their parents didn't raise them properly.

Demographic data. Additionally, demographic data was collected in order to calculate descriptive statistics. These data were used in two analyses. First, an overall demographic profile of the sample was created to assist in the generalization of the results. Second, the demographic characteristics such as race, gender, program enrollment, certification type, and/or preferred classroom placement were analyzed by construct to determine if the P&T as Allies training effects varied by demographic characteristics.

Data Collection Procedures

Before conducting this study, permission from the Institutional Review Board (IRB) of Clemson University was obtained. Following approval, the researcher contacted professors responsible for instruction of preservice teachers in the teacher preparation programs at Clemson University to gain access to preservice teachers for participation in this study. Participants were be sought from different disciplines (science, social studies, English, and math) and teaching levels (early childhood, elementary education, middle level, and secondary education) as well as preservice teachers preparing to teach special education. Additionally, the researcher sought to arrange participation of teacher preparation students across the span of their field placement experiences. Email communication was used to contact professors of sections of classes in the spring of 2014 which were long enough to accommodate the time required for the NAMI training. Twenty-four class sections were identified as possibilities. Four professors responded and interventions were arranged in the three of the classes: Elementary Education 4050, *Social Justice in the 21st Century*; Early Childhood 4840, *Early Childhood Curriculum*;

and Special Education 4950, *Community and Collaboration in Special Education*. Further, four professors agreed to allow their students to serve as control groups for the study.

The classes which served as control groups were as follows: Secondary English 4540, *Secondary English Capstone Experience*; Secondary Math 4560, *Secondary Math Capstone Experience*; Elementary Education 4510, *Elementary Methods in Science Teaching*; and Math 1150, *Contemporary Mathematics for Elementary School Teachers*. By including participants in this study at varying stages of their teacher preparation and from a variety of teaching levels and disciplines, a range of educational experiences and perspectives were represented.

All survey materials were paper copies. For the experimental group, preservice teachers responded to surveys on the same day of the training immediately prior to and following the training. Follow-up surveys were administered 2 weeks after the training. The control group was asked to complete the survey at two different times but did not participate in the intervention. Control groups had surveys administered to them and collected with follow-up surveys administered a minimum of 2 weeks later. This occurred during the same six week period of time that data collection for the intervention group was conducted. Data collection occurred during the spring semester of classes and provided access to participants for this investigation including preservice teachers taking regularly scheduled education classes as well as those preservice teachers completing student teaching experiences. Each administration of the survey required 10 min or less.

A total of 30 min or less was spent completing surveys for the intervention group and a total of 20 min or less was required for the control group.

Prior to and following the training each participant completed a brief NAMI questionnaire in addition to the surveys prepared by the researcher. The information that the NAMI trainers collect is used by NAMI to evaluate their training program, include no identifying information, and was not be used or analyzed by the researcher.

Intervention Procedures

Each participant in the intervention attended the NAMI P & T as Allies training. The intervention was a two hour training with an education moderator, a NAMI presenter, a parent (may be the same person as the education moderator), and a person living with mental illness who experienced childhood or adolescent onset of mental illness. The intervention includes "lived experiences" of those who have taught students with mental illness, are a parent of persons who live with mental illness, or experience mental illness themselves. The facilitator shared experiences as both a teacher and a parent of children and adolescents with mental illness or emerging mental illness. The parent (or facilitator, if filling both roles) shared the experiences of a parent of a child who experienced mental illness while in school. The NAMI trainer presented signs and symptoms of early onset mental illness. Information about the experiences that parents and families have with a child with a developing mental illness was also presented. After hearing the presentation of a person living with a mental illness share experiences they had as a student with emerging childhood or adolescent mental illness and the impact of those experiences on their education and their lives, particpants have an opportunity to

ask questions during a group discussion facilitated by the training team. The training was closed by the NAMI presenter and the facilitator.

In the first intervention group there were three presenters, the parent, the facilitator, and the NAMI trainer. The part of the trainer living with a MHD was read by the NAMI trainer. In the second and third interventions there were two presenters and the parent (who also filled the role of facilitator). As in the first training session, the NAMI trainer read the part of the trainer with a MHD. Each training included the same instructional content and followed the same agenda. The NAMI trainer shared the same information each time using a powerpoint presentation that included information about the different MHD that children and adolescents experience as well as the possible symptoms that may be apparent in children experiencing MHD. Additionally, she shared the same information about the causes of MHD in children and adolscents each time. The trainings varied according to the experiences that were shared by the educator and parent/ educator as well as the questions and comments the training participants asked.

Reliability of Data Entry

The researcher entered participant responses into an excel spreadsheet and then use JMP to analyze the data. In order to determine reliability of the data entry a random number generator was used to select items for an independent observer to check ensuring that responses are recorded correctly. The independent observer was an undergraduate student who attended a meeting with the student researcher and methodologist to discuss the way to check for accuracy of data entry. The following data entry reliability procedures were followed. First, data was randomly selected to be checked for accuracy

from participant-completed surveys to data entry sheets as well as from the data entry sheets to electronic spreadsheets. Subsequent checks were conducted on randomly selected surveys and data entry sheets until no errors were found. The first check of reliability of data entry was made with 30% of the data. No mistakes were found in the transcription of data from the surveys to the paper data entry sheets. There were two errors in the entry of data into electronic spreadsheets from the data entry sheet. These errors were corrected. The second check of 5 random entries from each data sheet to electronic spreadsheets was conducted with entries from each set of data collection and one errors was discovered in transcription from data entry sheets to spread sheet These errors were corrected and a third check of random entries was conducted. This check did not uncover any errors. A fourth random check was conducted and again no errors were found. Upon the completion of the fourth random check of data entry and with no additional errors discovered, it was concluded that the data entry was accurate.

Data Analysis

This section describes the procedures that were used to analyze the data. A quasi-experimental pretest- posttest nonequivalent control group design was used to investigate the research questions. A series of statistical models was used to analyze data from the instrument's three scales relating to group (i.e., intervention, control), time (i.e., pre-intervention, post intervention, follow-up for the intervention group and pre- and follow-up for the control group), and possible demographic covariates. Statistical methods were based on an Analysis of Variance (ANOVA) and post hoc tests including: Least Squares

Student's *t* test and contrast tests. These analyses were used to compare specific groups, times, and covariates.

Research questions were examined using a complete block design to analyze the overall effects of the treatment on the constructs using JMP. The statistical model was:

$$Y_{ijk} = \mu + G_i + P_j (G)_i + T_k + T_k * G_i + \varepsilon_{ijk.}$$

Y_{ijk} is the response (Knowledge, Personal Beliefs, and Subjective Norms) of Participant $_j$, in Group $_I$, at Time $_k$.; μ is the overall average response; G_i represents the effect of group (control versus experimental); $P_i(G_i)$ is the effect of participant j within group I (the $P_j(G_i)$ term will be further evaluated by partitioning it into the different demographic variables such as age, gender, area of certification, etc.); T_k*G_i is the interaction between time and group; and E_{ijk} is the random error.

CHAPTER 4

RESULTS

The purpose of this exploratory study was to measure the effects of the Parents & Teachers as Allies training on preservice teachers' mental health literacy, perceived self-efficacy in meeting the needs of students with EBD and MHD, and stigmatizing attitudes. This chapter will address the following research questions and hypotheses:

- Question 1: Is the P&T as Allies training effective in increasing preservice teachers' mental health literacy?
- Hypothesis 1: The P&T as Allies training will increase preservice teachers' mental health literacy.
- Question 2: Will increases in mental health literacy generated by the P&T as Allies training be sustained two weeks after the intervention?
- Hypothesis 2: Preservice teachers will demonstrate sustained increases in mental health literacy two weeks following the intervention.
- Question 3: Is the P&T as Allies training effective in increasing preservice teachers' sense of self-efficacy in identifying and assisting students exhibiting signs and symptoms of mental health distress/mental disorders?
- Hypothesis 3: The P&T as Allies training will increase preservice teachers' sense of self-efficacy in identifying and assisting students exhibiting signs and symptoms of mental health distress/mental illness.

- Question 4: Will increases in preservice teachers' sense of self-efficacy generated by the P & T as Allies training be sustained two weeks after the intervention?
- Hypothesis 4: Preservice teachers' will demonstrate sustained increases in their sense of self-efficacy in identifying and assisting students exhibiting signs and symptoms of mental illness two weeks following the P & T as Allies training.
- Question 5: Is the P&T as Allies training effective in decreasing preservice teachers' stigmatizing attitudes toward mental illness?
- Hypothesis 5: The P & T as Allies training will decrease preservice teachers' stigmatizing attitudes toward mental illness.
- Question 6: Will decreases in preservice teachers' stigmatizing attitudes towards mental illness generated by the P & T as Allies training be sustained two weeks after the intervention?
- Hypothesis 6: Preservice teachers will demonstrate sustained decreases in stigmatizing attitudes toward mental illness two weeks following the P & T as Allies training.

This quasi-experimental pretest-posttest nonequivalent control group design measured the effects of the National Alliance on Mental Illness P &T as Allies training on preservice teachers' mental health literacy, perceived self-efficacy in meeting the needs of students with EBD and MHD, and stigmatizing attitudes. The effectiveness of the NAMI P & T as Allies training was measured first by using analysis of variance to examine the changes in responses on the surveys administered to participants. Responses measured for control group participants included two surveys matching those

administered to intervention participants at pre-intervention and follow-up. Intervention participants responded to three surveys—one immediately prior to the training, one immediately following the training and a follow up measure two weeks later. The *Fisher's Protected Least Significant Difference Test* (Least Squares Student's *t* test) was used to examine how the times differed from one administration of the survey to the next.

Certain underlying assumptions were made when planning this study. First, it was assumed that the study could be replicated and that the findings would be generalizable. Second, confidentiality and anonymity for participants in this exploratory study were provided in order to ensure honest answers to the survey questions.

Results are presented in the following section for the measures of interest. First, characteristics of all participants in the study are described. Second, updated reliability measures for the instrument are reported. Third, overall effects of the intervention are examined. Fourth, results are reported for the dependent variables including a comparison of results by administration of the surveys to experimental and control groups. Fifth, results for dependent measures are examined by demographic data. Finally, a summary of the research findings is presented.

Measurement of Variables

Before describing the findings of the research the assumptions underlying the analysis of the data is discussed. The method for data analysis includes Analysis of Variance. When using this analysis method there are certain assumptions made which include that the distributions will be approximately normal. To investigate and validate these assumptions the residuals in the model were captured and then analyzed for their

distribution fit. This analysis was conducted using JMP's distribution analysis feature. The resulting histograms with continuous curves pictured as an overlay were visually examined to determine if the distributions were approximately normal. The distributions for the control group and the intervention group data both were depicted as normal curves in the JMP analysis. With this information indicating that the assumptions of normality in the analysis are well founded, description of the data analysis is discussed for the remainder of this chapter.

This dissertation research study involved administration of the same instrument three times for each intervention group. Cronbach's α scores for Perceived Behavioral Control (Personal Beliefs) remained stable for the control and intervention groups across survey administrations. Additionally they remained similar to scores from initial consistency measures reported in Chapter 3, are included in Table 9.

Measures for Stigmatizing Attitudes differed from those found when field testing of the instrument was conducted. Scores for the stigmatizing attitudes portion of the survey were lower during the study than during the field testing and were low enough to be below the acceptable level for the control group and one administration of the survey for the intervention group. This will be discussed further in the limitations section of Chapter 5.

Table 4.1

Internal Consistency for Perceived Behavioral Control and Stigmatizing Attitudes using Cronbach's α Alpha

	Instrument Administration				
	Pre		Post	Follow Up	
	Control	Intervention	Intervention	Control	Intervention
Perceived Behavioral Control	0.88	0.94	0.92	0.89	0.93
Stigmatizing Attitudes	0.61	0.72	0.70	0.53	0.68

As described in Chapter 3 the Mental Health Literacy items were adjusted from likert type items to item specific response questions. In order to obtain initial reliability scores for the new items in the Mental Health Literacy section a group of undergraduate students responded to the questions and the responses are reported in Table 4.2. The responses for the undergraduate group used to pilot the new questions and the Mental Health Literacy scores from pre to follow up for the control group used in the study remained stable. Analysis using the student's *t* test indicates that the pre and post means of survey responses for the undergraduate class and those of the control group did not differ significantly.

Table 4.2

Test Retest Reliability Utilizing Least Squares Student's t test for Knowledge Measures

	Instrument Administration			
	Undergraduate Class		Control Group	
	Pre	Follow Up	Pre	Follow Up
Mental Health Literacy	3.128	3.121	3.166	3.082

Overview of Intervention Effects

In order to determine the effectiveness of the P&T as Allies training, data for each dependent variable were analyzed. Each dependent variable was measured using the JMP statistical software. An analysis of variance (ANOVA) was conducted as well as *Fisher's Protected Least Significant Difference Test* (hereafter referred to as LS Means Student's *t*) to determine the efficacy of the NAMI P & T as Allies training on the dependent variables identified in this study. Specifically, the training's efficacy in increasing mental health literacy and perceived behavioral control were measured. The training's effect on decreasing stigmatizing attitudes was also measured. This section examines the overall intervention effects on the dependent variables for all participants which are included in Table 4.3.

Mental health literacy. Mental health literacy was measured by the knowledge questions on the survey administered to participants in the control and intervention groups. Results for the experimental group knowledge measures indicated increases in Mental Health Literacy from pre to post survey administration and these increases were maintained at the follow up measure with mean scores of 2.98, 3.94, and 3.80 respectively ($p = < .0001$, $\alpha = 0.050$). The Least Squares Student's *t* test showed a significant change in responses from pre to post measures which were maintained at the follow-up administration of the survey. Although the follow-up survey administration mean was slightly lower than the post-intervention mean, the Least Squares Student's *t* showed the post and follow-up means as not significantly different. In addition, the follow-up measure remained significantly different from the pre-intervention measure.

Results indicated that the control group participants' scores remained stable from pre to follow up survey administration ($p = 0.8408$, $\alpha = 0.05$). Analysis of the responses using LS Means Student's *t* showed that control group knowledge scores were not significantly different from the pre to follow up administrations of the survey. Mean scores of 3.40 and 3.38 respectively were recorded.

Perceived Behavioral Control. The dependent variable Perceived Behavioral Control was measured using the personal beliefs section of the survey administered to participants. For the experimental group, an increase in scores was observed from pre to post measures and the increase was maintained at the follow up administration of the survey with mean scores of 3.23, 4.17, and 4.17 respectively ($p = < 0.0001$, $\alpha = 0.050$). The Least Squares Student's *t* test showed a significant change in responses from pre to post measures with the follow-up mean remaining significantly different from the pre-intervention administration of the survey.

Analysis of results indicated that control group knowledge scores remained stable from pre to follow up administrations of the survey with mean scores of 3.53 and 3.65 respectively ($p = 0.4002$, $\alpha = 0.050$), and these measures do not significantly differ according to the Least Squares Student's *t* test.

Stigmatizing Attitudes. Results for the experimental group on the stigmatizing attitudes dependent variable indicated that there was a decrease in stigmatizing attitudes from pre to post which was maintained at the follow up administration of the survey with mean scores of 1.52, 1.27, and 1.30 respectively ($p = <0.0001$, $\alpha = 0.050$). The follow up survey administration mean was slightly higher than the post mean; however, according

to the Least Squares Student's *t*, the post and follow up means are not significantly different and the follow up measure remained significantly different from the pre training measure.

Results for the dependent variable Stigmatizing Attitudes showed that control group responses on the survey remained stable from the pre to follow up survey administrations with mean scores of 1.54 and 1.58 respectively ($p = 0.6836$, $\alpha = 0.050$). According to the Least Squares Student's *t* test these means are not significantly different.

The results of the ANOVA tests are included in Table 4.4 for the control and experimental groups.

Table 4.3

Means and Standard Error of Control and Experimental Groups

	Control		Experimental		
	Pre	Follow up	Pre	Post	Follow up
Knowledge	3.40±0.08	3.38±0.08	2.98±0.05	3.93±0.06	3.80±0.06
Perceived Self Efficacy	3.53±0.12	3.65±0.12	3.24±0.06	4.17±0.06	4.17±0.06
Stigmatizing Attitudes	1.54±0.08	1.58±0.08	1.52±0.003	1.27±0.03	1.30±0.03

Table 4.4

Analysis of Variance F Ratios and p-values for experimental and control groups

	Control		Experimental	
	F	p	*F*	P
Knowledge	1.4785	0.9996	5.5233	< .0001*

Perceived Self Efficacy	1.2813	0.204	12.3553	< .0001*
Stigmatizing Attitudes	1.4609	0.1017	10.4384	< .0001*

Note: *Significant at the p<0.05 level.

Analysis of Intervention Effects by Administration

In order to determine if there were differences in results by training administration, intervention effects were analyzed using ANOVA and Least Squares Student's *t*. This was accomplished by disaggregating the results of participant responses by the training in which they participated. In order to match control groups with intervention groups subject area and participant groups were considered. Groups were matched for analysis to allow for the groups to be matched as closely as possible with the convenience sample used for this study.

Intervention group 1. The first training for this study was conducted in an elementary education course entitled *Social Justice and 21st Century Learners* which included 16 preservice teachers. Preservice teachers in this class were junior-level elementary education majors with a focus on literacy, seeking elementary education certification. The control group used for this administration was an elementary education class of 24 preservice teachers entitled *Elementary Methods in Science Teaching*. Preservice teachers in this class were junior-level special education majors seeking multicategorical special education certification.

Mental Health Literacy scores for experimental group survey responses on this construct increased from pre to post to follow-up administrations. Mean scores for the follow-up administration declined slightly from the post training administration.

According to the Least Squares Student's *t* the increase from pre to post training administration was significant and the change from the pre training measure remained significant at the follow up survey administration ($p = <0.0001$, $\alpha = 0.05$) despite a slight decrease in score from the post to follow-up administrations.

Mean scores for the dependent variable Mental Health Literacy in the control group for the first administration remained stable ($p = 0.4684$, $\alpha = 0.050$) across survey administrations and were not significantly different from pre to follow-up survey administrations according to Least Squares Student's *t*.

Mean scores for the dependent variable Perceived Behavioral Control from the pre and post training survey administrations for the experimental group increased and were significantly different. These increases were maintained for the follow up administration of the survey ($p = 0.0001$, $\alpha = 0.05$). The post and follow up administration changes remained stable and were both significantly different from the pre training survey.

Mean scores for the dependent variable Perceived Behavioral Control in the control group for administration one ($p = 0.0752$, $\alpha = 0.05$) increased slightly across survey administrations but were not significantly different from pre to follow-up survey administrations according to Least Squares Student's *t*.

Mean scores for the dependent variable Stigmatizing Attitudes from the pre and post training survey administrations for the experimental group decreased and these decreases were maintained for the follow up administration of the survey ($p = 0.0002$, $\alpha = 0.05$). The change in the mean score from the pre and post training administrations of the

survey were significant. The post and follow up administration changes remained stable and were both significantly different from the pre training survey.

Mean scores for the dependent variable Stigmatizing Attitudes in the control group for administration one ($p = 0.4227$, $\alpha = 0.05$) remained stable across survey administrations and were not significantly different from pre to follow up survey administrations according to Least Squares Student's *t*.

Intervention group 2. The second training for this study was conducted with a class entitled *Communication and Collaboration in Special Education*. Preservice teachers in this class were special education majors completing their student teaching assignments. The control group used for this administration included Secondary English and Math majors who were completing their student teaching assignments.

Mean scores for dependent variable mental health literacy for the experimental group increased from pre to post training administrations. Mean scores for the follow up administration remained stable from the post training administration ($p = <0.0001$, $\alpha = 0.05$). According to the Least Squares Student's *t* the increase from pre to post training administration was significant. Additionally, the post training and follow up measures were not significantly different from each other significant and were both significantly different from the pre-intervention survey administration.

Mean scores for the dependent variable Mental Health Literacy in the control group for administration two remained stable ($p = 0.7077$, $\alpha = 0.050$) across survey administrations and were not significantly different from pre to follow up survey administrations according to Least Squares Student's *t*.

Mean scores for dependent variable Perceived Behavioral Control for the experimental group increased from pre to post training administrations. Mean scores for the follow up administration remained stable from the post training administration ($p = <0.0001$, $\alpha = 0.05$). According to the Least Squares Student's *t* the increase from pre to post training administration was significant. Additionally, the post training and follow up measures were not significantly different from each other and were both significantly different from the pre training survey administration.

Mean scores for the dependent variable Perceived Behavioral Control in the control group for administration two remained stable ($p = 0.2394$, $\alpha = 0.050$) across survey administrations and were not significantly different from pre to follow up survey administrations according to Least Squares Student's *t*.

Mean scores for dependent variable Stigmatizing Attitudes for the experimental group decreased from pre to post training ($p = <0.0001$, $\alpha = 0.05$). There was an increase in mean scores in responses for the follow up survey. According to the Least Squares Student's *t* the decrease in mean scores for stigmatizing attitudes from pre to post training administration was significant. The mean response scores for the follow up survey increased from scores on the post training measure although not back to the original level of scores. The difference between the pre training and follow up survey administrations were not significantly different.

Mean scores for the dependent variable Stigmatizing Attitudes in the control group for administration two remained stable ($p = 0.6627$, $\alpha = 0.050$) across survey

administrations and were not significantly different from pre to follow up survey administrations according to Least Squares Student's *t*.

Intervention group 3. The third training for this study was conducted with an early childhood education class of 22 preservice teachers entitled *Early Childhood Science*. Preservice teachers in this class were junior-level early childhood education majors. The control group used for this administration was a math class of 30 preservice teachers entitled *Contemporary Mathematics for Elementary School Teachers I.* Preservice teachers in this class were sophomore and junior level education majors seeking certification in early childhood, elementary, or special education.

Mean scores for the dependent variable Mental Health Literacy for the experimental group increased from pre to post training administrations. Mean scores for the follow up administration remained stable from the post training administration ($p = <0.0001$, $\alpha = 0.05$). According to the Least Squares Student's *t* the increase from pre to post-intervention administration was significant. Additionally, the post training and follow-up measures were not significantly different from each other and both were significantly different from the pre-intervention survey administration.

The dependent variable Mental Health Literacy for the control group at administration three remained stable ($p = 0.1887$, $\alpha = 0.050$) across survey administrations and were not significantly different from pre to follow-up survey administrations according to Least Squares Student's *t*.

Mean scores for the dependent variable Perceived Behavioral Control in the control group for administration three remained stable ($p = 0.8186$, $\alpha = 0.050$) across

survey administrations and were not significantly different from pre to follow up survey administrations according to Least Squares Student's *t*.

The dependent variable Perceived Behavioral Control for the experimental group had increases in mean scores from pre to post intervention administrations. Mean scores for the follow up administration remained stable from the post-intervention administration ($p = <0.0001$, $\alpha = 0.05$). According to the Least Squares Student's *t* the increase from pre to post intervention administration was significant. Additionally, the post-intervention and follow-up measures were not significantly different from each other; however, both were significantly different from the pre-intervention survey administration.

Mean scores for dependent variable Stigmatizing Attitudes for the experimental group decreased from pre to post intervention ($p = <0.0143$, $\alpha = 0.05$). The Least Squares Student's *t* test showed a significant decrease in Stigmatizing Attitudes from the pre to post-intervention administration survey administration. The follow up measure indicated that the change from the pre to post measures did not remain stable with a slight increase in Stigmatizing Attitudes from the post to follow up. Data analysis showed that there was an overall all decrease in stigmatizing attitudes from the pre to post to follow up; however, the follow up measure indicated a slight increase in Stigmatizing Attitudes as compared to the post measure. The follow up measure of stigmatizing attitudes did remain lower than the pre-intervention measure.

The control group mean scores for the dependent variable Stigmatizing Attitudes for administration two remained stable ($p = 0.5983$, $\alpha = 0.050$) across survey

administrations and were not significantly different from pre to follow-up survey administrations according to Least Squares Student's *t*. Means and standard error of measures are reported for each dependent variable by administration in Table 12.

Dependent Variables by Demographic Data

In order to determine if there were differences in outcome measures related to demographic characteristics of the study participants, ANOVA and the Least Squares Student's *t* were run for each dependent variable by demographic characteristic for both control and experimental groups. Upon completion of the above mentioned analyses it was determined that there were no significant differences by demographic characteristics observed in this data set. This may be attributable to the population of participants being predominantly female and aged 20-22.

Control group measures on the pre surveys were slightly higher than those of intervention group measures. These scores remained stable with no significant changes in responses between the pre and follow up administrations of the surveys and at the same time the intervention measures shifted in the predicted directions in all cases. Additionally, there were no differences in outcome measures related to demographic characteristics of control group members.

Table 4.5

Means and Standard Error of Experimental and Control Groups by Administration

	Control		Experimental		
	Pre	**Follow up**	**Pre**	**Post**	**Follow up**
Administration 1					
Knowledge					
	3.51±0.09	3.59±0.08	3.18±0.12	4.13±0.12	3.79±0.12
Perceived Self Efficacy					
	4.06±0.08	4.26±0.08	2.51±0.13	3.89±0.13	3.84±0.13
Stigmatizing Attitudes					
	1.54±0.09	1.65±0.09	1.80±0.07	1.38±0.07	1.36±0.07
Administration 2					
Knowledge					
	3.18±0.16	3.09±0.16	3.27±0.11	4.09±0.11	3.96±0.11
Perceived Self Efficacy					
	3.00±0.12	3.21±0.12	4.08±0.08	4.70±0.08	4.80±0.09
Stigmatizing Attitudes					
	1.59±0.15	1.50±0.15	1.32±0.04	1.17±0.04	1.23±0.04
Administration 3					
Knowledge					
	3.47±0.06	3.35±0.06	3.43±0.07	4.09±0.07	3.96±0.07
Perceived Self Efficacy					
	3.25±0.12	3.18±0.11	3.15±0.09	3.98±0.09	3.89±0.10
Stigmatizing Attitudes					
	1.47±0.13	1.57±0.13	1.57±0.05	1.36±0.05	1.37±0.06

Table 4.6

Means and Standard Deviations of Mental Health Literacy by Demographic Measures

	Control Mean ± Standard Deviation			Experimental Mean ± Standard Deviation		
	n	**Pre**	**Follow up**	***n***	**Pre**	**Post**	**Follow up**
Gender							
M	3	3.45±0.17	3.25±0.17	1	2.80±0	4.20±0	4.20±0
F	43	3.38±0.09	3.38±0.09	50	2.97±0.06	3.94±0.06	3.80±0.06
Age							
18-19	12	3.49±0.06	3.32±0.06	--	--	--	---
20-21	20	3.42±0.09	3.56±0.08	38	2.97±0.06	3.91±0.07	3.73±0.07
21-24	8	3.28±0.15	3.15±0.15	12	3.06±0.12	4.03±0.12	4.03±0.12
25-30	2	3.6±0	3.6±	--	-	-	-
>30	--	--	--	1	2.20± 0	3.40± 0	3.40± 0
Race/Ethnicity							
Latino/ Hispanic	--	--	--	1	3.00±0	4.20±0	4.00±0
European American	23	3.39±0.09	3.38±0.08	47	2.98±0.06	3.93±0.06	3.80±0.06
African American	2	3.2±0	3.20±0	1	3.20±0	3.80± 0	3.00±0
Asian American	--	--	--	1	3.00±0	4.00± 0	3.80±0
Other	--	--	--	1	3.00±0	4.40±0	4.20± 0
Level of Education							
Freshman	9	3.2±0.08	3.16±0.08	--		-	-
Sophomore	4	3.76±0.09	3.72±0.09	--		-	-
Junior	20	3.51±0.09	3.66±0.09	32	2.99±0.07	3.86±0.08	3.70±0.08
Senior	10	3.20±0.16	3.05±0.16	18	2.97±0.09	4.04±0.09	3.95±0.09
≥Bachelor's Degree	--	--	--	1	2.80±0	4.00±0	4.00± 0

Certification Area							
Early Childhood	4	3.16±0.14	2.92±0.14	18	3.09±0.08	3.81±0.09	3.78±0.09
Elem. Ed.	5	3.70±0.07	3.50±0.07	15	2.84±0.11	3.97±0.12	3.66±0.11
Middle	--	--	--				
Secondary Math/Science	10	3.07±0.11	3.11±0.11				
Secondary English/ Social Studies	5	3.40±0.23	3.07±0.23				
Related Arts	--	--	--				
Special Education	10	3.38±0.09	3.46±0.09	6	3.06±0.17	4.23±0.17	4.06±0.17
Preferred Teaching Level							
Pk-2nd	8	3.50±0.10	3.28±0.10	26	2 .90±0.08	3.86±0.08	3.83±0.08
3rd-5th	12	3.53±0.01	3.72±0.09	17	3.02±0.09	3.91±0.10	3.61±0.09
6th-8th	5	3.37±0.11	3.47±0.11	2	2.67±0.18	4.20±0.18	4.0±0.18
9th-12th	11	3.17±0.13	3.16±0.13	3	3.40±0.17	4.2±0.17	4.05±0.17
Post. Sec.	--	--	--	--	--	--	--
Academic Status							
Freshmen	9	3.32±0.08	3.16±0.08	--	--	--	--
Sophomore	2	3.64±0.14	3.80±0.14	--	--	--	--
Junior	14	3.59±0.10	3.58±0.09	23	2.92±0.09	3.93±0.10	3.71±0.09
Senior	11	3.24±0.13	3.27±0.13	27	3.04±0.07	3.93±0.07	3.86±0.07
Graduate	--	--	--	--	--	--	--
Number of Field Experiences							
0	1	3.40±0	3.60±0	1	3.40±0	3.60±0-	3.60±0-
1-2	10	3.43±0.08	3.25±0.08	2	3.20±0.50-	3.90±0.50	3.30±0.50
3-4	7	3.38±0.16	3.30±0.16	4	3.08±0.21	4.10±0.25	3.86±0.21
4-5	9	3.31±0.15	3.34±0.15	16	2.84±0.11	3.73±0.11	3.56±0.11
>6	16	3.45±0.10	3.58±0.10	27	3.02± 0.07	4.05± 0.07	3.99± 0.07

Knows Someone with a MHD							
Yes	22	3.44±0.09	3.46±0.09	37	3.13±0.06	3.96±0.07	3.86±0.07
No	6	3.15±0.15	2.98±0.15.	14	2.61±0.10	3.87±0.10	3.62±0.10

Table 4.7

Means and Standard Deviations of Perceived Self Efficacy by Demographic Measures

	Control			Experimental			
	n	Pre	Follow up	*n*	Pre	Post	Follow up
Sex							
M	3	3.94±0.20	3.97±0.20	1	2.25±0	3.63±0	2.63±0
F	44	3.47±0.13	3.58±0.13	50	3.28±0.06	4.21±0.06	4.22±0.06
Age							
18-19	12	3.26±0.14	3.13±0.12	--	--	--	---
20-21	24	3.90±0.07	4.01±0.07	38	2.99±0.07	4.01±0.07	4.00±0.07
21-24	11	3.11±0.13	3.38±0.13	12	3.93±0.10	4.60±0.10	4.64±0.10
25-30	1	3.50±0	4.00±0	--	-	-	-
>30	--	--	--	1	5.38± 0	5.13± 0	5.00± 0
Race/Ethnicity							
Latino/Hispanic	--	--	--	1	2.50±0	3.38±0	2.88±0
European American	46	3.55±0.06	3.65±0.06	47	3.26±0.07	4.20±0.07	4.19±0.07
African American	1	3.00±0	3.38±0	1	2.75±0	2.50± 0	2.88±0
Asian American	--	--	--	1	2.63±0	3.38± 0	4.00±0
Other	--	--	--	1	4.38±0	5.13±0	5.13± 0
Level of Education							
Freshman	9	3.11±0.20	2.96±0.16	-		-	-
Sophomore	4	3.48±0.09	3.63±0.09	-		-	-
Junior	21	3.99±0.10	4.24±0.10	32	2.90±0.08	3.88±0.08	3.86±0.08
Senior	11	3.14±0.08	3.21±0.08	18	3.97±0.09	4.68±0.09	4.74±0.09
≥BA/BS	--	--	--	1	2.13±0	4.30±0	3.88±0
Certification Area							
Early Childhood.	4	2.90±0.18	2.75±0.15	18	3.17±0.08	3.91±0.08	3.89±0.08
Elementary Education	5	3.35±0.14	3.48±0.14	15	2.51±0.13	3.89±0.13	3.84±0.13

Middle	10	3.20±0.07	3.30±0.07				
Secondary Math/Science	5	2.63±0.28	3.04±0.28				
Secondary English/ Social Studies	12	3.75±0.16	4.03±0.11				
RelatedlArts							
Special Education				6	3.64±0.13	4.59±0.13	4.73±0.13
Preferred Teaching Level							
Pk-2nd	9	3.60±0.11	3.63±0.10	26	3.42±0.08	4.19±0.08	4.17±0.08
3rd-5th	14	3.88±0.11	4.08±0.11	17	2.94±0.12	3.99±0.12	4.03±0.12
6th-8th	5	3.80±0.16	3.71±0.14	2	3.29±0.26	4.42±0.26	4.33±0.26
9th-12th	13	3.29±0.08	3.41±0.08	3	3.28±0.22	4.41±0.22	4.47±0.22
Post-Secondary.							
Academic Status							
Freshman	9	3.11±0.20	2.96±0.16				
Sophomore	4	3.90±0.17	3.83±0.17				
Junior	16	3.95±0.09	4.21±0.09	23	2.86±0.10	3.89±0.10	3.84±0.10
Senior	17	3.27±0.09	3.45±0.09	27	3.62±0.08	4.44±0.08	4.50±0.08
Graduate							
Number of Field Experiences							
0	0	2.25±0	2.00±0	1	3.25±0	4.00±0	4.13±0-
1-2	12	3.30±0.15	3.26±0.13	2	2.94±0.53	3.38±0.53-	3.63±0.53-
3-4	8	3.01±0.18	3.30±0.18	3	2.55±0.26	3.63±0.26	3.80±0.26
4-5	12	3.64±0.10	3.68±0.10	16	2.64±0.12	3.86±0.12	3.82±0.12
>6	17	3.93±0.07	4.13±0.07	27	3.79±0.07	4.52± 0.07-	4.50± 0.07-
I know Someone with a MHD							
Yes	41	3.55±0.07	3.67±0.066	37	3.53±0.07	4.32±0.07	4.35±0.07
No	7	3.34±0.12	3.41±0.11	14	2.61±0.12	3.81±0.12	3.74±0.12

Table 4.8

Means and Standard Deviations of Stigmatizing Attitudes by Demographic Measures

	Control			Experimental1			
	n	Pre	Follow up	*n*	Pre	Post	Post2
Sex							
M	3	1.56±0.15	1.75±0.15	1	1.50±0	1.00±0	1.25±0
F	44	1.53±0.07	1.60±0.07	50	1.53±0.03	1.27±0.03	1.31±0.35
Age							
18-19	12	1.37±0.09	1.63±0.09				
20-21	24	1.61±0.10	1.61±0.10	38	1.60±0.04	1.33±0.04	1.32±0.04
21-24	11	1.55±0.13	1.60±0.13	12	1.37±0.06	1.15±0.06	1.29±0.06
25-30	1	1.25±0	1.00±0				
>30				1	1.00±0	1.00±0	1.00±0
Race/Ethnicity							
Latino/Hispanic				1	2.00±0	1.00±0	1.75±0
European American	46	1.52±0.07	1.59±0.07	47	1.52±0.04	1.28±0.04	1.28±0.04
African American	1	1.00±0	1.00±0	1	2.00±0	2.00±0	2.00±0
Asian American				1	1.50±0	1.00±0	1.50±0
Other				1	1.75±0	1.50±0	1.50±0
Level of Education							
Freshman	9	1.27±0.11	1.55±0.11				
Sophomore	4	1.85±0.33	1.60±0.33				
Junior	21	1.49±0.09	1.72±0.09	32	1.70±0.05	1.39±0.05	1.40±0.05
Senior	11	1.63±0.14	1.49±0.14	18	1.20±0.04	1.09±0.04	1.16±0.04
≥BA/BS				1	1.00±0	1.00±0	1.00±0
Certification Area							
Early Childhood.	4	1.25±0.07	1.40±0.07	18	1.58±0.06	1.37±0.06	1.39±0.06
Elementary Education	5	1.58±0.10	1.79±0.10	15	1.80±0.07	1.38±0.07	1.36±0.07

Middle	10	1.55±0.08	1.91±0.08	6	1.14±0.04	1.18±0.04	1.14±0.04
Secondary Math/Science	5	1.67±0.22	1.67±0.22				
Secondary English/ Social Studies	12	1.58±0.12	1.73±0.12				
Related Arts							
Special Education							
Preferred Teaching Level							
Pk-2nd	9	1.53±0.16	1.45±0.16.	26	1.50±0.04	1.26±0.04	1.30±0.04
3rd-5th	14	1.47±0.09	1.68±0.09	17	1.72±0.07	1.33±0.07	1.36±0.07
6th-8th	5	1.63±0.18	2.08±0.18	2	1.25±0.05	1.17±0.05	1.17±0.05
9th-12th	13	1.63±0.14	1.43±0.13	3	1.25±0.08	1.31±0.08	1.25±0.08
Post-Secondary							
Academic Status							
Freshman	9	1.28±0.11	1.55±0.11				
Sophomore	4	1.85±0.28	1.45±0.28				
Junior	16	1.14±0.09	1.69±0.09	23	1.65±0.06	1.33±0.06	1.30±0.06
Senior	17	1.63±0.12	1.57±0.12	27	1.44±0.04	1.24±0.04	1.29±0.04
Graduate							
Number of Field Experiences							
0	1	2.00±0	2.50±0	1	1.00±0	1.00±0-	1.00±0
1-2	12	1.31±0.09	1.56±0.09	2	1.25±0.19	1.38±0.19	1.25±0.19
3-4	8	1.80±0.18	1.60±0.18	4	1.50±0.04	1.40±0.04	1.35±0.04
4-5	12	1.40±0.03	1.40±0.03	16	1.85±0.07	1.38±0.07	1.43±0.07
>6	17	1.57±0.11	1.69±0.11	27	1.38±0.04	1.20±0.04	1.23±0.04
I know Someone with a MHD							
Yes	41	1.51±0.08	1.59±0.08	37	1.34±0.02	1.25±0.02	1.24±0.02
No	7	1.59±0.06	1.63±0.06	14	1.98±0.09	1.35±0.09	1.46±0.09

Summary of Findings

Statistically significant differences were observed between the pre and post surveys ($p < 0.0001$) for Mental Health Literacy when considering the intervention group as a whole. Increases in Mental Health Literacy were significant from pre to post survey administrations and these changes were sustained at the follow up survey administration. Control group measures on the pre surveys for Mental Health Literacy were slightly higher than those of intervention group measures. These scores remained stable with no significant changes in responses between the pre and follow up administrations of the surveys.

Perceived Behavioral Control differences were statistically significant ($p<0.0001$) with significant increases from pre to post-intervention survey administrations for the intervention group. The increases in Perceived Behavioral Control from the pre to post measures were maintained and remained significant on the follow-up survey administration. Measures for the control group on the pre surveys were slightly higher than those of intervention group measures for Perceived Behavioral Control and remained stable with no significant changes in responses between the pre and follow up administrations of the surveys.

There were significant differences observed between the pre and post surveys for the dependent variable Stigmatizing Attitudes. Decreases in Stigmatizing Attitudes were measured between pre and post training surveys and these decreases in stigmatizing attitudes were maintained and remained significant on the follow-up surveys. The

control group responses did not have changes that were significant from pre to follow up on the measures for Stigmatizing Attitudes. Control group measures of stigmatizing attitudes were slightly lower on the pre survey measure when compared to the intervention group and the observations remained stable at the follow up measure for the control group.

When the data were disaggregated and measures were examined by training time the findings were consistent with those in the overall analysis except in the case of special education student teachers. Measures for participants in this training group demonstrated changes that were significant and remained significant for Mental Health Literacy and Perceived Behavioral Control. Measures for the dependent variable, Stigmatizing Attitudes, indicated significant decreases in Stigmatizing Attitudes from pre to post-survey administration. However, these changes did not remain significant from the pre to follow-up administration of the survey. The measures did remain lower than the initial measures of Stigmatizing Attitudes for the special education student teacher training group. Control group data remained stable without significant changes across groups when examined by administration.

When data for dependent variables were examined by demographic characteristics, there were several areas in which the differences attributable to the training were not consistent with the overall findings. These instances most frequently occurred when the sample size included only one participant. In a limited number of situations there were differences by demographic characteristic that could not be

attributed to small sample sizes. The research questions along with the variations in findings associated with demographic characteristics will be discussed in chapter five.

CHAPTER FIVE

DISCUSSION

This exploratory study addressed the need for teachers to be able to identify and provide support for students experiencing EBD and MHD by implementing a teacher training program developed by the National Alliance for Mental Illness (NAMI) for preservice teachers. The intervention addressed knowledge about signs and symptoms of early onset mental health disorders in children and adolescents as well as provided information about methods for communicating with parents of students who are exhibiting these signs and symptoms. In addition to providing training to teachers (in the case of this study, to pre-service teachers) regarding mental health distress and disorders in children and adolescents the NAMI provided training addresses mental health literacy which has been shown to decrease stigmatizing attitudes (Corrigan, et al., 2010; Jorm, 2010; President's New Freedom Commission on Mental Health, 2003; Spagnolo et al., 2008; U.S. Department of Health and Human Services, 1999; Yamaguchi et al., 2011).

According to the literature reviewed for this study, there are serious needs on the part of students experiencing EBD and MHD as well as serious gaps in the Mental Health Literacy, Perceived Behavioral Control, and Stigmatizing Attitudes of preservice teachers. First, the literature indicates that children with EBD and MHD the poorest outcomes of all disability groups and that they are the fastest growing disability category under IDEA (Wagner et al., 2005). They experience the highest rates of school failure, engagement with law enforcement and other negative outcomes for people in that age

group (Greenbaum et al., 1996; Wagner et al., 2005). Additionally, they have lower wages (Rouse, 2007), lower employment rates (U.S., Department of Labor, Bureau of Labor Statistics, 2010), poorer health (Plies, Ward, & Lucas, 2010) as well as increased costs to society including criminality, lost tax contributions, reliance on Medicaid and Medicare, and welfare dependence (Levin & Belfield, 2007). Because these subclinical mental health issues tend to emerge during childhood and adolescence there is great benefit to be gained in preventing these issues from becoming fully developed mental health disorders (Jorm, 2012).

According to the Theory of Planned Behavior (Ajzen, 1991), the factors contributing to the likelihood of a behavior of interest being performed include knowledge, personal beliefs, and, subjective norms. To test the hypothesis that with (a) increased knowledge, (b) increased self-efficacy of teachers in their ability to recognize and offer assistance to students experiencing mental health distress/ mental health illness, and (c) decreased stigmatizing attitudes; the National Alliance for Mental Illness (NAMI) Parents and Teachers as Allies (P&T as Allies) will be provided to participants and the above mentioned constructs will be measured.

Major Findings of the Study

The purpose of this study was to measure the effects of the Parents & Teachers as Allies training on preservice teachers' mental health literacy, perceived self-efficacy in meeting the needs of students with EBD and MHD, and stigmatizing attitudes. This chapter will discuss the theoretical framework of the study and the findings from the data

analysis for each research question. Additionally, the limitations of the study will be discussed as well as recommendations for future research and implications for practice.

The theoretical framework underlying this study is Ajzen's (1991) Theory of Planned Behavior (TPB). According to Ajzen (1991), behaviors may be reliably predicted by intention to engage in a behavior of interest when volitional control of engaging in the behavior is not an issue. The components that influence a subject's intention to engage in certain behaviors are attitudes, subjective norms, and perceived behavioral control (PBC). For the purpose of this study, the teachers' feelings about whether or not they are prepared to include students with EBD and MHD in their classroom settings are the personal beliefs that were examined and correspond to the PBC component of Ajzen's model. Subjective norms refer to a person's perceptions about the expectations of important others regarding performance of the behavior. When considered together, attitudes, subjective norms, and PBC serve as reliable predictors of the performance of a behavior (Campbell, 2010). The instrument for this study was designed in order to measure these constructs of interests. The hypothesized outcome of the training was that these constructs would be influenced by the training and that it may then be reasonably predicted preservice teachers would engage in supportive behaviors for students struggling with EBD and MHD based on the perceptions, beliefs and understandings gained from their training.

Research Questions 1 & 2

Is the P&T as Allies training effective in increasing preservice teachers' mental health literacy? Will increases in Mental Health Literacy generated by the P&T as Allies training be sustained two weeks after the intervention?

Data from the surveys indicate that the P & T as Allies training is effective in increasing preservice teachers' Mental Health Literacy and that knowledge is sustained for two weeks following the training. These findings indicate that the P&T as Allies training does provide an increase in the overall sample of preservice teachers' mental health literacy as well as for the individual training administrations. Further, the stability of the control group measures from pre to follow up indicate that the changes in the mean Mental Health Literacy scores for the intervention group can be attributed to the training. The literature indicates that when an individual's Mental Health Literacy improves they are more likely to recognize mental health distress in themselves and others (Barney, Griffiths, Jorm, & Christensen, 2006a). A further benefit of improved Mental Health Literacy is that knowledge is believed to decrease stigma (Jorm et al., 2006; U.S. Department of Health and Human Services, 1999).

The significant positive changes from pre to post measures of preservice teacher Mental Health Literacy were sustained and remained significant on the follow-up measure administered two weeks later. Mental Health Literacy survey measures for Administrations 1, 2 and 3 of the training had means that differed significantly from pre to post and follow up. The control groups for Administration1, 2 and 3did not differ significantly from pre to follow up Mental Health Literacy survey measures.

These findings indicate that the P&T as Allies training not only increased preservice teachers' Mental Health Literacy but those changes in Mental Health Literacy observed after the P & T as Allies training remained significant two weeks after the training was conducted. Additionally, for Administrations 1, 2, and 3 of the P & T as Allies training the changes in Mental Health Literacy were significantly different from the pre to post survey measures and these changes were maintained two weeks after the training. Control group measures for Mental Health Literacy remained stable across survey administrations indicating that the intervention is most likely responsible for the increase in Mental Health Literacy for the participants in the intervention group.

Research on Mental Health Literacy suggests that when people can recognize what is being experienced by themselves or others as mental health distress there is a better chance that they will seek or offer help appropriately (Highet et al., 2004). Among other things, Highet and colleagues found that benefits were reaped by educating people to understand that mental health disorders are in fact health disorders. Early and appropriate responses to mental health distress and mental health illness is more likely to happen when there are understandings by people on a broad scale about the nature of these illnesses (Gulliver et al., 2012; Highet et al., 2004; Jorm et al., 2012). Considering that Ajzen's Theory of Planned Behavior has demonstrated that when people believe they have the knowledge they need to take action on some matter, they are more likely to do so, it can be predicted with some level of accuracy that participants in the P & T as Allies training would take steps to seeking or offering appropriate mental health first aid (Jorm, Kitchner, Fischer, & Cvetlovski, 2010.)

Research Questions 3 & 4

Is the P&T as Allies training effective in increasing preservice teachers' Perceived Behavioral Control in identifying and assisting students exhibiting signs and symptoms of mental health distress/mental disorders? Will increases in preservice teachers' sense of Perceived Behavioral Control in identifying and supporting students exhibiting signs and symptoms of mental health distress/disorders generated by the P & T as Allies training be sustained two weeks after the intervention?

Mean scores for the intervention group increased from the pre-training measure to the post-training measure. When examined by administration, the findings were consistent—preservice teachers' Perceived Behavioral Control increased significantly across groups by intervention training while control measures remained stable. According to the literature, there is a need for teachers who have students with EBD and MHD in their classes to be better prepared to meet the needs of these students (Delport 2012; Fink & Janssen, 1993; Kamens et al., 2000; Maag & Katsiyannis, 1999). Preparing teachers to effectively teach and support students with MHD and EBD may decrease the likelihood of the negative outcomes many of these students experience.

Personal beliefs, or Perceived Behavioral Control, in this study is measured by the feelings that preservice teachers have about their preparedness to manage and support students with EBD and MHD appropriately. This construct was explored by considering the literature regarding the preparation of preservice teachers as well as their perceptions of their preparation. Competencies considered valuable for teachers who serve students with EBD and MHD as well as the need for more teachers with such training have been

identified by a variety of experts in teacher preparation including Delport (2012), Henderson et al. (2005), Kamens et al. (2000), and Maag and Katsiyannis (1999). Additionally, preservice and inservice teachers have identified a need and desire for more training to serve this population (Cook, 2002; Heflin & Bullock, 1999; Kamens et al., 2000; Maag & Katsiyannis, 1999; Rose et al., 2009; Sawka et al., 2002). The findings in this study indicate that the P & T as Allies training may increase the feelings of preparedness of preservice teachers to be helpful and supportive to students with EBD and MHD in appropriate ways. Again, referring to the Theory of Planned behavior, Perceived Behavioral Control is a construct that contributes to the likelihood of a behavior being carried out (Armitage & Conner, 2001).

Research Questions 5 & 6

Is the P&T as Allies training effective in decreasing preservice teachers' Stigmatizing Attitudes toward mental illness? Will decreases in preservice teachers' Stigmatizing Attitudes towards mental illness generated by the P & T as Allies training be sustained two weeks after the intervention?

Decreases observed in Stigmatizing Attitudes following the P & T as Allies training were sustained and remained significant after two weeks when the data was considered as a whole group. These changes also remained significant at the two-week, follow-up measure. When considered by administration training group, groups 1 and 3 had significant changes from pre to post that remained significant at follow up. Group 2 results also declined significantly from pre to post measures. But scores then increased slightly from post to follow-up measures resulting in a difference from pre to follow up

that was not significantly different. Even with this increase, the follow-up measure represented a decrease from the initial measure of Stigmatizing Attitudes.

Stigma was the last construct of interest in the present study and is thought to be a major reason why people experiencing MHD do not seek treatment (Corrigan et al., 2010; Moskos et al., 2007; U.S. Department of Health and Human Services, 1999). Research has been conducted that demonstrates that the problems associated with experiencing MHD in school—including stigma—may be helped with programs that provide training (Brownell et al., 2005; Carter et al., 2011; Cheney et al., 1996; Gage et al., 2010; Horner et al., 2010; Lane & Carter, 2006; Lewis et al., 2010; Rose et al., 2009; Sawka et al., 2002; Wright et al., 2006; Yamaguchi et al., 2011). Outcomes for stigma measures indicate that stigmatizing attitudes can be reduced through this training when used for preservice teachers. The Theory of Planned Behavior includes attitudes in its constructs which have an influence on a person's likelihood of engaging in a behavior. Researchers found that the attitudes people hold about engaging in a behavior does influence whether or not a person will engage in the behavior of interest (Campbell, 2010; Davis, Ajzen, Saunders, & Williams, 2002). Given the influence of attitudes on the likelihood of engaging in a behavior, the present study suggests that by reducing stigmatizing attitudes in preservice teachers they will be more likely to be supportive and able to serve students with EBD and MHD in appropriate and helpful ways.

Limitations

Several limitations were noted in this study. First, this study included a relatively small, homogenous sample size so the findings cannot be generalized to the population of

preservice teachers as a whole. Second, there were several challenges in accessing participants posed by using intact classes to implement the training. Two important challenges to the research included limited access to participants and the use of nonequivalent control groups. The borderline to low Cronbach's α measures for the stigmatizing attitudes items that had not previously been seen during field testing of the instrument also contributed to the limitations of this study.

A third possible limitation in this could be differences in training among intervention groups. Data analysis did not indicate differences between groups other than the follow-up stigma measures for preservice special education teachers when examined by administration; however, consideration should be given to this possibility when conducting trainings with multiple groups and the trainers vary from one administration to the next. There was not a treatment fidelity measure to use during training. Such a measure would have allowed for evaluation of treatment fidelity beyond the observations and notes taken by the researcher. Additionally, when the surveys were administered to the participants there was not a script used for giving directions for survey completion. The lack of a script for administering the survey may have led to response differences due to researcher bias.

Although not a difference in the direct training, participants in the study were given contact information for the NAMI trainer as well as resources that they could access regarding mental health information and services in the area. It is possible that participants who received the training also sought further information after the training

and this could account for the sustained effects of the intervention rather than the effectiveness of the intervention itself.

Fourth, it was noted that the control group scores were higher to begin with in some cases than participant group scores. This would indicate that the groups were not equivalent at the initial measure. In order to correct for this, an Analysis of Covariance could be conducted. This analysis would allow for statistical correction of the differences between groups.

Students included in the sample were primarily white and female and therefore their responses cannot be generalized to the whole population of preservice teachers. Also, the control group for this study was composed of a convenience sample of students who were easily accessible to the student researcher. They were matched as well as they could be to existing intervention groups but were only similar to the intervention groups, not equivalent. The surveys were field tested and acceptable to good reliability measures were accomplished. However, the reliability measures for the stigma portion of the survey did not remain stable over the course of administrations. Interestingly, the reliability scores were slightly higher when measured for the intervention group than for the control group. The inconsistencies in these measures should be considered when reviewing the findings for Stigmatizing Attitudes.

Recommendations for Future Research

Future research should be conducted to further establish the efficacy of the P & T as Allies training. Random assignment to groups, matched control groups and intervention groups, and a larger, more diverse group of participants would all be optimal

ways to test the efficacy of the training. The addition of fidelity measures, for example a checklist for the inclusion of all elements of the training, as well as a script for administering the survey to assure systematic implementation of the interventions would improve the reliability of the outcome measures. Exploration of the training's efficacy at different age or educational levels would be helpful to determine the best point in a teacher preparation program to include the training.

Also, there should be further investigation into measures for stigmatizing attitudes. The measures used in this study did not generate consistently strong reliability scores. The reason for the variations in responses between preservice special education students and those preparing for other areas of certification on the stigmatizing attitudes portion of the TKBS survey also needs further exploration. Additionally, it would be useful to explore why it is that stigma is identified in the literature as an important barrier to treatment when findings in this study suggest that preservice teachers do not think that they have stigmatizing attitudes. Existing research suggests that stigmatizing attitudes are widespread and prevalent even among those who provide services to individuals with mental health needs (Scheerder et al., 2010).

The utility of this training for inservice teachers is another possibility for investigation. A benefit of conducting this training with inservice teachers would be that there would be opportunities for additional follow-up measures to be takes as well as possibilities to collect qualitative data from the participants as well as their coworkers and supervisors regarding their support and service for students with EBD and MHD and how those services may or may not change following training.

Implications for Practice

Results of this exploratory study suggest that preservice teachers' mental health literacy and perceived behavioral control increase after participating in the P & T as Allies training. Because limited knowledge and perceptions of their ability to work with students experiencing EBD and MHD are expressed concerns of preservice teachers (Cook, 2002), this training may prove to be helpful in preparing these individuals to better serve students experiencing these problems. Further, the findings suggest that stigmatizing attitudes decrease as a result of the training.

This training is readily available through Local NAMI affiliates and the cost involved is minimal (one dollar per participant for the monograph which describes mental health symptoms in children and adolescents). Additionally, the training only requires two hours of time for participants so it should be fairly easy to include in teacher training programs.

Stigma is considered a barrier to treatment for those experiencing MHD (Moskos et al., 2007; President's New Freedom Commission on Mental Health, 2003; U.S Department of Health and Human Services, 1999) indicating that training with efficacy in decreasing stigmatizing attitudes would be a useful one to implement with preservice teachers.

Conclusion

This study's findings regarding increases in Mental Health Literacy and Perceived Behavioral Control and decreases in Stigmatizing attitudes seem to indicate that this training has utility for preparing teachers to support and identify students who may be

struggling with MHD. Teachers who are better equipped to serve these students may be a way to improve outcomes for this group who generally experience the poorest outcomes of all students. The Parents and Teachers as Allies curriculum developed by NAMI has included factual information about mental health disorders as well as what the signs and symptoms of the disorders look like in children and adolescents. The training requires volunteers to be prepared for implementing the program; however, the intervention is not complex in nature nor is the information particularly difficult to disseminate. In short, the P & T as Allies it is an uncomplicated and inexpensive training to provide that seems to have some efficacy in helping meet the needs of students.

If a short, inexpensive training can increase knowledge of preservice teachers, help them to feel more capable of working with and meeting the needs of students experiencing MHD, and decrease stigmatizing attitudes that may be held it would likely be a good use of instructional time across a range of teacher training settings.

APPENDICES

Appendix A

Summaries of Included Studies

Table 1
Summary of Studies Focusing on Mental Health Literacy

Article	Type of Study	Participants	Area of Focus	Measures	Findings
Darby, Hay, Mond, and Quirk, 2010	Descriptive	983 of 3,047 participants in the 2005 South Australian Health Omnibus Survey given the Anorexia Nervosa Mental Health Literacy Survey (AN MHL)	Anorexia Nervosa Mental Health Literacy	Respondent-based interview with vignette and AN MHL survey	Higher levels of MHL regarding eating disorders were found in the following respondent categories: female, young, higher educational attainment, and living in urban areas.
Highet, Luscombe, Davenport, Burns, and Hickie, 2006	Descriptive	Representative community sample of 3200 respondents	Associations of exposure to depression-related information and recognition of depression	Telephone Survey	Respondents perceive depression as a mental health rather than a general health problem. Those familiar with news coverage and the national depression awareness campaign indicated greater understanding

					about depression. They were also more likely to be young, female, have achieved higher levels of education, and live in metropolitan areas.
Jorm, Kitchner, Fischer, and Cvetlovski, 2010	Experimental-Individually randomized three-group parallel design	262 members of the Australian public randomly assigned to one of three groups (e-learning CD course completion, reading a mental health first aid manual, or in a waiting list control group.	Mental Health First Aid Training Mental health knowledge, stigmatizing attitudes, confidence in providing help to others, actions taken to implement mental health first aid	Online questionnaires pre and post training and at 6 months follow-up	E-learning and printed manual had positive effects compared to the control group. The e-learning cd did reduce personal stigma and social distance compared to the manual. Effects found at posttest were generally also present at the six month follow-up measure.
Kelly, Jorm, and Rodgers, 2006	Descriptive	1137 Australian adolescents in school years 8, 9, and 10.	Response of adolescents to peers experiencing common mental illnesses	Survey regarding mental health first aid responses of adolescents for their peers	Adolescents most often offered positive social support to peers experiencing mental illness,

					about 1/4th sought help from an adult, nearly 1/4th offered inappropriate help, and 1/5th of respondents took no appropriate actions to help a friend.
O'Reilly, Bell, and Chen, 2010	Descriptive	391 Pharmacists in New South Wales	Beliefs about helpfulness of interventions for schizophrenia and depression	Survey with mental health literacy measures	Pharmacists generally were able to correctly identify depression and schizophrenia and were positive about the efficacy of treatment. Most held negative views about hospitalization and believed that public discrimination towards mental illness is prevalent.
Scheerder et al., 2010	Descriptive	2,670 participants in training programs about depression in nine of the European	Community and health professionals attitudes towards depression	Questionnaire including attitudes towards depression and its treatment, causes, knowledge	A lack of training for Community Facilitators (CFs) - may contribute to stigmatizing of

		Alliance Against Depression (EAAD) countries		of symptoms.	patients, and negatively affect professional collaboration and treatment. Many respondents had limited knowledge about MHD and negative attitudes towards people experiencing MHD.
Schomerus et al., 2012	Meta-analysis	Representative sample population based studies. Analysis included 33 reports of time trend analyses of beliefs and attitudes about mental illness	Public attitudes toward people with mental illness and mental disorders	Beliefs about causes of and definition of mental disorder, attitudes towards help-seeking, prevalence of negative stereotypes, and social acceptance of persons with mental illness	Studies investigating attitudes towards people with mental illnesses show inconsistent results. Improvements were noted in mental health literacy and perceptions about seeking treatment. A trend toward deteriorating public attitudes was also noted.

Tacker and Dobie, 2008	Pilot study	30 middle school students in Seattle, Washington	Developing and supporting Mental Health Fitness	Entry and Exit Surveys with quantitative scales and qualitative response options	Students experienced increases in identifying coping mechanisms, supportive resources, signs of depression, And the ability to identify appropriate action if they believe someone is at risk of suicide. Students indicated interest in the topics presented in the program and found it to be useful.

Table 2

Summary of Studies Focusing on Stigma

Article	**Type of Study**	**Participants**	**Area of Focus**	**Measures**	**Findings**
Barney, Griffiths, Jorm, and Christensen, 2006	Descriptive	A random sample of 1312 adults in Australia	Self and perceived stigma, depressive symptoms and experience, and help seeking intentions	Questionnaire with a depression vignette	Self and perceived stigma is associated with reluctance to seek professional help. Respondents expected negative reaction if they sought help and some felt that professionals would respond negatively to them if they sought help.
Chandra and Minkovitz, 2006	Descriptive	274 eighth grade students, 138 boys and 136 girls at two middle schools	Gender differences and stigma in teen willingness to use mental health services	Self-administered questionnaire	There are gender differences in mental health attitudes and willingness to use mental health services. Girls were more likely than boys to seek mental health care

					and had greater mental health knowledge than boys. Perceived parent disapproval for seeking mental health services was higher for boys than for girls.
Chandra and Minkovitz, 2007	Descriptive	A purposive sample of eighth graders was selected to represent a diverse population of respondents	Factors examining attitudes towards mental health issues and help-seeking for mental health issues as well as how stigma influences use of mental health services by adolescents	In-depth interviews lasting from 45 to 60 minutes conducted and student responses were coded using an inductive coding method regarding personal experiences with mental health, mental health knowledge, family and peer conversations about mental health, perceived social consequences of mental health service use, and attitudes of school	Nearly half of participants equated good mental health with intelligence and confused mental illness with mental retardation. Family attitudes seemed to influence participant attitudes with girl were more likely to discuss mental health issues but most participants reported being uncomfortable with peers who were struggling with mental health

				staff about mental health issues students may have.	issues. Teens' attitudes were influenced by the perception of the social consequences of seeking mental health care and sensed teachers are uncomfortable with addressing the mental health needs of teens.
Jorm, Christensen, and Griffiths, 2006 a	Descriptive	A national sample of 2031 18-74 year olds were surveyed in 1995, in 2003-20043998 participants 18 and older were surveyed. Surveys included vignettes on a variety of mental health conditions including depression, early schizophrenia, depression with suicidal thoughts, and chronic	Changes in depression awareness and attitudes over time and the effects of *beyondblue; the national depression initiative* on these	Data for male and female participants were pooled after finding with the 1995 data that this variable made little difference in responses. Percentage responses were compared for high and low-exposure states in 1995 and 2003-2004. Percentages were calculated by applying survey weights to attain	Respondents increased in reporting beliefs that those suffering from depression are be at greater risk for suicide. Indicating increased awareness. These findings were greater in parts of Australia having higher exposure to the depression awareness indicating its effect on raising

		schizophrenia. Only the depression data were used in this study.		better population estimates. For the percentages calculated 95% confidence intervals were estimated.	awareness of depression and discrimination.
Jorm, Christensen, and Griffiths, 2006 b	Descriptive	National Sample of adults at two periods in time (1995 and 2003-2004). Participants were adults 18-74 (1995) and 18 and older (2003-2004)	Determination of change in 8 years of recognition and treatment beliefs regarding mental health disorders among Australian adults since 1995.	Survey with vignettes which participants were asked to respond to in two ways: what might be wrong with the person in the vignette and what help might be appropriate for them.	The researchers found that beliefs about the helpfulness of seeking treatment increased and those about psychiatric drugs and admission to a psychiatric ward being harmful reduced. Increases in the awareness of the range of help available were also observed.
Kranke, Floersch, Townsend, and Munson, 2010	Descriptive	40 12-17 year olds meeting DSM-IV criteria for a mental health disorder and taking psychiatric medicine at the	Experience of stigma among adolescents taking psychiatric medications for the treatment of a diagnosed mental	Semi structured interviews were conducted and responses analyzed thematically a modified method of labeling theory.	90% of participants endorsed one of the following constructs: secrecy, shame, and limiting social interactions. The

		time of the study	health disorder.		interviews also indicated adolescents' perceptions of peers, school environment, and family could accentuate stigma or serve as a barrier to protect against it.
Link, Young, Phelan, and Collins, 2004	Literature Review		To provide a profile of the current measures for assessing mental illness stigma and assist researchers in selecting and creating measures needed to conduct work in observing, measuring, and understanding stigma processes. Additionally, gaps in stigma measurement are addressed.	60.1% of studies were non-experimental surveys (of these 7.3% included vignettes and 52.8% did not). 16.2% of the studies included were experimental (15.4% included vignettes and 0.8% did not). 13.8% were qualitative (2.4% with content analysis and 11.4% with interviews of participant observation as the main study	The authors identified measure applicable to adult members of the general public, children from the general public, consumers of mental health services, and family members of consumers of mental health services. Gaps with few or no measures include: structural discrimination, emotional responses of

				design). 11.4% of the included articles were literature reviews.	mental health patients/ consumers, methods for assessing knowledge attitudes beliefs and behaviors of children as well as children's experience of stigma. Experimental studies to help understand how we might change stigma processes are needed.
Martin, Pescosolido, Olafsdottir, and McLeod, 2007	Descriptive	Nationally representative sample of 1,393 non-institutionalized adults	Social reactions to children with mental health problems	Preferences for social distance from children with mental health disorders	Findings suggest that the label of mental illness evokes rejection because it is associated with violence in the public's mind.

Moses, 2010	Descriptive	56 adolescents in a Midwestern US city	Adolescents' perceptions of being treated "differently" because of mental health problems.	Qualitative analysis of mixed methods interviews included inductive analysis, categorization within personal domains (peers, family, school staff), and axial coding used to map out stigmatizing behaviors and reasons for the behavior. Quantitative analysis included bivariate analysis (ANOVA, Chi-square, Student's t-test, Spearman's rho correlation) to explore associations between stigma classifications and youth's demographic and clinical characteristics.	Adolescents experienced stigmatization from peers, family members, and school staff. They also reported experiencing "different" treatment that they perceived as helpful and positive. To overcome stigma family members, peers, and school staff need help in overcoming inclinations to make negative assumptions and discriminate against these youth.

Moskos, Olson, Halpern, and Gray, 2007	Descriptive	270 parents and other survivors of 49 youth suicide deaths from a sample of 151 consecutive youth suicide deaths	Evaluation of mental health treatment sought for and by decedents and barriers to mental health treatment	270 interviews each lasting approximately 2 hours which included a 70 item questionnaire of which 69 were used. Parent interviews were analyzed and grouped according to barriers to mental health treatment and history of seeking mental health treatment for the decedent. Responses were also grouped using decedent case regarding the health insurance status of the decedent.	Barriers to receiving care that were reported include: decedent believed nothing could help (73%), 71% perceived that the decedent believed seeking help was a sign of weakness or failure, 58% believed the decedent was reluctant to admit to having problems, and 52% believed that the decedent was too embarrassed to seek help. Siblings friends, relatives additionally indicated that the decedent did not know where to go for help.

Table 3

Studies Focusing on Practices for Reducing Stigma

Article	Type of Study	Participants	Area of Focus	Measures	Findings
Bizub and Davidson, 2011	Intervention	5 students from an upper-level course focusing on the lived experience of mental illness. The participants were between 21 and 23 years old, all white, 1 male and 4 female and from a small liberal arts college in the northeast of the United States.	How contact with a person with a serious mental illness effect the stigmatizing attitudes of upper-level psychology majors.	Participants responded to two open ended questions regarding how they felt in anticipation of being matched with a person with a serious mental health illness and how they felt about their friend after being matched with them.	Participants indicated that through their friendships with the people with whom they were matched they learned to see the person with a mental illness as an individual rather than just the illness and the sum of their symptoms.
Brown, Evans, Espenschade, and O'Connor, 2010	Experimental, random assignment to groups, a 3 (intervention) by 3 (time period) mixed design ANOVA design, within subject ANOVA to check for simple effects, paired t-tests were	143 undergraduate students from a Midwestern state university. Participants were mainly Caucasian, a little more than half female and averaged 19.3 years of age from an introductory	The impact of two brief interventions on stigmatizing attitudes. The interventions included a film depicting individuals with schizophrenia and a simulation of auditory	Participants completed stigma measures followed by two additional measures, the *Symptom Checklist—90—Revised* (Derogatis 1994) and the *Quality of Life Inventory* (Frisch	Participants in this study experienced changes in stigma and social distance over time. In the simulation group participants reported an increase in social distance and stigmatizing

	used to identify when changes in social distance occurred, Cohen's d was calculated to determine effect sizes	psychology class. They included business (20.3%), education (14.7%), biology (11.95), and psychology (5.6%) majors.	hallucinations.	1994). The measures were administered prior to the intervention, immediately following the intervention, and one week later. Control group participants completed the instruments for the second time after a 10-15 minute passage of time. And were invited to return one week later to respond to the stigma measures again.	attitudes. In the filmed contact group participants reported decreases in stigmatizing attitudes and social distance with changes persisting over the week between administrations of the measures.
Corrigan et al., 2010	Experimental 3 (condition) by 2 (positive or negative recollection) mixed model ANOVAs, interactions and main effects were measured and post hoc Tukey's tests were used to	201 participants were recruited from four colleges in the Midwest of who 200 participated. These were randomly placed in either the original 90 IOOV, the 30 minute version of IOOV,	The impact of an anti-stigma program called In Our Own Voice (IOOV)developed by the National Alliance on Mental Illness (NAMI) which is shortened from 90 minutes to 30 minutes on	Participants were administered the Life Story Memory Test immediately after the assigned condition was completed.	Contact with persons with mental illness yielded better impact on perceptions and recollections than education. Findings indicate the shortened version yielded

	examine positive or negative recollections across the interventions	or a 30 minute education comparison group	cognitive processes which lead to stereotypes		results that were similar or better than the 90 minute version and better than the education group.
Pinto-Foltz, Logsdon, and Meyers 2011	Cluster-randomized trial	156 US adolescent girls aged 13-17 years of age. 95 in the intervention group and 61 in the control group	To determine the initial acceptability, feasibility, and efficacy of an existing community based intervention administered by the National Alliance on Mental Illness (NAMI) called In Our Own Voices (IOOV) to reduce stigma and increase mental health literacy in adolescents	Feasibility measures considered enrolling adolescents in the study, retaining adolescents in the study, and administering the intervention. Acceptability was considered in terms of acceptability of the intervention and method of delivery and assessed by administration of a 7 item survey with a 0-3 likert-type scale and narrative comments of participants in response to a question about how	. The intervention did not produce an immediate effect on the intervention group but did show a significant difference between the control and intervention groups in terms of intermediate effects.

				they felt about the presentation. Mental illness stigma measures were taken using the Revised Attribution Questionnaire (Watson et al 2004) Mental Health Literacy measures were taken using the IOOV Knowledge Measure (wood and Wahl 2006)	
Pitre, Stewart, Adams, Bedard, and Landry, 2007	Experimental	173 children took the pretest. Completed data were available for 144 (78 males and 95 females) students due to due to absences for the pretest, posttest or intervention. Completed demographic data was available for 135 students (18 third grades with a	Evaluate the effectiveness of a puppet program to reduce stigmatizing attitudes in grades 3-6 students	Opinions about Mental Illness Scale in its original form which had been used previously with children between grades 2 and 8	Scores for children in the experimental group reduced on three of the six OMI factors, benevolence increased, and stereotyping and pessimistic predictions decreased. Anti-stigma programs using puppetry seem to show effectiveness in

		mean age of 8.11, 35 fourth graders with a mean age of 9.9, 52 fifth graders with a mean age of 10.10, and 39 sixth graders with a mean age of 11.8).			reducing stigmatizing attitudes.
Romer, and Bock, 2008	Experimental, random sample	A national sample of 1,258 youth aged 14-22 including 284 who had experienced symptoms of depression	Evaluate the efficacy of presenting a counter-stereotype to help undermine the perceived homogeneity of stigmatized groups and promote help seeking behavior for those with the illness.	Students were asked questions about their familiarity with mental illness and those who were familiar with depression were assigned to either the "treated first" group or the "not-treated first" group. A person was described to the groups who had (treated first) or had not (not-treated first) been successfully treated for depression were asked questions	. Results indicate that presenting counter-sterotypes as a mechanism for producing stereotype change of mental illness in young people. These differences were present even when the treatment effects were described after the non-treated person was described indicating that the reduction in stereotype happens when the information is presented in either order.

about their opinions about that person.
To identify youth who had experienced depressive symptoms two items from the Youth Risk Behavior Survey were asked. 22.5 reported to have experienced one of the symptoms associated with depression and were considered to be personally susceptible to mental illness stigma regarding depression.

Spagnolo, Murphy, and Librera, 2008	Experimental	426 high school students anonymously participated in the study. Students represented the northern, central, and southern regions of New Jersey.	The effects of a public education program on the attitudes of high school students toward people with mental illness.	Independent samples t-tests were used to determine differences in attitudes based on pre and post-test assessments.	After the 1 hour presentations by mental health consumers, students reported less stigmatizing attitudes on 7 of the 9 factors and the total scale score as measured by The Attribution Questionnaire-Short Form for Children.

Table 4

Studies Focusing on Teacher Preparation for Teaching Students with Emotional and Behavior Disorder and Mental Health Distress/ Illness

Article	**Type of Study**	**Participants**	**Area of Focus**	**Measures**	**Findings**
Billingsley, Fall, and Williams, 2006	Descriptive	859 teachers of students with emotional and behavioral disorders (EBD)	Comparison of the characteristics and preparedness of teachers for students with EBD with those of other special educators	Surveys were completed with teachers using computer assisted telephone interviews. Analyses included descriptive statistics, t tests, and chi square analysis. Results were weighted to produce national estimates.	Teachers of students with EBD were less likely to be fully certified, were significantly more likely to have had to take the qualifying test for certification more than once, and entered teaching through alternative certification programs. 1/3rd reported that their college preparation did not reflect the realities of their first school-based assignment.
Bullock, Dykes, and Kelly, 1974	Descriptive	Faculty and graduate level students at the University of	Developing a comprehensive listing of competencies	Supervisors of teachers of students with EBD, and teachers of	The areas of competence that were reported as most useful were

		Florida, Area of the Education of the Emotionally disturbed and socially maladjusted developed a list of 123 competency goal statements regarding the training experiences that would contribute to the knowledge of teachers of students with EBD.	relevant to teacher preparation for teachers of students with emotional and behavioral disorders and developing goal statements for helping preservice teachers attain these competencies.	students with EBD gave feedback about which if any training experiences contributed to their knowledge relating to the goal statements and how frequently each was used.	management, field experiences, programming, and background overview. Least frequently used were assessment diagnosis, evaluation, research, and administration.
Bullock and Whelan, 1971	Experimental	47 teachers in a Midwestern state	Proficiencies and competencies valued by teachers of students with emotional and behavioral disorders.	An 88 item survey was administered to teachers and the responses were analyzed and compared to teacher responses in a previous study using the same questionnaire.	Teachers in the study agreed with the previously studied group of teachers about the importance of items in the survey and proficiency measures, tended to rank themselves as proficient on items viewed as important and less proficient on items viewed as

					unimportant, and did not view the competencies as important as those s in the previous study.
Gable, Hendrickson, Young, and Shokoohi-Yekta, 1992	Descriptive	111 teachers from a group of teachers randomly selected from the roster of teachers belonging to the Council for Children with Behavior Disorders. 25 teacher educators from a group of 50 institutions chosen at random from the National Directory of Special Education Preparation Programs to obtain a pool of EBD teacher educators.25 teacher trainers	Identify and compare perceptions of teachers of students with EBD and those of special teacher educators regarding teacher training practices and task, setting and grade level demands experienced by teachers of students with EBD.	Surveys developed to investigate classroom practices of teachers in the area of emotional and behavioral disturbances and the perceptions of teacher educators of various teaching competencies and how well teacher training programs were meeting the training needs of teachers.	Teachers of students with EBD spend on average more than 56 hours per week carrying out professional responsibilities including collaborating and conferencing and planning for behavior management.

Henderson, Klein, Gonzalez, and Bradley, 2005	Descriptive	A sample of K-12 special education teachers drawn from a nationally representative sample of local administrators and service providers.	Comparison of teachers of students with Emotional Disturbances with other special education teachers in terms of preparation, experience, working conditions, future plans, instructional skill, and credentials.	Computer assisted telephone interviews conducted in 2000.	Teachers of students with emotional disturbances are less experienced, less credentialed, more likely to have been credentialed through alternative certification programs, work in more restrictive settings, and are less experienced than their special education counterparts. Teachers of students with ED report being more skilled in assessing and addressing behavior but less skilled in other instructional tasks.
Katsiyannis, Landrum, and Bullock, 1997	Descriptive	Special Education Directors from 47 states who responded to surveys regarding the nature of	Examine the nature of certification requirements (if any) for teachers of students with EBD	Survey	Twenty-eight of 47 states offer certification in EBD. Nineteen states do not have EBD certification

		certification requirements for teachers of students with Emotional and Behavioral Disorders.			although 9 of those states require EBD coursework. Skill development in behavior management, social skills, program development and management, curriculum and instruction and consultation/collaboration are emphasized. Further emphasis may be required in crisis management and psychoeducational training that focuses on affective training for students with EBD.
Maag and Katsiyannis, 1999	Descriptive	101 directors of emotional and behavioral disorders programs from 32 states	Examination of teacher preparation program requirements and competencies for training teachers to work with students with EBD	Surveys investigating EBD program teacher competencies and EBD program practices were analyzed.	Shortages of qualified teachers for students with EBD lead to teachers receiving emergency certifications. Training in EBD

					specific programs is increasing with states offering certification at the undergraduate and graduate level for those specializing in teaching students with EBD.
Rose, Howley, Fergusson, and Jament, 2009	Descriptive	Responses were received from 48 of 124 special residential schools and 43 face to face interviews were conducted with teachers and other professionals.	The mental health status of students and staff confidence and professional knowledge in relation to mental health issues.	Survey Methods (questionnaire and interviews) yielding both quantitative and qualitative data	The availability of services varies widely. Respondents feel they have a limited understanding of the needs of students with mental health issues and feel ill-prepared to identify or address the mental health needs of students.

Sawka, McCurdy, and Mannella, 2002	Experimental	64 staff members in a large urban school district	Helping educators meet the needs of students with and at risk for developing emotional and behavioral disorders.	Staff knowledge, consumer satisfaction, implementation of skills trained, and student classroom behavior.	Participation in the study was associated with increased staff knowledge and increased academic engagement of students. Teacher satisfaction with the project was high.

Table 5

Studies Focusing on Teacher Perceptions of Preparation for and teaching of students with EBD

Article	**Type of Study**	**Participants**	**Disabilities Included**	**Measures**	**Findings**
Avramidis, Bayliss, and Burden, 1999	Descriptive	135 students completing their student teaching at a university school of education.	The attitudes of secondary student teachers towards the inclusion of students with special education needs.	Surveys measuring attitudes, perceptions of skills the participants possessed, and confidence in meeting IEP requirements of students with special education need.	Students with EBD were the most likely to cause concern for and stress about inclusion in general education classes, student teachers perceptions of their own skills correlated with their attitude towards inclusion, participants expressed a desire for more experience with students with special educational needs as well as more training and more knowledge in this area.

Cook, 2002	Descriptive	Members of 16 classes required by all preservice teachers.at a Midwestern university.	Inclusive attitudes and self-reports of strengths and weaknesses of preservice teachers in a program infusing special education in a series of general seminar courses.	Surveys used to measure four factors were used with participants. These surveys were slightly modified versions of the Opinions Relative to Integration of Students with Disabilities Scale.	Participants felt that their preparation for inclusion of students with disabilities was inadequate. Perceived Ability to Teach Students with Disabilities, that ratings for teaching students with SLD, multiple disabilities, and mental retardation were all significantly higher than for those of teaching students with EBD
Heflin and Bullock, 2010	Descriptive	18 teachers from a school district in Texas. One general education teacher and one special education teacher from an elementary, middle and high school in three different school districts.	To examine attitudes of teachers about how full inclusion affects daily activities in schools.	Open ended questions were asked during a combination of face-to-face and telephone interviews.	Teachers reported insufficient training and support, non-proportional ratios, being unable to meet the educational needs of included students, problems with behavior

					management, a lack of time for making curricular modifications, and difficulty finding time to talk with team members.
Kamens, Loprete, and Slostad, 2000	Exploratory	71 practicing elementary education teachers.	Recommendations of practicing teachers for preparing preservice teachers for inclusion of special education students in general education settings.	Survey	Programs should include behavioral strategies, conflict resolution and social skills, identifying students with special needs, adaptation of curriculum, materials, and instructional strategies, as well as training in collaboration, co-teaching, and teaming.

Sutherland, Denny, and Gunter, 2005	Descriptive	109 teachers responded to surveys sent to EBD teachers in the district. 90 licensed to teach EBD and 19 were not fully licensed.	Areas of interest were teacher-reported professional development needs reported by fully licensed teachers versus those with emergency licenses.	Surveys measured of professional development needs of teachers of students with EBD.	Licensed teachers reported greater feelings of competency than those with emergency licenses.

Table 6

Theoretical Framework: Summary of Studies Using the Theory of Planned Behavior

Article	**Type of Study**	**Participants**	**Area of Focus**	**Measures**	**Findings**
Campbell, 2010	Experimental	593 individuals (parents, students, and teachers)	Intent of nondisabled students, parents, teachers and schools to include students with disabilities	Questionnaires analytical techniques included ANOVA and multinomial regression	The components of the theory of planned behavior (attitude, subjective norms, and perceived behavioral control) are positively correlated with the actual level of integration of SWDs)
Choi, 2012	Experimental	430 students in 14 sections of an organizational theory class co-taught by 28 instructors at a North American business school	individual creativity	Structural equation modeling using longitudinal panel data Questionnaires given at three points in time to students measuring leader encouragement (5 items) T1, peer support (3 items)	The three TPB components mediated the context creativity link, peer support exerted significant effects on attitude toward creativity and creative self-efficacy both of which were significant

				T1, attitude toward creativity (two items) T2, creative self-efficacy - perceived behavioral control- (3 items) T2, Creative intention (2 items) T2, and T3 to instructors creative performance	predictors of creativity intention, instructor rated creativity was significantly and positively associated with creative self-efficacy and positively but non-significantly associated with creativity intention
Spink, Wilson, and Bostick (2012)	Experimental	122 university students from a kinesiology class in a Midwestern Canadian university	Predicting Intent to exercise in structured setting vs. unstructured setting	Questionnaire	Setting and interaction of setting with Perceived behavioral control accounted for variance in intention to exercise and was a significant predictor in unstructured settings. Attitude and subjective norms

					were positively related to intention. Does not measure actual performance of the behavior
Teo, 2011	Descriptive	157 preservice teachers at the National Institute of Education in Singapore 72% were female, 28% male, mean age 22.4	To examine pre-service teachers' self-reported intentions to use technology	Structural Equation Modeling to test a model representing relationships between six variables in study (perceived usefulness, perceived ease of use, subjective norm, attitudes towards usage, facilitating conditions, and behavioral intention to use) The measure was taken using a 17 item survey using a 5 point likert scale with 1 being	Attitude toward use was strongest determinant of behavioral intention, followed by subjective norm and perceived ease of use, and the perceived usefulness and perceived ease of use have the largest effects on attitude toward use. Current research is supported that there is a strong relationship between PU,PEU and ATU and that attitude and SN

strongly disagree and 5 being strongly agree The dependent variable was behavioral intention to use	have significant effects on behavior intention

Appendix B

Survey Development

Response Questions for Panel

Please take a few minutes to tell me what you think about mental health in schools. I am just interested in your personal opinions, experiences, and general knowledge on this topic as a teacher. Be brief, this is not meant to take a long time and should be based on your first responses and thoughts. Bulleted lists are fine; a short narrative response is good if what you want to say requires an explanation.

Domain 1 Mental Health Literacy

Mental health Literacy is defined as one's knowledge about mental health
This section of the survey will examine the participants' knowledge about mental health and signs and symptoms of mental health distress/illness in youth and adolescents (subclinical symptoms of mental health disorders/ diagnosable illness described in the DSM-IV)

1) What do you know about mental health distress/ illness?

2) What do you see as gaps in knowledge that educators have in this area?

3) What comes to mind when you think about teaching and mental health of students?

Domain 2 Stigma

Stigma can be defined as the idea that individuals possessing characteristics viewed as undesirable are treated as tainted and less than whole and valuable people. (please remember that stigma is exceedingly prevalent in our society so being open about stigmatizing attitudes is not something to be shy about……unless the attitudes can be readily identified and good questions formulated I won't be able to measure changes in stigma due to the intervention. So be candid, not self-conscious about the social acceptability of what you share. Please.)

1) Please share opinions and beliefs you have about people with mental illness, particularly teaching students with mental illness.

2) What concerns or worries would you have about having students with mental illness in your class? (Think along the lines of how it might affect the rest of the class. The nature of the students, and whether you think they should be in classes with other, not mentally ill students.).

3) Share anything else that comes to mind when thinking about teaching and managing students with mental illness

Domain 3 Perception of preparation to deal with, recognize, offer appropriate assistance to students with mental health distress/ mental health disorders

1) Consider your training for teaching. How prepared do you think that you were (are) to meet the needs of students with mental illness in the classroom?
2) What would you identify as skills teachers need for dealing with students with mental illness in the classroom?
3) Share any other thoughts you have about your perceptions about how well teachers (including you) are prepared to deal effectively with students who have mental illness in the classroom setting.

Teacher Knowledge and Attitude Survey (Initial Survey)

Circle or fill in appropriate answer

Gender M / F Age_____ Race/ Ethnicity_____ Preferred Teaching Area ID / LD/ EBD

Knowledge

Response Item	Response					
	Strongly Disagree	Moderately Disagree	Mildly Disagree	Mildly Agree	Moderately Agree	Strongly Agree
Emotional and Behavioral disturbances mental health disorders are under the control of the person with the disorder or illness.	1	2	3	4	5	6
There is a biological basis for mental health disorders and emotional or behavioral disorders.	1	2	3	4	5	6
There is a biological basis for mental health disorders and emotional or behavioral disorders.	1	2	3	4	5	6
Children and adolescents with mental health disorders should have medical as well as psychological care.	1	2	3	4	5	6
Medication is appropriate even when therapy or teaching appropriate behaviors would be effective for a child or adolescent.	1	2	3	4	5	6
Irritability, anger, combativeness are signs of depression in children.	1	2	3	4	5	6
Teens who are depressed can be hyperactive.	1	2	3	4	5	6
Substance use and failure to care about personal appearance are signs of adolescent depression	1	2	3	4	5	6
Children and adolescents can have bipolar disorder.	1	2	3	4	5	6
Tremendous fatigue is a sign of adolescent bipolar.	1	2	3	4	5	6
Hallucinations, psychosis, and paranoia are symptoms of disorders including depression, bipolar disorder, and schizophrenia	1	2	3	4	5	6
Children and adolescents with emotional or behavioral disorders and mental health disorders have one diagnosis, not multiple diagnoses.	1	2	3	4	5	6

Pretest Posttest Two Weeks #_____

Personal Beliefs

Response Item	Response					
	Strongly Disagree	Moderately Disagree	Mildly Disagree	Mildly Agree	Moderately Agree	Strongly Agree
I have enough training to deal with almost any behavior problem.	1	2	3	4	5	6
When a student is having emotional or behavioral difficulty I am able to recognize it.	1	2	3	4	5	6
When I really try I can help the most difficult students.	1	2	3	4	5	6
As hard as I try, I have difficulty identifying the reason for bad student behavior.	1	2	3	4	5	6
I am good at recognizing problem behaviors of students that may not be due to willful misbehavior.	1	2	3	4	5	6
I know how to get help for students with emotional and behavioral problems.	1	2	3	4	5	6
I know how to get help for students with emotional and behavioral problems.	1	2	3	4	5	6
I can identify the reasons for student's behavior problems.	1	2	3	4	5	6
I feel capable of and comfortable with talking to parents of students I teach who have emotional, behavioral or mental health disorders.	1	2	3	4	5	6

Subjective Norms

Response Item	Response					
	Strongly Disagree	Moderately Disagree	Mildly Disagree	Mildly Agree	Moderately Agree	Strongly Agree
Emotional and behavioral problems are a sign of weakness and sensitivity.	1	2	3	4	5	6
People with mental illness and behavioral disorders are unpredictable.	1	2	3	4	5	6
It is difficult to deal with students with mental health and behavioral disorders.	1	2	3	4	5	6
You don't recover from mental health problems.	1	2	3	4	5	6
I understand why most people don't like students with emotional and behavioral problems.	1	2	3	4	5	6
I don't want to deal with students who have mental health and emotional or behavioral disorders.	1	2	3	4	5	6
If given the choice, I would agree to have a student with en emotional or behavioral disorder or mental health disorder in my class.	1	2	3	4	5	6
Mental health disorders are not medical conditions.	1	2	3	4	5	6

Feedback Form

Survey Feedback Form

Feedback on the Survey

Please answer the following questions about the survey you have just completed.
1. Approximately how long did it take you to fill out this survey? _____ minutes

2. Were there any questions that you did not understand, that were not clear?
____ yes ____ no

3. If you answered yes to question #2, which questions were they?
(For example Knowledge 1=K1, Personal Belief 3= PB3, or Subjective Norm= SN 2)

And, why were they not clear?

4. Can you think of anything that was left out about knowledge, personal beliefs, or subjective norms?

5. If yes, what should have been included?

6. Were there any questions that should have not been included?
_____yes _____no

7. If you answered yes to #6, what questions were they? (Please use same format as above to identify the questions)

Why do you feel they should not have been included?

Thank you very much for your time!

Appendix C
Survey Materials

Survey of Teacher Knowledge, Beliefs and Subjective Norms

This survey has two parts. **In the first part you will be asked to provide demographic data**. This data will be used for statistical purposes. **In the second part you will be asked to respond to statements based on your knowledge, beliefs, and subjective norms**. When you see the word "children" you are being asked to respond to statements about both young children and teenagers. When you see the word "teenager" you are being asked to respond to statements about older children from the ages of 13 through 18. The words "mental health disorders" refer to difficulties children might have with their feelings (for example: sadness, fear, anxiety, anger, worry) or behaviors (for example: acting out, being hyperactive, misbehaving, disobeying adults, not paying attention).

For the statements on the survey please select the number that best reflects your knowledge or how much you agree or disagree with each item. All of your answers will be kept confidential and separate from any identifying information so please be sure to express your genuine answers, not what you think the "right" answer should be. Thank you in advance for your participation and responses!

Demographic Data

Please circle the appropriate answer:

Question	Responses						
Sex	Male	Female					
Age	18-19	20-21	21-24	25-30	>30		
Race/Ethnicity	Latino/ Hispanic	Caucasian	African American	Asian American	Other		
Level of Education	Freshman	Sophomore	Junior	Senior	≥Bachelor's Degree		
Areas of Planned Certification	Early Childhood	Elementary	Middle Level	Secondary math/science	Secondary English/ history	Special Education	Related Arts (PE, Music, Art, etc.)
Preferred Grade level to teach	p-K-2nd	3^{rd}-5^{th}	6^{th}-8^{th}	9^{th}-12^{th}	Post-secondary		
Academic Status	Freshman	Sophomore	Junior	Senior	Graduate		
Number of Field Experiences	0	1-2	3-4	4-5	>6		
I know someone with a mental health diagnosis	Yes	No					

Circle the answer that reflects how true you think the following are about mental health disorders in children.

Response Item					
	Never or almost never	Some of the time	About half of the time	Most of the time	Always or Almost always
1 Children with mental health disorders should have medical as well as psychological care.	1	2	3	4	5
2 Irritability, anger, and combativeness can be signs of depression in children.	1	2	3	4	5
3 Failure to care about personal appearance can be a sign of an adolescent mental health disorder.	1	2	3	4	5
4 Hallucinations, psychosis, and paranoia can be symptoms of several different disorders including bipolar, depression, and schizophrenia.	1	2	3	4	5

Circle the response that best completes the following statement for you.

	No knowledge	**Little knowledge**	**Average knowledge**	**Knowledgeable**	**Very Knowledgeable**
5 I have/ am _____ about symptoms of mental health distress in children and adolescents.	1	2	3	4	5

Circle the number that best reflects how much you agree or disagree with each item.

Response Item	**Response**					
	Strongly Disagree	Moderately Disagree	Mildly Disagree	Mildly Agree	Moderately Agree	Strongly Agree
6 I have received enough training to deal with almost any behavior problem.	1	2	3	4	5	6
7 I feel comfortable talking to parents of students with mental health disorders.	1	2	3	4	5	6
8 When a student is experiencing symptoms of mental health disorders I am able to recognize it.	1	2	3	4	5	6
9 I can help students with the most challenging problems.	1	2	3	4	5	6
10 I am good at recognizing problem behaviors of students that may be due to mental health disorders.	1	2	3	4	5	6
11 I know how to get help at my school for students who might have a mental health disorder.	1	2	3	4	5	6
12 I can identify the reasons for a student's behavior problems.	1	2	3	4	5	6
13 I feel capable of talking to parents of students I teach who have mental health disorders.	1	2	3	4	5	6

Circle the number that best reflects how much you agree or disagree with each item.

Response Item	**Response**					
	Strongly Disagree	Moderately Disagree	Mildly Disagree	Mildly Agree	Moderately Agree	Strongly Agree
14 Persons with mental health disorders cannot lead normal lives.	1	2	3	4	5	6
15 I would think less positively of a child with mental health disorders.	1	2	3	4	5	6
16 When children have problems with their mental health it is because their parents didn't raise them properly.	1	2	3	4	5	6
17 I would not ask a teenager with a mental health disorder to work for me.	1	2	3	4	5	6

REFERENCES

Achenbach, T M. (1991). *Manual for the Child Behavior Checklist/4-18 and 1991 Profile*. Burlington: University of Vermont, Department of Psychiatry.

Achenbach, T. M., McConaughy, S. H., & Howell, C. T. (1987). Child/adolescent behavioral and emotional problems: implications of cross-informant correlations for situational specificity. *Psychological bulletin*, *101*(2), 213.

American Psychiatric Association. (2013). *Diagnostic and Statistical Manual of Mental Disorders* (5th Ed.). Arlington, VA: Author.

Ajzen, I. (1991). The theory of planned behavior. *Organizational and Human Decision Processes*, *50*, 179-211.

Ajzen, I. (2001). Constructing a theory of planned behavior questionnaire. Retrieved from http://www-unix.oit.umass.edu/_ajzen/tpb.html

Anderson, J. A., Kutash, K., & Duchnowski, A. J. (2001). A comparison of the academic progress of students with EBD and students with LD. *Journal of Emotional and Behavioral Disorders*, *9*(2), 106-115.

Aromaa, E., Tolvanen, A., Tuulari, J. & Wahlbeck, K. (2011). *Attitudes to and Stereotypes of Mental Health Measure*. Retrieved from PsycTESTS. doi: 10.1037/t12179-000

Armitage, C. & Conner, M. (2001). Efficacy of the theory of planned behavior: A meta-analytic review. *British Journal of Social Psychology*, *40*, 471-499.

Avramidis, E., Bayliss, P., & Burden, R. (2000). Student teachers' attitudes towards the inclusion of children with special educational needs in the ordinary school. *Teaching and Teacher Education*, *16*(3), 277-293.

Bandura, A., Adams, N. E., & Beyer, J. (1977). Cognitive processes mediating behavioral change. *Journal of Personality and Social Psychology*, *35*(3), 125.

Bandura, A. (1982). Self-efficacy mechanism in human agency. *American Psychologist*, *37*(2), 122.

Barney, L.J., Griffiths, K.M., Jorm, A.F., & Christensen, H. (2006). Stigma about depression and its impact on help-seeking intentions. *Australian and New Zealand Journal of Psychiatry*, *40*, 51-54.

Barry, C. B. & Busch, S.H. (2007). Do state parity laws reduce the financial burden on

families of children with mental health care needs? *Health Services Research, 42*(3), 1061-1084.

Bizub, A.L. & Davidson, L. (2011). Stigma-busting, compeer, and the psychology student: A pilot study on the impact of contact with a person who has a mental illness. *The Humanistic Psychologist, 39*(4), 312-323. doi:10.1080/08873267.618039

Blackorby, J., Wagner, M., Cameto, R., Davies, E., Levine, P., Newman, L., …. & Sumi, C. (2005). Engagement, academics, social adjustment, and independence: The achievements of elementary and middle school students with disabilities. *In Special Education Elementary Longitudinal Study*. Retrieved from http://www.seels.net/designdocs/engagement/All_SEELS_outcomes_10-04-05.pdf

Brister, T., Cavaleri, M., Olin, S.S., Burns, B.J., & Hoagwood, K.E. (2012). An evaluation of the NAMI basics program. *Journal of Family Studies, 21*, 439-442. doi: 10.1007/s10826-011-9496-6

Brown, S.A., Evans, Y., Espenchade, K., & O'Connor, M. (2010). An examination of two brief stigma reduction strategies: Filmed personal contact and hallucination simulations. *Community Mental Health Journal, 46*, 494-499. doi: 10.1007/s10597-010-9309-1

Brownell, M. T., Ross, D. R., Colon, E. P., & McCallum, C. L. (2005). Critical features of special education teacher preparation: A comparison with general teacher education. *The Journal of Special Education*, 38(4), 242-252.

Campbell, M. (2010). An application of the theory of planned behavior to examine the impact of classroom inclusion on elementary school students. *Journal of Evidence-Based Social Work, 7*(3), 235-250.

Carter, E.W., Lane, K.L., Crnobori, M., Bruhn, A.L., & Oakes, W.P. (2011). Self-determination interventions for students with and at risk for emotional and behavioral disorders: Mapping the knowledge base. *Behavioral Disorders, 36* (2), 100-116.

Chandra, A. & Minkovitz, C.S. (2006). Stigma starts early: Gender differences in teen willingness to use mental health services. *Journal of Adolescent Health, 38*, 754.e1-754.e8. doi 10.1016/j.jadohealth.2005.08.011.

Chandra, A. & Minkovitz, C.S. (2007). Factors that influence mental health stigma among 8th grade adolescents. *Journal of Youth and Adolescence, 36*, 763-774. doi: 10.1007/s10964-006.

Cheney, D., Walker, B., & Blum, C. (2004). *Teacher Knowledge and Skills Survey* V. 2.0

Christensen, A., Margolin, G., & Sullaway, M. (1992). Interparental agreement on child behavior problems. *Psychological Assessment*, *4*(4), 419.

Choi, J. N. (2012). Context and creativity: The theory of planned behavior as an alternative mechanism. *Social Behavior and Personality*, *40*, 681-692.

Clemson University (2013a). *2013 Undergraduate Catalog*. Retrieved from http://www.registrar.clemson.edu/publicat/catalog/2013/hehd.pdf

Clemson University (2013b). *Eugene T. Moore School of Education handbook: Clemson University*. Retrieved from http://www.clemson.edu/hehd/departments/education/documents/ed-handbook.pdf

Cook, B.G. (2002). Inclusive attitudes, strengths, and weaknesses of pre-service general educators enrolled in a curriculum infusion teacher preparation program. *Teacher Education and Special Education, 24*(3), 262-277.

Corrigan, P.W., & Calabrese, J.D. (2005). Toolkit [Database record]. Retrieved from PsycTESTS.doi: 10.1037/t00467-000

Corrigan, P.W., Rafacz, J.D., Hautamaki, J., Walton, J., Rüsch, N., Rao, D.,…Reeder, G. (2010). Changing stigmatizing perceptions and recollections about mental illness: The effects of NAMI's *In Our Own Voice*. *Community Mental Health Journal*, *46*, 517-522. doi: 10.1007/s10597-009-92873

Costello, E. J., Mustillo, S., Erkanli, A., Keeler, G., & Angold, A. (2003). Prevalence and development of psychiatric disorders in childhood and adolescence. *Archives of General Psychiatry*, 60, 837–844.

Cronbach, L.J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika*, *16*(3), 297-334.

Delport, J. (2012). *Characteristics of Successful Teachers of Students with Emotional Behavioral Disabilities: Teacher and Expert Perceptions*. (Unpublished doctoral dissertation). University of Washington, Seattle, Washington.

Duchnowski, A.J. & Kutash, K. (2011). School reform and mental health services for students with emotional and behavioral disturbances educated in urban schools. *Education and Treatment of Children, 34*, 323-346.

Eaton, D. K., Kann, L., Kinchen, S., Shanklin, S., Ross, J., Hawkins, J., ... & Wechsler, H. (2008). Youth risk behavior surveillance--United States, 2007. *Morbidity and mortality weekly report. Surveillance summaries (Washington, DC: 2002)*, *57*(4), 1-131.

Elliott, S. N., & Busse, R. T. (1992). Review of the child behavior checklist. *Mental measurements yearbook, 11*, 166-169.

Examining mental health in children and youth, focusing on issues throughout the developmental process, and S.1704, to amend the public health service act to establish a state family support grant program to end the practice of parents giving legal custody of their seriously emotionally disturbed children to state agencies for the purpose of obtaining mental health services for those children; Hearings before the Subcommittee on Substance Abuse and Mental Health Services of the Committee on Health, Education, Labor, Pensions, United States Senate, 108th Cong. 2 (2004).

Fink, A. H., & Janssen, K. N. (1993). Competencies for teaching students with emotional-behavioral disabilities. *Preventing School Failure: Alternative Education for Children and Youth*, *37*(2), 11-15.

Forness, S. R. (2011). Special education and the new mental health: A response to new direction of CCBD. *Behavioral Disorders*, *37*(1), 41-46.

Forness, S. R., Kim, J., & Walker, H. M. (2012). Prevalence of students with EBD: Impact on general education. *Beyond Behavior, 21(27), 3-10.*

Forness, S.R. & Knitzer, J. (1992). A new proposed definition and terminology to replace "serious emotional disturbance" in individuals with disabilities education act. *School Psychology Review*, *21*(1), 12-20.

Furlong, M. J., & Wood, M. (1998). Review of the child behavior checklist. *Buros Mental Measurement Yearbook.*

Gage, N. A., Adamson, R., Mitchell, B.S., Lierheimer, K., O'Connor, K. V., Bailey, N. Schultz, T., Schmidt, C., & Jones, S. (2010). Promise and possibility in special education services for students with emotional and behavioral disorders: Peacock hill revisited. *Behavioral* D*isorders*, *35*, 294-307.

Gardner, D. P. (1983). A nation at risk. *Washington, D. C.: The National Commission on Excellence in Education,* US Department of Education.

Gay, L.R., Mills, G.E., & Airasian, P. (2009). Experimental research. In Educational *Research: Competencies for Analysis and Applications* (9th ed.), 259. Upper Saddle River, NJ: Pearson Education.

Gibson, S. & Dembo, M. (1984). Teacher efficacy: A construct validation. *Journal of Educational Psychology, 76*(4), 569-582.

Greenbaum, P. E., Dedrick, R.F., Friedman, R.M., Kutash, K. Brown, E.C., Lardieri. S.P., & Pugh, A.M. (1996). National adolescent and child treatment study: Outcomes
for children with serious emotional and behavioral disturbance. *Journal of Emotional and Behavioral Disorders*, *4*(3), 130-146.

Gulliver, A., Griffiths, K., & Christensen, H. (2010). Perceived barriers and facilitators to mental health help-seeking in young people: A systematic review. *BMC Psychiatry, 10*. doi:10.1186/1471-244X-10-
113.

Gulliver A., Griffith K. M., Christensen H., & Brewer, J. (2012). A systematic review of help-seeking interventions for depression, anxiety and general psychological distress. *BMC Psych*, *12*(81). Retrieved from http://www.biomedcentral.com/1471-244X/12/81

Hasson, F., Keeney, S., & McKenna, H. (2000). Research guidelines for the Delphi survey technique. *Journal of Advanced Nursing*, *32*(4), 1008-1015.

Heflin, L.J & Bullock, L.M. (1999). Inclusion of students with emotional/behavioral disorders: A survey of teachers in general and special education. *Preventing School Failure: Alternative Education for Children and Youth*, *43*(3), 103-111.

Heneghan, A., Stein, R.E.K., Hurlburt, M.S., Zhang, J., Rolls-Reutz, J., Fisher, E., Landsverk, J., & Horwitz, S.M. (2013). Mental health problems in teens investigated by U.S. Child Welfare Agencies. *Journal of Adolescent Health, 52*, 634-640. http://dx.doi.org/10.1016/j.jadohealth.2012.10.269

Hickie IB. (2001) "Beyondblue": The national depression initiative. *Australasian Psychiatry*, 9: 147–150.

Highet, N.J., Luscombe, G.M., Davenport, T.A., Burns, J.N., & Hickie, I.B. (2004). Positive relationships between public awareness activity and recognition of the impacts of depression in Australia. *Australian and New Zealand Journal of Psychiatry*, *40*, 55-58.

Horner, R. H., Sugai, G., & Anderson, C. M. (2010). Examining the evidence base for

school-wide positive behavior support. *Focus on Exceptional Children*, *42*(8), 1-14.

Individuals With Disabilities Education Act, 20 U.S.C. §1401 *et seq.* (2004).

Jorm, A. (2012). Mental health literacy: Empowering the community to take action. *American Psychologist*, *67*(3), 231-243.

Jorm, A.F., Barney, L.J., Christensen, H., Highet, N.J., Kelly, C.M., & Kitchener, B. (2006). Research on mental health literacy: What we know and what we still need to know. *Australian and New Zealand Journal of Psychiatry*, (*40*), 3-5.

Jorm, A.F., Christensen, H., & Griffiths, K.M. (2006a). Changes in depression awareness and attitudes in Australia: The impact of *beyondblue; the national depression initiative*. *Australian and New Zealand Journal of Psychiatry*, *40*, 42-26.

Jorm, A.F., Christensen, H., & Griffiths, K.M. (2006b). The public's ability to recognize mental disorders and their beliefs about treatment: Changes in Australia over 8 years. *Australian and New Zealand Journal of Psychiatry*, *40*, 36-41.

Jorm, A. F., Korten, A. E., Jacomb, P. A., Christensen, H., Rodgers, B., & Pollitt, P. (1997). "Mental health literacy": A survey of the public's ability to recognise mental disorders and their beliefs about the effectiveness of treatment. *Medical Journal of Australia, 166,* 182–186.

Kamens, M.W., Loprete, S.J. & Slostad, F.A. (2000). Classroom teachers' perceptions about inclusion and preservice teacher education. *Teaching Education, 11*(2), 147-158.

Kataoka, S. H., Zhang, L., & Wells, K. B. (2002). Unmet need for mental health care among US children: Variation by ethnicity and insurance status. *American Journal of Psychiatry*, *159*(9), 1548-1555.

Kranke, D., Floersch, J., Townsend, L., & Munson, M. (2010). Stigma experience among adolescents taking psychiatric medication. *Children and Youth Services Review*, *32*, 496-505. doi: 10.1016/j.childyouth.2009.11.02

Kutash, K., & Duchnowski, A. J. (2004). The mental health needs of youth with emotional and behavioral disabilities placed in special education programs in urban schools. *Journal of Child and Family Studies*, *13*(2), 235-248.

Kutash, K., Duchnowski, A. J., Robbins, V., Calvanese, P. K., Oliveira, B., Black, M., &

Vaughn, D. (2000). The School and community study: Characteristics of students who have emotional and behavioral disabilities served in restructuring public schools. *Journal of Child and Family Studies*, 9(2), 175-190.

Lane, K.L., & Carter, E.W. (2006). Supporting transition age youth with and at risk for emotional and behavioral disorders at the secondary level: A need for further inquiry. *Journal of Emotional and Behavioral Disorders*, *14*(2), 66-70.

Lane, K.L., Carter, E.W., Pierson, M.R., & Glaeser, B.C. (2006) Academic, social, and behavioral characteristics of high school students with emotional disturbances or learning disabilities. *Journal of Emotional and Behavioral Disorders, 14*(2), 108-117.

Lane, K. L., Parks, R. J., Kalberg, J. R., & Carter, E.W. (2007). Systematic screening at the middle school level: Score reliability and validity of the student risk screening scale. *Journal of Emotional and Behavioral Disorders, 15*(4), 209-222.

Levin, H.M., & Belfield, C.R. (2007). Educational interventions to raise high school graduation rates. In C.R. Belfield and H.M. Levin (Eds.), *The Price We Pay: Economic and Social Consequences of Inadequate Education* (pp. 177–199). Washington, DC: Brookings Institution Press.

Lewis, T. J., Jones, S. E. L., Horner, R.H., & Sugai, G. (2010). School wide positive behavior support and students with emotional/ behavioral disorders: Implications for prevention, identification and intervention. *Exceptionality: A Special Education Journal*, *18*(2), 8293.

Link, B.G., Yang, L.H., Phelan, J.C., & Collins, P.Y. (2004). Measuring mental illness stigma. *Schizophrenia Bulletin*, *30*(3), 511-541.

Lucksted, A., Stewart, B., & Forbes, C.B. (2008). Benefits and changes for family to family graduates. *American Journal of Community Psychology*, *42*, 154-166. doi 10.1007/s10464-008-9195-7

Lucksted, A., McNulty, K., Brayboy, L., & Forbes, C.B. (2009). Initial evaluation of the peer-to-peer program. *Psychiatric Services*, 60(2), 250-253.

Maag, J.W. & Katsiyannis, A. (1999) Teacher preparation in E/BD: A national survey. *Behavioral Disorders*, 24(3), 189-196.

Maag, J.W., & Katsiyannis, A. (2010). School-based mental health services: Funding options and issues. *Journal of Disability Policy Studies, 21*, 173-180.

Martin, J. K., Pescosolido, B. A., Olafsdottir, S., & McLeod, J.D. (2007). The

construction of fear: American's preference for social distance from children and adolescents with mental health problems. *Journal of Health and Social Behavior*, *48*, 50-67.

Mathers, C. D., Fat, D. M., & Boerma, J. T. (2008). *The global burden of disease: 2004 update*. World Health Organization.\

Merikangas, K. M., He, J. P., Brody, D., Fisher, P. W., Bourdon, K. & Koretz , D. S. 2010. Prevalence and treatment of mental disorders among US children in the 2001-2004 NHANES. *Pediatrics*, 125 (75). DOI: 10.1542/peds.2008-2598

Merikangas, K. R., He, J. P., Burstein, M., Swanson, S. A., Avenevoli, S., Cui, L., ... & Swendsen, J. (2010). Lifetime prevalence of mental disorders in US adolescents: results from the National Comorbidity Survey Replication–Adolescent Supplement (NCS-A). *Journal of the American Academy of Child & Adolescent Psychiatry*, *49*(10), 980-989.

Messick, S. 1990. Validity of test interpretation and use. Encyclopedia of Educational Research (6th ed.) M. C. Alkin, (Ed.), Encyclopedia, New York: Macmillan, 1991.

Moses, T. (2010). Being treated differently: Stigma experiences with family, peers, and school staff among adolescents with mental health disorders. *Social Science & Medicine, 70*, 985-993. doi: 10.1016/jsocscimed.2009.12.022

Moskos, M., Olson, L., Halbern, S., & Gray, D. (2007). Utah youth suicide study: Barriers to mental health treatment for adolescents. *Suicide and Life-threatening Behavior*, *37*, 179-186.

Mukolo, A., Heflinger, C.A., & Wallston, K.A. (2010). The stigma of childhood mental disorders: A conceptual framework. *Journal of the American Academy of Child and Adolescent Psychiatry*, 49, 1-16.

National Dissemination Center for Children with Disabilities (June 2010). Emotional Disturbance Fact Sheet. Retrieved from http://nichcy.org/disability/specific/emotionaldisturbance

Pescosolido, B. A., Jensen, P. S., Martin, J. K., Perry, B. L., Olafsdottir, S., & Fettes, D. (2008). Public knowledge and assessment of child mental health problems: Findings from the National Stigma Study—Children. *Journal of the American Academy of Child & Adolescent Psychiatry, 47,* 339–349. doi:10.1097/CHI.0b013e318160e3a0

Pleis, J.R., Ward, B.W., & Lucas, J.W. (2010). *Vital and health statistics: Summary health statistics for U. S. adults: National health interview survey, 2009*. Series 10: No.249. Hyattsville, MD: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics.

Pinto-Foltz, M.D., Logsdon, M.C., & Myers, J.A. (2011). Feasibility, acceptability, and initial efficacy of a knowledge-contact program to reduce mental illness stigma and improve mental health literacy in adolescents. *Social Science & Medicine*, *72*, 2011-2019. doi:10.1016/j.socscimed.2011.04.006

Pitre, N. Stewart, S., Adams, S. Bedard, T., and Landry, S. (2007). The use of puppets with elementary school children in reducing stigmatizing attitudes towards mental illness. *Journal of Mental Health*, *16*(3), 415-429.

President's New Freedom Commission on Mental Health. (2003). *Achieving the Promise: Transforming Mental Health Care in America* (Pub. No. SMA-03-3831). Rockville, MD: Department of Health and Human Services.

Reid, R., Gonzales, J.E., Nordness, P.D., Trout, A. & Epstein, M.H. (2004). A meta-analysis of the academic status of students with emotional/ behavioral disturbance. *The Journal of Special Education*, 38(3), 130-143.

Ritterfeld, U., & Jin, S.A. (2006). Knowledge about schizophrenia measure [Database record]. Retrieved from PsycTESTS. doi: 10-1037/t5574-000

Ritterfeld, U. & Jin, S.-A. (2006). Schizophrenia Attitude Scale [Database record]. Retrieved from PsycTESTS. doi: 10.1037/t15571-000

Romer, D. & Bock, M. (2008). Reducing the stigma of mental illness among adolescents and young adults: The effects of treatment information. *Journal of Health Communication, 13*, 742-758. doi: 10.1080/10810730802487406

Rose, R., Howley, M., Fergusson, A., & Jament, J., (2009). Mental health and special education needs: Exploring a complex relationship. *British Journal of Special Education, 36*(1), 4-8.

Rouse, C.E. (2007). Quantifying the costs of inadequate education: Consequences of the labor market. In C.R. Belfield and H.M. Levin (Eds.), *The Price We Pay: Economic and Social Consequences of Inadequate Education* (pp. 99–124). Washington, DC: Brookings Institution Press.

Sawka, K.D., McCurdy, B.L., & Manella, M. C.(2002). Strengthening emotional support services: An empirically based model for training teachers of students with behavior disorders, 2002. *Journal of Emotional and Behavioral Disorders*, *10*(4), 223-232.

Scheerder, G. et al. (2010). Community and health professionals' attitude toward depression: A pilot study in nine EAAD countries. *International Journal of Social Psychiatry*, *57* (4), 387-401. doi: 10.1177/0020764009359742

Schomerus,G., Schwahn,C., Holzinger, A., Corrigan, P.W., Grabe, H.J., Carta, M.G., & Angermeyer, M.C. (2012) Evolution of public attitudes about mental illness: A systematic review and meta-analysis. *Acta Psychiatrica Scandinavica*, *125*, 440-452. doi: 10.1111/j.1600-0447.2012.081826.x

Schunk, D. H. (2011). *Learning theories: An Educational Perspective. 6th ed.* Pearson: Boston, MA. pp. 117-162.

Spagnolo, A. B., Murphy, A. A., & Librera, L.A. (2008). Reducing stigma by meeting and learning from people with mental illness. *Psychiatric Rehabilitation Journal*, *31*(3), 186-193. doi: 10.2975/31.32008.186.193

Spink, K.S., Wilson, K.S., & Bostick, J.M. (2012). Theory of planned behavior and intention to exercise: Effects of setting. *American Journal of Health Behavior*, *36*. 254-264.

Streiner, D. L. (2003). Starting at the beginning: an introduction to coefficient alpha and internal consistency. *Journal of personality assessment*, *80*(1), 99-103.

Tacker, K. & Dobie, S.(2008). Mastermind: Empower yourself with mental health. A program for adolescents. *Journal of School Health*, *78*(1)54-57.

Teo, T. (2012). Examining the intention to use technology among pre-service teachers: An integration of the technology acceptance model and theory of planned behavior. *Interactive Learning Environments*, *20*(1), 3-18.

Teo, T. & Fan, X. (2013). Coefficient alpha and beyond: Issues and alternatives for educational research. *Asia-Pacific Educational Research*, *22*(2), 209-213. doi 10.1007/s40299-0075-z

U.S. Department of Education, Office of Elementary and Secondary Education. (2002). No child left behind: A desktop reference. Washington, DC: Author

U.S. Department of Education, Office of Special Education and Rehabilitative Services, (2011). Office of Special Education Programs, *30th Annual Report to Congress on the Implementation of the Individuals with Disabilities Education Act, 2008,* Washington, D.C.

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.

U.S. Department of Labor, Bureau of Labor Statistics (2010). Tabulations. Retrieved from http://www.bls.gov/cps/cpsa2009.pdf.

Wagner, M. & Davis, M. (2006). How are we preparing students with emotional disturbances for the transition to young adulthood? Findings from the national longitudinal transition study—2. *Journal of Emotional and Behavioral Disorders*, *14*(2), 86-98.

Wagner, M., Kutash, K., Duchnowski, A.J., & Epstein, M. (2005). The special education elementary longitudinal study and the national longitudinal transition study: Study designs and implications for children and youth with emotional disturbance. *Journal of Emotional and Behavioral Disorders*, *13,* 25-41.

Wagner, M., Newman, L., Cameto, R., and Levine, P. (2005). Changes over time in the early post school outcomes of youth with disabilities. *A Report of Findings from the National Longitudinal Transition Study (NLTS) and the National Longitudinal Transition Study-2 (NLTS2).* Menlo Park, CA: SRI International. Retrieved from www.nlts2.org/reports/2005_06/nlts2_report_2005_06_complete.pdf.

Wright, E. R., Russell, L.A., Anderson, J.A., Kooreman, H.E., & Wright, D.E. (2006). Impact of team structure on achieving treatment goals in a system of care. *Journal of Emotional and Behavioral Disorders, 14*(4), 240-250.

Yamaguchi, S., Mino, Y., & Uddin, S. (2011). Strategies and future attempts to reduce stigmatization and increase awareness of mental health problems among young people: A narrative review of educational interventions. *Psychiatry and Clinical Neurosciences,* 65, 405-415. doi: 10.1111/j.1440-1819.2011.02239.x