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Examining Changes in College Counseling Clients’ Symptomology and Severity over an Eight Year Span

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EXAMINING CHANGES IN COLLEGE COUNSELING CLIENTS' SYMPTOMOLOGY AND SEVERITY OVER AN EIGHT YEAR SPAN

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A Dissertation Submitted to the Faculty of Old Dominion University in Partial Fulfillment of the Requirements for the Degree of

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ABSTRACT

EXAMINING CHANGES IN COLLEGE COUNSELING CLIENTS’ SYMPTOMOLOGY AND SEVERITY OVER AN EIGHT YEAR SPAN

Caroline Lee Bertolet
Old Dominion University, 2016
Chair: Dr. Alan Schwitzer

The current college counseling literature has conflicting findings regarding the extent to which the severity of mental health symptoms has increased for college students. Some researchers claim that over time student’s mental health symptoms have become more complex rather than more severe. This study examined archival data to analyze both the severity and complexity of symptoms in an eight year time span. The study also examined how disruptiveness and treatment demand have changed over the eight year period. The data were analyzed using multiple regression. The results of the study supported perspectives found in the current literature indicating little increase in severity of symptoms over time. The results did not indicate any significant change over time in complexity of problems and disruptiveness. There was a significant increase in treatment demand over time. Implications for the college counseling knowledgebase, college counseling directors and their institutions, college counseling professionals, and students are discussed. Limitations of the study and recommendations for future research are provided.
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This dissertation is dedicated to my parents, Bobby and Carol Joyner.
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CHAPTER ONE

INTRODUCTION

This chapter will provide an introduction to the research study. An overview of the issues and concerns that college students and university counseling centers encounter will be presented. The current problem will be summarized and the purpose and significance of the study will be reviewed. Research questions, research design and the theoretical framework will be briefly introduced. The chapter will conclude with assumptions and limitations of the study, followed by definitions of terms.

Background of the Problem

Many colleges and universities across the country offer counseling and mental health services for their students to help with personal problems that are interfering with their academic success (Bishop, 2010; Lockard et. al, 2012). Counseling centers aim to help students cope with their life challenges, stressors, and psychological problems and seek to improve overall student well-being (Ememe & Igbokwe, 2012). In turn, the 2014 National Survey of College Counseling Centers reported that 65% of students who sought counseling indicated the counseling helped them stay enrolled in school (Gallagher, 2014).

Students entering college often are experiencing a multitude of issues and concerns. These may include life transitions, career and developmental needs, stress, violence, gender issues, multicultural issues and serious psychological problems (Archer & Cooper, 1998). According to the 2014 National Survey of College Counseling Centers, about 11% of students have sought some form of counseling (either individual or group) in the course of an academic year (Gallagher, 2014). In the past five years, college counseling directors have reported an
increase in anxiety disorders, crises requiring immediate response, psychiatric medication issues, clinical depression, learning disabilities, and sexual assault (Gallagher, 2014).

**Statement of the Problem**

Some researchers have suggested that college student populations have experienced an increase in presentations of severe psychological problems (Gallagher, 2014; Gallagher et al., 2012). The latest survey of national college counseling directors supports this notion; this survey revealed that 94% of the directors report a greater number of students with severe psychological problems (Gallagher, 2014). However, there have also been studies that failed to uncover this type of significant increase in severity of symptoms (Hoeppner, Hoeppner, & Campbell, 2009; Berger, Franke, Hofmann, Sperth, and Holm-Hadulla, 2015).

Sharkin (1997; 2012) argues that reports of an increase in severity are based on the perceptions of the directors and clinicians at the counseling centers rather than actual increases in severe presentations. He questions much of the research and suggests there is a lack of empirical evidence to support the claim that severity has increased. Much and Swanson (2010) further the argument, negatively critiquing many articles that report findings solely based on the counselor’s perspective or the individual client’s perspective. Both Sharkin (1997; 2012) and Much & Swanson (2010) question the methodology of the research supporting the notion that the severity of mental health symptoms has increased among college students. The lack of a common operationalized term for severity is another critique of the literature (Sharkin & Coulter, 2005), since authors have defined severity in a multitude of ways and many will interchange the terms severity and complexity.

Further, some researchers have suggested that it is the increase in complexity of problems that has increased among college students, not necessarily the severity (Archer & Cooper, 1998;
Gallagher, 2012; Much & Swanson, 2010). If this is the case, for instance, it could be argued that due to the increase in individual differences among students entering college, there has been an increase in diverse and complex problems (Archer & Cooper, 1998; Much & Swanson, 2010). Gallagher (2012) also suggests that students’ problems such as family dysfunction, substance abuse, sexual experiences, impact of technology, and changing social mores have impacted the complexity of their problems.

Severity and complexity of symptoms can each have an influence on the disruptiveness of a student’s environment. The severity and complexity of students’ emotional, behavioral, relational, and mental problems can affect academic performance, living environment, and classroom behaviors (Prince, 2015). Students have reported that problems such as exhaustion, low energy levels, difficulty concentrating, and difficulties with mood all affect academic performance (Markoulakis and Kirsh, 2013). Students with mental health symptoms are less likely to be involved in clubs or organizations and report less overall satisfaction (Salzer, 2012). The institution, faculty, and staff can also be impacted by students with mental health symptoms (Schwitzer & Van Brunt, 2015).

The increase in severity and complexity of symptoms as well as an increase in disruptiveness may also impact treatment demand. Researchers suggest that the more severe the clients’ symptomology, the more sessions required to achieve clinically significant change (Wolgast et al., 2005). University counseling centers may lack the resources to accommodate the needs of these students and therefore refer to off-campus resources (Archer & Cooper, 1998; Gallagher, 2000; Owen, Devdas, & Rodolfa, 2007; Stone & Archer, 1990; Stone & McMichael, 1996). Correspondingly, disruptiveness and treatment demand were also examined in this study.

**Purpose of the Study**
The purpose of this study was to examine empirically whether levels of severity, complexity, disruptiveness, and treatment demand of college students’ mental health concerns have changed over time. The study was designed to differentiate severity from complexity and to determine if these have increased among college students over recent years. In addition, the study analyzed trends pertaining to disruptiveness in a college student’s life over an eight year time span. Finally, the study examined changes in treatment demand for college students over recent years.

**Significance of the Study**

This study contributes to the literature related to the current debate of whether mental health symptom severity or complexity has increased among college students. In addition, the study provided operational terms for severity, complexity, disruptiveness, and treatment demand with regards to college counseling. In accordance with suggested research, this study utilized objective clinical measures to determine and differentiate severity and complexity. (Sharkin, 1997, 2005). Previous research has been criticized for using only the counselors’ perspective or the client’s perspective to describe diagnoses and presenting problems (respectively, Sharkin & Coulter, 2005). This study utilized both the counselor’s diagnosis as well as the client’s identified presenting problems as suggested by Sharkin and Coulter (2005). Finally, the study is expected to contribute and support the existing literature concerning the disruptiveness and treatment demand over time.

**Research Questions**

The current study will address the following research questions:

**Analyzing the Changes in Severity and Complexity of Mental Health Symptoms**
**Research Question 1.** To what extent, if any, have clients’ presentation of concerns increased in severity over time?

**Research Question 2.** To what extent, if any, have clients’ presentations of concerns increased in complexity over time?

**Analyzing the Changes in Disruptiveness and Treatment Demand**

**Research Question 3.** To what extent, if any, has disruptiveness for college counseling clients changed over time?

**Research Question 4.** To what extent, if any, has treatment demand for college counseling clients changed over time?

**Research Design**

This study is Phase III of a larger college counseling center research project and will build upon previous research that was conducted using an established dataset. A longitudinal quantitative study was conducted using an ex post facto design to analyze the data. Archival data from a university counseling center was examined. The study consisted of 2,101 participants who sought counseling services between the academic years of 2000-2001 and 2007-2008. The data includes demographics (gender, ethnicity, age, and college class), number of sessions, presenting problems, severity classification, Global Assessment Functioning (GAF), grade point average (GPA), counselors’ diagnosis, and referral sources.

Multiple regression was used to analyze each research question. The dependent variable for each research question was time. For research question one, severity classification and GAF were the independent variables and used to assess for severity. For research question two, total number of presenting problems and total number of diagnoses were the independent variables
and used to assess for complexity. For research question three, intake GPA and referral source were the independent variables and used to assess for disruptiveness. For research question four, total number of sessions, being referred off campus, and whether student returned for a second course of counseling were the independent variables and used to assess treatment demand.

**Theoretical Framework**

Drum and Lawler’s (1988) tripartite model is used as a theoretical framework for the study. The model suggests that university counseling centers can intervene based on three different characteristics of students: current level of need, perceived sense of urgency, and motivation for change (Schwitzer, 2012). The model proposes three different approaches for intervention: Preventative Intervention, Intermediate Intervention, and Psychotherapeutic Intervention (Schwitzer, 2012; Schwitzer, Bergholz, Dore, & Salimi, 1998).

Preventative intervention is aimed at preventing the onset of problems or personal-emotional needs (Schwitzer, 2012; Schwitzer, Bergholz, Dore, & Salimi, 1998). The goals of preventative strategies are to provide understanding, enhance attitudes and promote healthier behaviors. Intermediate intervention is applied when students are experiencing existing adjustment or psychosocial problems. These concerns may cause some disruptiveness but not severe dysfunction for a student. Psychotherapeutic intervention may be implemented with students who have recurrent issues that are causing severe disruptiveness and dysfunction. More intensive, face-to-face treatment is needed for these students.

Having a framework to address students’ mental health concerns may equip university counseling centers with strategies and interventions to meet the treatment demand of students (Schwitzer & Van Brunt, 2015). College counselors who have a better understanding of how
severity, complexity, disruptiveness, and treatment demand have changed overtime will be better equipped at implementation of the tripartite model.

Assumptions and Limitations

Assumptions

The current study is based on a variety of assumptions. Because an archival dataset is being utilized, it is assumed that all data were collected and cleaned in an ethical and competent manner. It is assumed that the data collected from both the Institutional Research and the university counseling center are an accurate portrayal of the students who attended counseling. An assumption of the study is that all the participants are college students enrolled as either undergraduate or graduate students.

Limitations

In addition to these assumptions, the current study has limitations. This study employs the use of archival data that is eight years old. Due to the age of the data, the dataset might not be ideally reflect the most current trends is college counseling. The dataset also covers an eight year span, while Sharkin (1997) suggests at least 10 years to be covered when examining increases in mental health symptomology among college students. The study relied on the clinical perceptions of counselors and client self-reports as counseling; as is typical, these can be viewed as subjective and therefore be a threat to the construct validity (Sharkin, 1997). In addition, the study was conducted at a single institution and therefore generalizability to all college students may be limited.

Definition of Terms

*Academic Success*: Based on a student’s grade point average (GPA) and whether the student has completed their degree.
**College Class:** Student identifies as either freshman, sophomore, junior, senior, transfer, or graduate student.

**College Student:** An individual that is taking courses at either a 2 year or 4 year institution.

**Complexity:** Defined by the number of students’ reported presenting problems, number of counselors’ diagnoses, and number of problem domains.

**Degree Completion:** Successful completion of a bachelor’s degree within six years from starting at a 4 year institution

**Diagnosis Level:** Four different classes of severity determined by previous research.

**Disruptiveness:** Refers to how the student’s environment has been affected by the students’ mental health problems. For the purpose of this study, this is determined by the referral source plus GPA.

**Global Assessment of Functioning (GAF):** A measurement in the *Diagnostic Statistical Manual (DSM)- IV* to assess and evaluate how clients are functioning in their everyday lives (Endicott, Spitzer, Fleiss, & Cohen, 1976).

**Grade Point Average (GPA):** Measurement of students’ success in coursework on a scale of 0.0-4.0.

**Number of sessions:** The number of times the student attended an individual counseling session at the University Counseling Center.

**Post-treatment (GPA):** The change in students’ cumulative GPA for the semester prior to participating in counseling and students’ cumulative GPA for the semester in which they utilized counseling services.

**Presenting Problem:** The perceived issue(s) that initially prompts the client to seek mental health services.
Returns Over Time: The amount of times a student has returned to the counseling center for services for three or more months after already completing initial treatment.

Severity: Diagnosis level and GAF at intake.

Term of Treatment Initiation: The semester and year the student initiated treatment at the University Counseling Center.

Traditional Undergraduate Student: College student between the ages of 18-23 enrolled full time (at least 12 credit hours) at a 2-year or 4-year institution and has not completed a bachelor’s degree.

University Counseling Center: An office at a college or university that provides mental health services to the students attending the institution. May provide other services such as coaching, career counseling, crisis intervention, and consultation services.

Summary

This chapter provided an introduction to the current study. It provided an overview discussing the conflicting research in regards to severity and symptomology trends in mental health with college students. The subsequent chapters will provide a more thorough review of the literature, explain the research questions and hypotheses, and describe the study’s intended method design.
CHAPTER TWO
REVIEW OF THE LITERATURE

This chapter will review college counseling and the current mental health trends for college students. A brief history of college counseling will be discussed, followed by the current trends of college counseling. The terms severity, complexity, disruptiveness, and treatment demand will be presented and operationalized. The chapter will conclude with the proposed study.

Introduction to College Counseling

Students attending colleges and universities enter into the institutions with diverse backgrounds, stressors, challenges, and resources. These challenges may include life transitions, multicultural issues, gender issues, academic problems, stress, career and developmental concerns, and psychological disorders. (Kitzrow, 2009). Student affairs provide support for students as they transition and navigate their way through school, having an impact both inside and outside of the classroom (Pascarella & Terenzini, 1991, 2005). Services offered by student affairs include advising, counseling, management or any other administrative functions outside of the classroom (Love, 2003). Counseling centers at universities and colleges can provide services to help students with personal issues, career planning, academic success, and crisis intervention (Spooner, 2000).

Benefits of College Counseling

As part of an institution of higher education, it can be said that the primary purpose of a counseling center is to help students with personal problems that are interfering with their academic success (Bishop, 2010; Lockard et. al, 2012). Researchers have shown that poor psychological health, sleep disturbances, and excessive substance abuse can negatively affect

Counseling can help students cope with their life challenges and stressors as well as help improve their overall well-being and improve academic performance (Ememe & Igbokwe, 2012). With the increase in the complexity of problems, violence on campuses and suicides (Archer & Cooper, 1998), college counselors are “assisting students with specific needs that interfere with successful functioning and providing students with opportunities for growth and development” (Dean, 2000, p. 45). Krumrei, Newton, and Kim (2010) noted the importance of addressing mental health concerns in regards to students’ quality of life.

Improved adjustment is a common need that college students struggle with while attending school. Researchers have shown counseling can be an effective tool when helping students with adjustment to college (Archer & Cooper, 1998). Sharf and Bishop (1975) found that students who sought counseling for personal problems differed in their social and emotional adjustment compared to the general student population. Ememe and Igbokwe (2012) also conducted a study on the effects of counseling on 550 adult learners from the University of Lagos. According to their study, 74.6% of their studied population believed that counseling is useful for adjustment to life on campus while 80% thought counseling helped them cope with the stressors of their studies.

Despite the benefits of counseling, less than half of students with documented mental health concerns utilize mental health services (Eisenberg, Hunt, & Speer, 2013). Marsh and Wilcoxon (2015) surveyed 105 volunteers from a university counseling centers and examined some of the barriers that keep distressed college students from seeking mental health services. The study indicated that an increased concern for costs increased the chances of student not
getting help, while a more positive attitude about getting help increased the chances of students seeking help. Gallagher (2012) noted that in 2010, 87% of students who committed suicide had not sought help.

**History of College Counseling**

Over the years, the needs and demands of college students have changed. With these changes, college counseling has evolved to meet these needs and provide support to students. Mental health service began as two separate entities (mental health and vocational support) that eventually combined to become what is now known as college counseling (Kraft, 2011).

Before 1910, counseling was typically provided to students by faculty and clergy. Health programs would encourage students to engage in physical activity to reduce emotional problems (Kraft, 2011). The first mental hygiene clinics were created at Princeton University in 1910 and University of Wisconsin in 1914 in response to the observation of students leaving school without completing their coursework due to emotional and personal problems (Kraft, 2011; Meadows, 2000; Farnsworth, 1957). Other schools began implementing mental health services with the first psychiatrist appointment at Yale in 1925 (Archer & Cooper, 1998).

In 1930, the development of college counseling was heavily influenced by the effects of the Great Depression. Career counseling and more vocational services were being offered to unemployed youth (Meadows, 2000). The first National Conference on Health in Colleges was held in 1931, and provided the first set of standards for mental hygiene (Kraft, 2011). By 1941, college and university counseling was evolving to include emotional, psychological and vocational concerns. In addition, national professional organizations had been formed and research had been conducted related to college counseling (Meadows, 2000).
After World War II, college and university counseling continued to expand due to the increased vocational and educational needs of the returning soldiers. The Veteran’s Association contracted with many colleges and universities to offer services to the soldiers. (Meadows, 2000; Archer & Cooper, 1998). By 1954, the role of counseling services was evolving separate from student personnel and a more multidisciplinary team was involved in mental health services (Kraft, 2011; Archer & Cooper, 1998). College and university mental health services were hiring psychiatrists, psychologists, and social workers to provide psychotherapy, medications and education to the students, faculty, or staff of the college or university (Kraft, 2011).

From 1960-1980, the “baby boomers” were starting to attend colleges and universities which lead to an increase in attendance of 2-year colleges as well as 4 year institutions (Kraft, 2011). At this point, college counseling grew rapidly due to the increase in demand (Kraft, 2011; Meadows, 2000). Although vocational services were still the primary focus of many counseling centers, personal counseling became a more important component of the centers (Archer & Cooper, 1998). Due to budgeting, many campuses were combining mental health and counseling services. During this era, centers started providing services to treat drug and alcohol abuse (Kraft, 2011), further shifting focus from primarily vocational to include personal counseling. The 1970s also brought about a shift in interventions with college students. Instead of focusing primarily on group or individual methods; counseling centers started using a more collaborative approach with faculty and administration. The counseling centers took into consideration environmental, institutional, and situational conditions for the students (Meadows, 2000).

From the 1980s to the present many changes have occurred in college counseling. Programs were created for issues such as AIDS, sexually transmitted infections (STI), substance
abuse, eating disorders, and sexual violence (Archer & Cooper, 1998). The release of the DSM-IV also contributed to changes in college counseling. The DSM now included diagnostic criteria for adjustment disorders, eating disorders, and learning problems (Kraft, 2011). The student population became more diverse and students were presenting with more emotional problems (Kitzrow, 2009; Meadows, 2000). The increase in murders, rapes, assaults and other violent acts required campuses to provide “trauma management” (Archer & Cooper, 1998, p. 8). Preventive measures such as education and consultation on contemporary issues are common among counseling centers.

**Current Trends in College Counseling**

Throughout the history of college counseling, career or vocational counseling was more prominent than personal concerns at many college counseling centers. However, as college counseling has evolved, vocational counseling has become less of a focus at counseling centers (Gallagher, 2012). This shift in focus is not due to the lack of need for career counseling even though vocational concerns are still a primary concern for students (Gallagher & Scheuring, 1979). The shift can be attributed to Career Placement Offices and Career Centers providing vocational counseling instead of the counseling center (Herr, Rayman, & Garis, 1993). With this shift in focus, college counseling centers started seeing students more for emotional, psychological, and personal problems (Archer & Cooper, 1998; Gallagher, 2012).

About 11% of the student population at colleges and universities will seek counseling services (Gallagher, 2014), with the majority of students obtaining counseling services identifying as female (Kleinpeter, Potts, & Bachmann, 2013). The continuing increase in diversity among students, faculty, and personnel require college counselors to have multicultural competence to help students “experience the growth necessary for becoming healthy and
productive citizens, and to pass on a culture that is able to deal with developing ethical and moral challenges” (Archer & Cooper, 1998, p. 9). Students now are likely to have concerns related to gender, racism, sexual orientation, sexual violence, and oppression.

Today’s traditional college student places a higher emphasis on achievement, conformity and acceptance from peers (Brunner, Wallace, Reyman, Sellers, & McCabe, 2014). Traditional college students disengage more due to more students working while attending school and the increase in technology (Galatas Von Steen, 2000). These difference in values have led to a more stressed generation. (Brunner, Wallace, Reymann, Sellers, & McCabe, 2014). Traditional students are often experiencing real concerns that “spiral out of control in chaotic, scary, and unpredictable ways” (Rosenbaum and Liebert, 2015, p. 180).

Non-traditional students are likely to have different stressors compared to traditional students. According to Benshoff and Bundy (2000), a non-traditional student is considered a student over the age of twenty-five. Due to being older, a non-traditional student may have other responsibilities such as a family and financial obligations.

College students have also reported having depression, anxiety, personality disorders, substance abuse, eating disorders and suicidal ideation (Kitzrow, 2009; Prince, 2015). According to the American College Health Association (2014), 33% of undergraduate students have reported having debilitating depression, 54% overwhelming anxiety, 38% overwhelming anger, 9% suicidal ideation, and 7% engaging in non-suicidal self-injurious behavior. This leads many clinicians and directors of college counseling centers to believe that the severity of mental health concerns have increased among college students (Gallagher, 2012; Kitzrow, 2009).
Krumrei, Newton, and Kim (2010) conducted a study involving nine postsecondary institutions’ counseling centers. The researchers analyzed data regarding the students’ demographics, presenting problem, academic and social functioning, and disposition toward counseling. The results indicated that the majority of the students reported their concerns interfered with their academic and social lives. Sixty-three percent reported moderate to severe social interference and 57% reported moderate to severe academic interference. Mood difficulties were found to be the most common concern, while those presenting with vocational concerns or learning problems were relatively low. Twenty-one percent of the students presented with clinically significant indicators of self-harm.

College students now present with eating disorders, anxiety disorders, personality disorders, mood disorders, substance abuse, violence as well as developmental and relational problem which lead researchers to argue that the severity and complexity of college students’ symptoms have increased over time (Humphrey, Kitchens, & Patrick, 2000). This perception will impact the disruptiveness in a college students’ life as well as the treatment demand needed by the counseling center (Humphrey, Kitchens, & Patrick, 2000).

**Operationalizing Changes in Severity, Complexity, Disruptiveness, and Demand of Treatment**

This section provides a review of the literature regarding the independent variables to be analyzed in the study. Severity, complexity, disruptiveness, and treatment demand will be discussed.

**Severity**
Current research operationalizes severity in a variety of ways. For the purpose of this study, severity was measured according to St. John’s (2014) classification criteria, which comprise of diagnostic levels and the Global Assessment of Functioning (GAF, Endicott, Spitzer, Fleiss, & Cohen, 1976). Diagnostic levels were determined by an expert panel based off of the *Diagnostic Statistical Manual of Mental Disorders* (4th ed., text rev.; DSM-IV-TR; American Psychiatric Association, 2000).

The possibility of an increase in psychopathology and symptom severity has become a compelling argument in the profession (Hoeppner, Hoeppner, & Campbell, 2009). Much of the literature supports the perceived notion that psychopathology and severity has increased in college counseling. Gallagher (2012) reviewed the common trends in college counseling over the past 30 years according to the National Survey of Counseling Center Directors. The trends include demographics of counseling directors, financial issues, career counseling, and the increase in student pathology. Gallagher reported that 81% of the directors perceived an increase in student pathology. Student hospitalization almost doubled between 2001 and 2011. Counseling staff responding to immediate crisis situations had increased, more students were on psychiatric medications, and suicide continues to be a concern among colleges and universities

Although survey data anecdotally supports the notion of increased severity, there is little empirical evidence supporting the argument (Sharkin, 1997, 2012). Attempting to provide empirical evidence, Benton, Robertson, Tseng, Newton, & Benton (2003) examined archival data over a 13 year span. The study reviewed reports the clinicians had filled out at the end of services for over 13,000 student-clients. The results indicated that there were increases in 14 of the 19 client problem areas. These problem areas include relationship, stress/anxiety, situational, depression, developmental, medication, suicidal ideation, and personality disorders. The study
provides evidence that there has been an increase in the reported problems of college students but not necessarily the severity of the problems.

Conversely, Hoeppner, Hoeppner, and Campbell (2009) examined 12 year archival intake records from a counseling center. The researchers did not find any increasing trends in clients reporting distress (complexity), pathology or symptom severity. In addition, there was a small negative trend in student-reported suicidal ideation over the years.

Berger, Franke, Hofmann, Sperth, and Holm-Hadulla (2015) found that self-reported mental health problems have significantly decreased over time. The researchers examined the prevalence of psychological distress among medical and psychology students at a university in Germany. The study was a replication of one performed at the same university in 1994. This allowed the researchers to compare the differences between 1994 and 2012. The results indicated that similar to the 1994 study, students reported symptoms of depression, difficulty concentrating, low self-esteem, and test anxiety. However, the prevalence of mental health problems were significantly lower in the 2012 sample compared to the 1994 sample. Possibilities for the difference in prevalence could be contributed to improvement of health care utilization in Germany, economic conditions, or the cultural stigma of communicating mental health problems.

**Complexity**

Complexity refers to a high rate of co-occurring issues (Coniglio, McLean, and Meuser, 2005). To determine complexity of a clients’ mental health symptoms, the number of diagnoses and the number of presenting problems were analyzed.

Cairns, Massfeller, and Deeth (2010) conducted a study differentiating the constructs of severity and complexity. The researchers analyzed the changes in severity and complexity of
presenting problems of counseling students in a Canadian postsecondary institution. Data was collected over a three year span and consisted of the Presenting Issues Form (PIF) that was completed at intake based on the counselors’ perception of students’ presenting problems. Five point scales were created to measure severity and complexity. The severity scale was based off of the GAF and *DSM IV-TR* and the complexity scale consisted of ratings ranging from 1 (straightforward concerns) to 5 (multiple complex concerns). The results indicated there was no significant difference of severity of presenting problems. The study did indicate that complexity varied by year and was at its greatest during the winter semester.

Gallagher (2012) suggests the increase in severity of symptoms could be due to the increase in complexities of college students’ problems such as family dysfunction, substance abuse, sexual experiences, impact of technology, and other changing social mores. Iarovici (2014), gives an example of how a student’s problems may be more complex. She states:

Nineteen-year-old Nicole, a Caucasian sophomore from North Carolina, is referred by her professor for panic during an exam and general poor academic performance. She tearfully admits that she has had increasing trouble concentrating and wonders if she might have ADHD. She also reports low energy, dizzy spells, and loss of interest over the past two months. Routine screening questions on an intake questionnaire (the CCAPS) uncover a preoccupation with body weight, feelings of dissatisfaction with body shape, and a wish for thinness (p. 98).

This example demonstrates how a college student might be suffering from numerous diagnoses such as anorexia, Attention Deficit Disorder (ADHD), and panic attacks.
Disruptiveness

The severity and complexity of students’ emotional, behavioral, relational, and mental problems can lead to disruptiveness of their academic performance, living environment, and classrooms (Prince, 2015). Disruptiveness refers to the impact mental health symptoms have on the different facets of a students’ life and environment (Schwitzer & Van Brunt, 2015). Referral source and intake GPA were used to determine disruptiveness.

Markoulakis and Kirsh (2013) reviewed and synthesized ten articles regarding some of the difficulties that students with mental illnesses may encounter. The authors concluded that students with mental illnesses encounter internal and external difficulties. The internal difficulties were prominent in the physical, psychological, and social domain. Physical problems came from mental illness as well as from medications. These problems included exhaustion, low energy levels, difficulty concentrating, and difficulties with students’ mood. In turn, the students had decreased academic performance, difficulties attending class and fulfilling academic demands. Increased psychological difficulties were increased with students with mental illnesses. These included poor concentration, motivation, and focus which affected academic performance. Lowered self-esteem and emotional resilience contributed to impaired social abilities. In addition, students had more difficulty coping with common stressors associated with going to college. In the social domain, students felt more vulnerable and distrustful leading them to avoid social situations. Social situations could include avoiding class, participating in group activities, or avoiding campus social activities. The stigma of having a mental illness caused students to avoid socializing. The external difficulties were associated with more of the structural domain contributing to barriers to academic success. Structural difficulties include difficulties imposed by the university environment such as: a perceived culture that the
university is intolerant of differences (including mental illness), the structure of the learning environment, and the lack of service coordination between academic counseling, university health services, and academic skills support.

Salzer (2012) compared the experiences of current and former college students with mental illnesses to their counterparts without mental illnesses. The survey administered to the students measured students’ experiences with faculty, campus facilities, and clubs and organizations. Salzer hypothesized that the more students engaged in resources and opportunities, the more the students would benefit. Results indicated that graduates with mental illnesses had higher engagement with faculty, use of campus facilities, involvement with clubs or organizations, relationships with administration, and overall satisfaction compared to the students that did not graduate. Also, current students with mental illnesses were more involved when compared to former students. Possible reasons could be that campus experiences are improving for students with mental illnesses or those students have not reached a level of dissatisfaction yet to impair their experiences.

Students may struggle with balancing academics, personal life, and adjustment (Schwitzer & Van Brunt, 2015). Students who are experiencing relational problems, psychological problems, violence, financial problems and other concerns have even more difficulty balancing the stressors of school. These challenges that students face not only impact their lives but can impact the institution, the faculty and staff assisting the students. Faculty, staff and personnel may experience more stress, anxiety, and burnout when assisting students with mental health concerns.

**Treatment Demand**
Demand of treatment was determined by students’ returns over time to the counseling center, total number of sessions, and off-campus referrals. Schwitzer, Grogan, Kaddoura, and Ochoa (1993) defined returns over time while studying the effects of brief mandatory counseling on help-seeking at-risk college students. The researchers identified two constructs: Total number of sessions and incidents of newly initiated treatment. Total number of sessions refers to the overall extent of counseling while newly initiated treatment refers to students’ return to the center after completing previous counseling sessions.

Of the students that do seek counseling services, many face the barrier of receiving enough treatment sessions. Many college counseling centers place a limit on how many sessions a student may receive due to financial reasons or to help meet the demanding need for such services (Stone & McMichael, 1996). The intent is not to overwhelm the center with unlimited sessions for students (Webb & Widseth, 1988). This calls into question how many sessions are needed to successfully treat a college student’s concerns.

Wolgast, Rader, Roche, Thompson, Zuben, and Goldberg (2005) suggested that the more severe the client’s symptomology, the more sessions required to achieve clinically significant change. Their study concluded, as supported by the literature, that half of the students were able to see significant change in as little as six sessions. The other half of students, however, required 14 sessions to see significant change for students with less severe symptoms and students with more severity required 20 sessions for significant change. Lunardi, Webb, and Widseth (2006) also examined implications for the differentiated number of counseling sessions a student receives at a counseling center. The authors reviewed records of 404 students at their college and found that 75% of their student clients attended less than 20 sessions. The 25% that attended more than 20 sessions had a more severe psychopathology. In addition, 57.6-67.2% of clients
seeking treatment have shown improvement on average of 12.7 sessions. However, one study found a statistical decrease in symptomology for college students in as little as six sessions (Nafziger, Couillard, & Smith, 1999).

Minami et al. (2009) examined the effectiveness of psychological treatment at a university counseling center. The authors reviewed archival data over an eight year span and analyzed the outcome of services in relation to the number of sessions. Their results indicated that 80% of the clients who received two or more sessions were doing better after receiving treatment. In addition, issues related to loss of productivity and stress had a positive outcome when a brief treatment model was used; while issues related to relational concerns, interpersonal conflict, and substance abuse did not benefit as much with a smaller number of sessions.

Limited number of sessions, perceived increase in severity of college students’ mental health symptoms, and financial constraints has affected the ability of the counseling centers to provide adequate services for the students (Archer & Cooper, 1998; Gallagher, 2000; Stone & Archer, 1990; Stone & McMichael, 1996). Therefore many counseling center will refer students to off-campus mental health providers (Owen, Devdas, & Rodolfa, 2007). Having off-campus referrals can raise the issues of students’ difficulties following through with referrals, being able to pay for the services, and accessibility to services.

Service demand, Continuum of Disruption, & Provision of college counseling services: Drum & Lawler’s (1988) Tripartite Model

Mental health, adjustment, and developmental issues can prevent a student from thriving in a college environment (Schwitzer & Van Brunt, 2015). Having a framework to address students’ mental health issues may equip university counseling centers with strategies and
interventions to meet the treatment demand of students. Drum and Lawler (1988) developed a tripartite model that suggests university counseling centers can intervene based on three different characteristics of students: current level of need, perceived sense of urgency, and motivation for change (Schwitzer, 2012). The model proposes three different approaches for intervention: Preventative Intervention, Intermediate Intervention, and Psychotherapeutic Intervention (Schwitzer, 2012; Schwitzer, Bergholz, Dore, & Salimi, 1998).

**Preventative Intervention**

According to Schwitzer (2012), preventative interventions would be implemented for students with no urgent need for assistance and having low motivation for change. Preventative intervention is aimed at preventing the onset of problems or personal-emotional needs (Schwitzer, 2012; Schwitzer, Bergholz, Dore, & Salimi, 1998). The goal of preventative strategies are to provide understanding, enhance attitudes and promote healthier behaviors. Preventative strategies may include psycho-educational groups, media influenced programs, web-based resources, providing posters or brochures, and an emphasis on self-assessment.

**Intermediate Intervention**

Intermediate intervention would be applied to students experiencing some expected adjustment or psychosocial problems (Schwitzer, 2012; Schwitzer, Bergholz, Dore, & Salimi, 1998). These concerns may cause some disruptiveness but not severe dysfunction for a student. Intermediate intervention promotes planned self-directed inquiry and problem-solving strategies. Workshops, brief counseling, support groups, and skill focused counseling are some strategies utilized with intermediate intervention.

**Psychotherapeutic Intervention**
Psychotherapeutic intervention may be implemented with students with a high sense of urgency (Schwitzer, 2012; Schwitzer, Bergholz, Dore, & Salimi, 1998). Students in need of psychotherapeutic intervention will typically have recurrent issues causing severe disruptiveness and dysfunction. More intensive, face-to-face treatment is needed for these students. Multi-disciplinary treatment teams consisting of counseling staff, psychiatrists, student health professionals, and nurses are recommended. Hospitalization, off-campus referrals, and medications may need to be utilized to best serve the students’ needs.

**The Current Study**

As the extended literature suggests, recent research have provided conflicting results covering increase in severity and complexity over time. Some researchers have provided evidence that severity has increased (Benton et al, 2003), while others question if the increased severity is just the perception of the clinicians (Sharkin, 1997) and have suggested that instead, the complexities of the symptoms have increased (Gallagher, 2012). Another argument questions the validity of some of the studies due to methodological concerns. Sharkin (1997) argues that it is difficult to define an increase in psychological concerns because some of the “problem” behaviors college students may present with might be the standard for their environment or their developmental struggles.

When trying to differentiate between severity and complexity, some of the current research will interchange the two terms; proving it difficult to find a common definition for each term (Sharkin & Coulter, 2005). Some researchers define severity in terms of frequency of occurrence of symptoms while others will define it based on the level of diagnosis (Krumrei, Newton, & Kim, 2012). In addition, severity has been defined by the disruptiveness of a
student’s ability and function (Sharkin, 1997, 2004). For the purpose of this study, severity, complexity, disruptiveness, and treatment demand were defined and utilized as separate terms.

Severity was defined using intake GAF and in accordance with a previous study using the same data. St. John (2014), created four separate classes to assess severity. An expert panel made recommendations based off the *DSM-IV-TR* and the National Survey of Counseling Center Directors (Gallagher, 2013) notion that certain diagnostic classes were said to be more critical than other groups within higher education. The classes are as follows:

1) Crisis (maximum severity) included “red flag” concerns (exempting substance-related issues).

2) Psychotherapeutic (high severity) incorporated counseling center director-driven pullouts for mood disorders, childhood issues, substance-related disorders, eating disorders, and personality disorders.

3) Intermediate (medium severity) encompassed the remaining childhood, mood, anxiety, substance, and eating disorders. It also included adjustment disorders, personality disorders, and all other classes of shared phenomenology/shared features.

4) Situational/Emerging (mild severity) comprised conditions that may be a focus of 43 clinical attention and any other additional conditions (pp 43).

Complexity was defined based on the total number of presenting concerns and counselors’ diagnosis according to Coniglio, McLean’s, and Meuser’s (2005) reference to complexity as a higher rate of co-occurring issues. The literature has often alluded to students presenting with a variety of problems, however, authors have continued to use both severity and
complexity to describe these problems. This study differentiates the two terms and determine if both severity and complexity have increased between the academic years 2000-2007.

In addition, the literature has also discussed how mental health concerns can be disruptive in different facets of a student’s life and affect treatment demand (Wolgast, Rader, Roche, Thompson, Zuben, and Goldberg, 2005; Prince, 2015). This study analyzed how disruptiveness and treatment demand have changed over the course of eight years. Disruptiveness was determined by the referral source and intake GPA. Finally, treatment demand was assessed by number of sessions, returns over time, and off-campus referrals. Based on the literature, this study conducted analyses to answer the following research questions:

1) To what extent have clients’ presentation of concerns increased in severity over time?

2) To what extent have clients’ presentations of concerns increased in complexity over time?

3) To what extent has disruptiveness for college counseling clients changed over time?

4) To what extent has treatment demand for college counseling clients changed over time?
CHAPTER THREE

METHODOLOGY

This chapter will review the methodology utilized for the current study. Participants, the setting, research design, data collection, and research analysis will be discussed in further detail. The chapter will conclude with a discussion of the limitations of the study.

Research Questions and Hypotheses

The purpose of this study was to explore the changes in severity and complexity over time as well as examine how disruptiveness and treatment demand have changed over time. The following research questions and hypotheses were analyzed:

Analyzing the Changes in Severity and Complexity of Mental Health Symptoms

Research Question 1: To what extent have clients’ presentation of concerns changed in severity over time?

Hypothesis 1: It was hypothesized that the incoming GAF will be lower as the time progresses while the students’ diagnosis level will be higher as time progresses. Lower GAF scores and greater diagnostic levels indicate more severity.

Research Question 2: To what degree have clients’ presentations of concerns changed in complexity over time?

Hypothesis 2: It was hypothesized that as time progresses, the number of diagnoses, presenting problems, and problem domains all will increase.

Analyzing the Changes in Disruptiveness and Treatment Demand

Research Question 3: To what degree has disruptiveness for college counseling clients changed over time?
Hypothesis 3: It was hypothesized that the referral source level will increase and the Intake GPA will decrease as time increases.

Research Question 4: To what degree has treatment demand for college counseling clients changed over time?

Hypothesis 4: It was hypothesized clients will have attended more sessions, be more likely to have received counseling at multiple different times during their college career, and have a greater likelihood of referral for services off-campus as time progresses.

Research Design and Methodology

A non-experimental longitudinal ex post facto design was utilized to implement the study. The study used archival data collected from a counseling center at a large Mid-Atlantic university over an eight year span (2000-2007). The ex post facto design is a causal-comparative approach examining the relationship between established groups. An ex post facto design is used to establish a functional relationship between the groups by comparing circumstances of the already given data (Lord, 1973). The researchers’ inability to manipulate the variables and randomize the subjects of the established groups in the current study provides support for utilization of an ex post facto design.

Archival data was collected and analyzed from the university counseling center. The data included students that started counseling at the center between the academic years 2000-2001 and 2007-2008. The participants were classified by the year they started counseling. Demographics such as gender, ethnicity, college class, and whether the student was traditional or non-traditional were included in the data. In addition to demographics, this study analyzed the diagnosis level, the GAF, number of sessions, presenting problems, counselors’ diagnoses,
returns over time and referral source. Academic data [i.e. graduation rate and grade point average (GPA)], acquired from the Office of Institutional Research and Assessment, were also included in the dataset. A summary of the research design can be found in Table 4.

The Setting

Archival data was analyzed from a counseling center at a large Mid-Atlantic University. The counseling center provides comprehensive mental health services to enrolled students. Services include: academic coaching, career assessment, crisis intervention, consultation and counseling. Students are afforded 10 free individual sessions per academic year. When appropriate, students may also be referred to group counseling, where they have access to unlimited group sessions.

Participants

Participants were students who signed an informed consent document upon their initial visit to the counseling center. By signing the informed consent, the students agreed that their records could be used for possible research and evaluation. The study consisted of 2,101 participants that sought counseling services between the academic years of 2000-2001 and 2007-2008. Total number of participants varied for each variable depending upon whether there was missing data for that variable. One variable worth noting is the intake Grade Point Average (GPA). The dataset was missing 761 entries for intake GPA. The resulting total number of participants for intake GPA was 1,340.

Participants’ Statistics

Of the 2,101 participants who chose to identify as a gender, 1,412 (67.2%) identified as female and 689 (32.8%) identified as male. It appears that participants were only given the option of identifying as male or female. Regarding age, 1,701 (81%) of the participants were traditional
students (under the age of 25), while 400 (19%) were considered non-traditional students (25 years or older). Table 1 represents the participants identified gender and their age in regards to being a traditional or non-traditional student.

Table 1

*Participants’ Demographics: Gender and Age (n=2101)*

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender (n = 2101)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>1412</td>
<td>67.2</td>
</tr>
<tr>
<td>Male</td>
<td>689</td>
<td>32.8</td>
</tr>
<tr>
<td>Age (n = 2101)</td>
<td></td>
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</tr>
<tr>
<td>Traditional</td>
<td>1701</td>
<td>81</td>
</tr>
<tr>
<td>Non-Traditional</td>
<td>400</td>
<td>19</td>
</tr>
</tbody>
</table>

Of the 2096 participants who reported their race/ethnicity, 537 (25.6 %) identified as African American, 106 (5%) identified as Asian American, 1260 (60 %) identified as Caucasian, 42 (2%) identified as International Student, 84 (4%) identified as Latina/Latino, 43 (2%) identified as Multiracial, 3 (.1%) identified as Native American, and 21 (1%) identified as other. Table 2 represents the participants identified race/ethnicity.

Table 2

*Participants’ Demographics: Race/Ethnicity (n=2096)*

<table>
<thead>
<tr>
<th>Characteristics</th>
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<th>%</th>
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<tbody>
<tr>
<td>Race/Ethnicity (n = 2096)</td>
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</tr>
<tr>
<td>African American</td>
<td>537</td>
<td>25.6</td>
</tr>
<tr>
<td>Asian American</td>
<td>106</td>
<td>5.0</td>
</tr>
<tr>
<td>Caucasian</td>
<td>1260</td>
<td>60.0</td>
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</tbody>
</table>
Of the 2066 participants who identified their college class at the start of counseling, 388 (18.5%) identified as freshman, 406 (19.3%) identified as sophomores, 502 (23.9%) identified as juniors, 506 (24.1%) identified as seniors, 255 (12.1%) identified as graduate students, 3 (.1%) identified as an alumnus, 4 (.2%) identified as non-degree seeking students, and 2 (.1%) identified as transfer students. Table 3 represents the college class participants identified as at the start of counseling.

Table 3

<table>
<thead>
<tr>
<th>Participants’ Demographics: College Class (n=2066)</th>
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</thead>
<tbody>
<tr>
<td>Characteristics</td>
</tr>
<tr>
<td>College Class (n = 2066)</td>
</tr>
<tr>
<td>Freshman</td>
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<tr>
<td>Sophomore</td>
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<tr>
<td>Junior</td>
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<tr>
<td>Senior</td>
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<tr>
<td>Graduate</td>
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<tr>
<td>Alumnus</td>
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<tr>
<td>Non-degree</td>
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<tr>
<td>Transfer</td>
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</table>
Data Collection

The archival data collected for this study were retrieved between August 2007 and December 2008 by a graduate student employed by the counseling center. The dataset comprises of students who started counseling sessions between the academic years 2000-2001 and 2007-2008. Data were also retrieved from the Office of Institutional Research and Assessment in 2013 by a previous researcher, which included students’ GPA and graduation year. The data from the counseling center and from the Office of Institutional Research and Assessment were combined to create the current dataset.

The data were gathered confidentially and stored in a secure location within the university counseling center. To ensure anonymity of the participants, previous researchers removed student ID numbers, social security numbers, and all individual identifiers. The participants were then given a Final ID Number (FIDN) by a previous researcher. This study is part of a larger research study and has IRB approval for continuation of the previous work.

Variables

Dependent Variable

The following measure were utilized as the dependent variable for all four research questions. It is assumed that the dependent variable was influenced by the following four independent variables.

Time. For the proposed study, time is defined by the month and year that clients first started attending counseling sessions. Sharkin (1997), suggested that a longer period of time
needs to be examined to establish a trend among the variables of interest in this study. The time span used here approached Sharkin’s (1997) recommendations.

**Independent Variables**

The following measures were used as the independent variables. It is assumed that the following independent variables were associated with differences in the dependent variable.

**Severity.** The intake GAF and diagnosis level was used to determine the severity of a client’s mental health concerns.

*Intake GAF.* The GAF (Endicott, Spitzer, Fleiss, & Cohen, 1976) is a measurement in the *DSM-IV-TR* to assess and evaluate how clients are functioning in their everyday lives. The GAF is a number ranging from 0-100 and was given by the counselor at the client’s intake. At the time of data collection, The DSM-IV was the most widely used diagnostic tool used to assess the presence of mental health concerns. The GAF is a modified version of the Global Assessment Scale created by Endicott, Spitzer, Fleiss, & Cohen (1976) as a way to measure severity and overall psychological functioning.

*Diagnosis Level.* Four levels were created by previous research to determine different levels of severity. The levels were created based off of the counselors’ diagnoses, the recommendations of an expert panel, and the notion that certain diagnoses are more critical than others (Gallagher, 2013; St. John, 2014). The four levels are as follows: a) “Crisis (maximum severity) included “red flag” concerns (exempting substance-related issues), b) Psychotherapeutic (high severity) incorporated counseling center director-driven pullouts for mood disorders, childhood issues, substance-related disorders, eating disorders, and personality disorders, c) Intermediate (medium severity) encompassed the remaining childhood, mood,
anxiety, substance, and eating disorders. It also included adjustment disorders, personality disorders, and all other classes of shared phenomenology/shared features, 4) Situational/Emerging (mild severity) comprised conditions that may be a focus of 43 clinical attention and any other additional conditions” (St. John, 2014; p. 49)

**Complexity.** Coniglio, McLean, and Meuser, (2005) referred to complexity as the higher rate of co-occurring issues. Therefore, the number of diagnoses and the number of presenting problems were used to determine the complexity of a clients’ mental health concerns

**Number of Diagnoses.** Sharkin and Coulter (2005) suggest utilizing both counselors’ diagnoses and the clients’ self-reported presenting problems when assessing for the increase in mental health symptoms. The number of diagnoses is the total number of diagnoses a client is given by the counselor at intake.

**Number of Presenting Problems.** Sharkin and Coulter (2005) suggest utilizing both counselors’ diagnoses and the clients’ self-reported presenting problems when assessing for the increase in mental health symptoms. The total number of presenting problems the client indicated when completing the initial form at the beginning of services were used for the number of presenting problems.

**Disruptiveness.** The referral source and intake GPA were used to determine the disruptiveness of mental health concerns in a client’s life.

**Referral Source.** An expert panel rank ordered the referral sources to determine different levels of disruptiveness. Blau et al. (2015) defines referral source as a route by which a student arrived at the counseling center. This study will include the following referral sources:
Level 1-Self-Referral. Student initiated contact with counseling center on their own accord.

Level 2-Health Professional Referral. This includes being referred by the health center or disability services.

Level 3-Intimate Others Referral. This includes being referred by friend, parent, partner or clergy.

Level 4-Academic and Institutional Referral. Student was referred to counseling center by faculty, advising, administrative staff, Women’s Center, student activities, International Studies Office, career services, Greek life advisor, and other.

Level 5- Personal, Emotional, Social Disruption Referral. Police, ombudsperson, peer educator, judicial services, lawyer, case manager, or resident assistant (R.A.) referred the student to counseling center

Intake GPA. This was operationalized in a straightforward manner as the client’s grade point average at the time of intake. GPA has been a common assessment tool for many researchers to determine academic performance (Illovsky, 1997).

Treatment Demand. The number of sessions, returns over time, and off-campus referrals were used to determine treatment demand of clients.

Number of Sessions. The total number of sessions represented the overall extent of counseling (Schwitzer, Grogan, Kaddoura, & Ochoa, 1993) and consisted of the total number of counseling sessions attended by the student.
**Returns over Time.** Schwitzer, Grogan, Kaddoura, and Ochoa (1993) defined returns over time with two constructs: number of sessions and newly initiated treatment returns. This study focused on the number of newly initiated treatment returns.

**Off-Campus Referrals** was determined by the need for a clinician to refer the client to off-campus services. Limited number of sessions, severity and complexity of issues, and other factors can contribute to the number of off-campus referrals (Owen, Devdas, & Rodolfa, 2007).

**Data Analysis**

Descriptive statistics including continuous variables, including: intake GAF, total number of diagnoses, total number of presenting problems, cumulative GPA the semester of counseling, and total number of sessions addressed the possible influence of confounding variables. Separate statistical analyses were conducted for each research question. Hierarchical multiple regression was used to analyze each research question. When using multiple regression, the following assumptions were made: a) the relationship between the variables was linear; and the people were independent b) the error scores were normally distributed (Aron, Coups, & Aron, 2013)

**Research Question 1.** Hierarchical multiple regression was used to determine if the intake GAF and diagnosis level were predictive of the month and year students sought counseling.

**Research Question 2.** Hierarchical multiple regression was used to determine if the number of diagnoses and the number of presenting problems were predictive of the month and year students sought counseling.
**Research Question 3.** Hierarchical multiple regression was used to determine if the referral source level and the participants’ GPA at intake were predictive of the month and year students sought counseling.

**Research Question 4.** Hierarchical multiple regression was used to determine if the number of counseling sessions, the number of returns over time, and whether a student was given an off-campus referrals were predictive of the month and year the students sought counseling.

Table 4

*Research Questions, Variables, & Analyses*

<table>
<thead>
<tr>
<th>Research Question</th>
<th>Independent Variables</th>
<th>Dependent Variables</th>
<th>Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>RQ1:</strong> To what degree have clients’ presentation of concerns increased in severity over time?</td>
<td>Diagnosis Level</td>
<td>Time</td>
<td>Multiple Regression</td>
</tr>
<tr>
<td></td>
<td>Intake GAF</td>
<td></td>
<td></td>
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<tr>
<td><strong>RQ2:</strong> To what degree have clients’ presentations of concerns increased in complexity over time?</td>
<td>Number of Counselor’s Diagnoses</td>
<td>Time</td>
<td>Multiple Regression</td>
</tr>
<tr>
<td></td>
<td>Number of Presenting Problems</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Number of Problem Domains</td>
<td></td>
<td></td>
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<tr>
<td><strong>RQ3:</strong> Has the severity and complexity of symptoms increased disruptiveness over time?</td>
<td>Referral Source Level</td>
<td>Time</td>
<td>Multiple Regression</td>
</tr>
<tr>
<td></td>
<td>Intake GPA</td>
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</tbody>
</table>
RQ4: How has severity and complexity of symptoms influence treatment demand over time?

<table>
<thead>
<tr>
<th>Number of Sessions</th>
<th>Time</th>
<th>Multiple Regression</th>
</tr>
</thead>
<tbody>
<tr>
<td>Returns over Time</td>
<td>Off-Campus Referrals</td>
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</tbody>
</table>

*Note. GAF = Global Assessment Functioning; GPA = Grade Point Average*

**Limitations**

As with other research studies, there are limitations to the current study. One of the limitations to the study is the time span it covers. Sharkin (1997) suggested that to properly examine the severity and changes in symptoms, a study should be over the course of at least 10 years, this study covers an eight year span. Due to the nature of the design, being non-experimental and lack of control of the variables, causation is difficult to determine due to the possibility of other confounding variables (Lord, 1973). These confounding variables can affect the internal and external validity of the study.

External validity refers to the ability to apply the results to the general population, while internal validity refers to the ability to infer accurate conclusions deduced from the analyses (Neukrug, 1999). The interaction of the causal relationship and settings may threaten the external validity (Heppner, Wampold, & Kivlighan, 2008). Due to the fact that the study was conducted at a large southeastern university, the results may not be generalizable to all college students. In addition, the dataset is eight years old and therefore may not represent the most current trends in college counseling.

The internal validity may be threatened due to history, maturation, and regression, (Heppner, Wampold, & Kivlighan, 2008). History refers to any event that happens during the time
of treatment. Maturation is the normal developmental changes that will happen over time and regression refers to the idea that participants with low scores on a pre-test will score higher on the post-test, while participants that score high on the pre-test will score lower on the post-test.

With regards to the first two research questions, validity may be threatened due to students with more severe or complex problems may be more likely to seek treatment (regression) compared to students with less severe and complex problems. Developmental changes will have also happened over the course of four years (maturation). Internal validity for the last two questions may be threatened by internalized stigmatization students’ may have seeking treatment based on societies acceptance of seeking mental health treatment (history) and access to treatment which could be influenced by financial concerns, transportation issues, or needing additional sessions (history).

Construct validity refers to how well the independent and dependent variables represent the constructs they were intended to measure (Heppner, Wampold, & Kivlighan, 2008). Construct validity may be threatened by the subjective interpretation of the counselors’ GAF score and diagnoses, as well as the honesty of the clients’ presenting problems. According to Sharkin (1997), “subjective perceptions may be meaningful, but there are significant limitations associated with reliance on perceptions” (pp 279). In addition, the diagnoses are based on the DSM-IV-TR. The DSM-IV-TR is not the most current manual for diagnosing mental health disorders.

Conclusion

This chapter reviewed the proposed methodology for the current study providing further details regarding the participants, the setting, research design, data collection, and research analysis. Limitations to the proposed study were also provided. The following chapters
will include the results of the statistical analyses for each research question and a discussion of the major findings, implications, and limitations.
CHAPTER FOUR
RESULTS

This chapter will review the results of the statistical analyses for the current study. Data cleaning and preliminary analyses will be discussed in further detail. The results of the statistical analysis for each research question will be given.

Analysis of Assumptions and Data Cleaning

Analysis of Assumptions

Before testing the hypotheses, exploratory data was provided by performing frequencies on gender, ethnicity, age, and student classification. Descriptive statistics were conducted for the continuous variables, including: intake GAF, total number of diagnoses, total number of presenting problems, cumulative GPA the semester of counseling, and total number of sessions. Preliminary analyses were conducted to address the following assumptions: normality, linearity, and homoscedasticity of residuals; absence of outliers; absence of multicollinearity; the independence of errors (Field, 2012).

Normality, linearity, and homoscedasticity of residuals.

Results for descriptive statistics can be found in Appendix B, table 6. Descriptive statistics were compiled for continuous variables to check for normality of the distribution. Continuous variables included intake GAF, total number of diagnoses, total number of presenting problems, cumulative GPA the semester of counseling, and total number of sessions. Skewness and kurtosis having an absolute value greater than 1.96 at p < .05 were considered violating assumption of normal distribution (Field, 2012). While most of the variables examined did not exceed the threshold, total number of sessions had an absolute value of 2.42 for kurtosis.
It was determined that due to the large sample size, total number of sessions did not violate the assumption of normality (Field, 2012). There was homoscedasticity, as assessed by visual inspection of a plot of studentized residuals versus unstandardized predicted values.

**Absence of outliers.**

SPSS software version 22 was used to test for outliers. Utilizing casewise diagnostics, outliers were determined if outside 3 standard deviations. There were no outliers present for all of the variables.

**Absence of multicollinearity.**

Results for multicollinearity can be found in Appendix B, table 7. To check for the absence of multicollinearity, Pearson’s $r$ correlations were performed on all variables. The $r$ value of 0.9 was used as the threshold to determine if two variables were highly correlated (Field, 2012). The variables were not highly correlated and had correlations less than .32. Thus, there was an absence of multicollinearity among the variables.

**Independence of errors.**

The Durbin-Watson statistic was examined to test the assumption of the independence of errors. The Durbin-Watson statistic of two was used for the threshold for determining independence of errors (Field, 2012). For this study, the Durbin-Watson statistics ranged from 1.80 to 1.88, which signifies lack of autocorrelation.

**Data Cleaning**

Prior to analyses, many of the individual variables were recoded. The dependent variable time needed to be re-coded into a continuous variable. Data were provided for the month and year the student started counseling. Each month and corresponding year were recoded into a numeric value ranging from 1-96 starting with May of 2000 = 1 and ending with April of 2001 =
For the independent variable of severity, intake GAF was recoded to exclude missing values and the diagnosis level was recoded from 1 = most severe and 4 = least severe to 1 = least severe and 4 = most severe with the respective changes to levels 2 and 3. Two new measures were created for the complexity variable. The number of diagnoses a student had were totaled to create “Total number of Diagnoses” and the number of presenting problems were totaled for each student to create “Total number of Presenting Problems”. For the disruptiveness variable the intake GPA was recoded to exclude missing values. A new measure was created to differentiate the referral source level. The referral source was created by categorizing the different referral sources into 5 different levels with level 1 representing least disruptive and level 5 representing most disruptive. Level 1 is self-referral, Level 2 is referral by a health professional, Level 3 is referral by intimate others, Level 4 is an academic or institutional referral, and Level 5 is a personal, emotional, or social disruption referral.

Table 5

<table>
<thead>
<tr>
<th>Referral Source (N = 24)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level and Source</td>
</tr>
<tr>
<td>--------------------------</td>
</tr>
<tr>
<td>Level 1: Self-Referral (Least Disruptive) (n = 1)</td>
</tr>
<tr>
<td>Self</td>
</tr>
<tr>
<td>Level 2: Health Professional Referral (n = 2)</td>
</tr>
<tr>
<td>Health Center</td>
</tr>
<tr>
<td>Disability</td>
</tr>
<tr>
<td>Level 3: Intimate Others Referral (Moderate Disruptiveness) (n = 4)</td>
</tr>
<tr>
<td>Friend</td>
</tr>
<tr>
<td>Parent</td>
</tr>
<tr>
<td>Partner</td>
</tr>
<tr>
<td>Clergy</td>
</tr>
<tr>
<td>Level 4: Academic and Institutional Referral (n = 11)</td>
</tr>
</tbody>
</table>
Table 5 identifies the different disruptive levels with their corresponding referral sources. For the treatment demand variable, returns over time was recoded into 1 = students attended two or more courses of counseling and 0 = students attended one course of counseling. Number of sessions was recoded to include the intake as the first session. Off-campus referral was created with 1 = the student was referred off-campus and 0 = the student was not referred off-campus.

**Description of Analyses**
Analysis of the data was performed using SPSS software version 22. An alpha significance level of .05 was utilized for all analyses; and gender was used as a control variable for all four research questions.

To address the first research question, a hierarchical multiple regression was performed to determine if there was a significant relationship between the severity of symptoms (intake GAF and diagnosis level) and time. The independent variables were intake GAF and diagnosis level and the dependent variable was time. Gender was used as a covariate.

For the second research question, a hierarchical multiple regression was performed to determine if there was a significant relationship between the complexity of symptoms (total number of presenting problems and total number of diagnoses) and time. The independent variables were total number of presenting problems and total number of diagnoses and the dependent variable was time. Gender was used as a covariate.

For the third research question, a hierarchical multiple regression was performed to determine if there was a significant relationship between disruptiveness (cumulative GPA the semester of counseling sessions and level of disruption and referral source) and time. The independent variables were cumulative GPA the semester of counseling, level of disruption and referral source, and the dependent variable was time. Gender was used as a covariate.

To address the fourth research question, a hierarchical logistic regression was performed to determine if there was a significant relationship between treatment demand (off campus referral, number of sessions, and returns over time) and time. The independent variables were campus referral, number of sessions, returns over time, and the dependent variable was time. Gender was used as a covariate.
**Research Question 1: To What Degree Have Clients’ Presentation of Concerns Increased in Severity Over Time?**

Hierarchical multiple regression was used to assess whether the severity of symptoms (intake GAF and diagnosis level) was predictive of time. The dependent variable was time and the independent variables were intake GAF and diagnosis level. To control for gender as a covariate, gender was entered for Step 1. In Step 2 of the analysis, intake GAF and diagnosis level were entered.

Results for research question 1 can be found in Appendix C, Table 8. The regression for Step 2 was significant, $F(3, 2033) = 2.91, p < .05$, with $R^2 = .004$ and $\Delta R^2 = .004$. The effect size of the second step of the model is represented by $\Delta R^2$. The second step of the model accounts for $< 1\%$ of the variance in the sample, which is a small effect size ($\Delta R^2 = .004$) (Cohen, 1988). In Step 2, diagnosis level ($\beta = -.05, p > .5$) and intake GAF ($\beta = .03, p > .1$) were not significant predictors of time. According to the results, severity did not increase over time as evidenced by the low impact that diagnosis level and intake GAF had on the model.

**Research Question 2: To What Degree Have Clients’ Presentation of Concerns Increased in Complexity Over Time?**

Hierarchical multiple regression was used to assess whether the complexity of symptoms (total number of presenting problems and total number of diagnoses) was predictive of time. The dependent variable was time and the independent variables were total number of presenting problems and total number of diagnoses. To control for gender as a covariate, gender was entered for Step 1. In Step 2 of the analysis, total number of presenting problems and total number of diagnoses were entered.
Results for research question 2 can be found in Appendix C, Table 9. The regression for Step 2 was significant, $F(3,2052) = 3.06, p < .05$, with $R^2 = .004$ and $\Delta R^2 = .004$. The effect size of the second step of the model is represented by $\Delta R^2$. The second step of the model accounts for $< 1\%$ of the variance in the sample, which is a small effect size ($\Delta R^2 = .004$) (Cohen, 1988). In Step 2, total number of presenting problems ($\beta = .05, p < .05$) were significant positive predictors of time. The total number of diagnoses ($\beta = -.06, p < .15$) were significant negative predictors of time. According to the results, complexity did not increase over time due to the decrease in diagnoses and the minimal increase in presenting problems.

**Research Question 3: To What Degree Has Disruptiveness for College Counseling Clients Changed Over Time?**

Hierarchical multiple regression was used to assess whether disruptiveness (cumulative GPA the semester of counseling and level of referral source) was predictive of time. The dependent variable was time and the independent variables were cumulative GPA the semester of counseling and level of referral source. To control for gender as a covariate, gender was entered for Step 1. In Step 2 of the analysis, cumulative GPA the semester of counseling and level of referral source were entered.

Results for research question 3 can be found in Appendix C, Table 10. The regression for Step 2 was significant, $F(3, 1142) = 9.40, p < .001$, with $R^2 = .02$ and $\Delta R^2 = .02$. The effect size of the second step of the model is represented by $\Delta R^2$. The second step of the model accounts for $2\%$ of the variance in the sample, which is a small effect size ($\Delta R^2 = .02$) (Cohen, 1988). In Step 2, cumulative GPA the semester of counseling ($\beta = .09, p < .01$) were significant positive predictors of time. The level of referral source ($\beta = -.11, p < .001$) were significant negative
predictors of time. According to the results, it appears disruptiveness did not increase over time due to the increase in GPA and decrease in referral source level.

**Research Question 4: To What Degree Has Treatment Demand for College Counseling Clients Changed Over Time?**

Hierarchical multiple regression was used to assess whether treatment demand (off campus referral, number of sessions, and returns over time) was predictive of time. The dependent variable was time and the independent variables were campus referral, number of sessions, and returns over time. To control for gender as a covariate, gender was entered for Step 1. In Step 2 of the analysis, off-campus referral, number of sessions, and returns over time were entered.

Results for research question 4 can be found in Appendix C, Table 11. The regression for Step 2 was significant, \( F(4, 2090) = 19.80, p < .001 \), with \( R^2 = .04 \) and \( \Delta R^2 = .04 \). The effect size of the second step of the model is represented by \( \Delta R^2 \). The second step of the model accounts for 4% of the variance in the sample, which is a small effect size (\( \Delta R^2 = .04 \)) (Cohen, 1988). In Step 2, off campus referral (\( \beta = .00, p > .5 \)) and number of sessions (\( \beta = .00, p > .5 \)) were not significant predictors of time. Returns over time (\( \beta = .19, p < .001 \)) were significant positive predictors of time. Treatment demand appeared to have a slight increase as time increased.
CHAPTER 5

DISCUSSION

This chapter will summarize the problem being studied and discuss the findings, implications, and limitations of the current study. Each research question will be discussed individually as well as implications for counseling professionals, counseling directors and institutions, and students. The chapter concludes with limitations and recommendations for future research.

Summary of Problem

The current counseling literature includes numerous debates about whether or not severity of mental health symptoms have increased in college students over the years. Some researchers have suggested that college student populations have experienced an increase in presentations of severe psychological problems (Gallagher, 2014; Gallagher et al, 2012), while others have not found any significant increase of severity of symptoms (Hoeppner, Hoeppner, & Campbell, 2009; Berger, Franke, Hofmann, Sperth, and Holm-Hadulla, 2015). The most recent survey of national college counseling directors supports the notion that symptoms have increased stating that 94% of the directors report a greater number of students with severe psychological problems (Gallagher, 2014). However, Sharkin (1997; 2012) argues that reports of an increase in severity are based on the perceptions of the directors and clinicians at the counseling centers rather than actual increases in severe presentations. Other researchers have suggested that the complexity of problems has increased among college students, not necessarily the severity (Archer & Cooper, 1998; Gallagher, 2012; Much & Swanson, 2010). They argue that the increase in complexity is due to problems such as family dysfunction, substance abuse, sexual experiences, impact of technology, and other issues caused by changing social mores (Gallagher, 2012). Severity and
complexity of symptoms can each have an influence on the disruptiveness of a student’s environment and the demand for treatment at a counseling center. Students have reported that such problems as exhaustion, low energy levels, difficulty concentrating, and difficulties with mood all affect their academic performance (Markoulakis and Kirsh, 2013) resulting in a demand for more treatment (Wolgast et al., 2005). This study makes the following contributions to this debate:

**Research Question One**

The first research question investigated the extent to which clients’ presentation of concerns changed in severity over time. It was hypothesized that severity of clients’ concerns would increase demonstrated by a lower intake GAF and higher diagnosis level as time progressed. Gallagher (2012) reports that 81% of college counseling directors perceived an increase in student pathology, an increase in counseling staff responding to immediate crisis situations, more students on psychiatric medications, and that student hospitalization almost doubled between the years 2001 and 2011. Other research has found students reporting an increase in relationships, stress/anxiety, situational, depression, developmental, medication, suicidal ideation, and personality disorders (Benton, Robertson, Tseng, Newton, & Benton, 2003). Conversely, Hoeppner, Hoeppner, and Campbell (2009) did not find any increase in pathology or symptoms severity. Berger, Franke, Hofmann, Sperth, and Holm-Hadulla (2015) found that self-reported mental health problem have significantly decreased over time.

The results of this study indicated that there was a small significant change in severity over the eight-year span. There was a small significant decrease in severity as time increased. However, intake GAF and diagnosis level did not have a significant increase or decrease (respectively) independently. These results are consistent with Hoeppner, Hoeppner, and
Campbell (2009) that did not find any increase in pathology or symptom severity. The study’s results contrast with the literature suggesting that severity of symptoms has either increased or decreased over time (Benton, Robertson, Tseng, Newton, & Benton, 2003; Gallagher, 2012; Berger, Franke, Hofmann, Sperth, and Holm-Hadulla, 2015). These findings appear to extend our knowledge by suggesting that the severity of students’ symptoms have neither increased nor decreased over time. The conflicting findings could be due to the natural subjectivity of counselor’s measuring the severity as well as the students’ own perceptions (Sharkin, 1997; 2012).

**Research Question Two**

The second research question addressed the extent to which clients’ presentations of concerns have changed in complexity over time. It was hypothesized that as time progresses, the complexity of problems would have increased, as demonstrated by the increase of total number of diagnoses and total number of presenting problems. Previous literature has suggested that the increase in severity of symptoms could actually be due to the increase in complexity of problems (Gallagher, 2012). Cairns, Massfeller, and Deeth (2010) conducted a study differentiating the constructs of severity and complexity. Cairns, Massfeller, and Deeth found that there was no significant difference of severity of presenting problems however, the complexity of problems varied from year to year.

The results of this study indicated that there was a small significant change in complexity of symptoms over time. There was a slight significance of variance in complexity overall. There was a minor significant increase of presenting problems over the eight year span. The total number of diagnoses, however, had a minor significant decrease over time. This was consistent with previous research which has found that the complexity of problems varies over
the years (Cairns, Massfeller, & Deeth, 2010). The results also support the notion that the change in students’ problems could be due to the complexity of problems versus the severity of problems (Gallagher, 2012). This finding appears to extend our knowledge by suggesting that although students may not qualify for multiple diagnoses, they are still presenting with an array of different problems.

**Research Question Three**

The third research question asks about the degree to which disruptiveness for college counseling clients changed over time. It was hypothesized that disruptiveness would have increased over the eight-year span as demonstrated by an increase in the referral source level and a decrease in the intake GPA. Research suggests that the severity and complexity of students’ emotional, behavioral, relational, and mental problems can lead to disruptiveness of their academic performance, living environment, and classrooms (Prince, 2015). Findings have included problems associated with increased psychological difficulties for students with mental illnesses such as: poor concentration, motivation, and lack of focus which affects academic performance. Students with mental illnesses also had lowered self-esteem, emotional resilience, and more difficulty coping with common stressors (Markoulakis and Kirsh, 2013).

The results of the current study indicated that there was a small significant change in disruptiveness over the eight year span. There was a minor significant decrease in disruptiveness over time. Both GPA and referral source level had a slight impact on the disruptiveness. The intake GPA demonstrated a significant minor increase as time increased. Referral source level demonstrated a significant minor decrease as time increased. These results are consistent with previous research that found that disruptiveness has a positive relationship with severity and complexity of symptoms (Prince, 2015). These findings appear to extend our knowledge by
suggesting that there has not been a change in disruptiveness over time could possibly be due to the lack of change in severity and complexity of symptoms.

**Research Question Four**

The fourth research question tested the degree to which treatment demand for college counseling clients has changed over an eight-year span. It was hypothesized that treatment demand will increase over time as demonstrated by clients attending more sessions, receiving counseling at multiple different times during their college career, and having a greater likelihood of referral for services off-campus as time progressed. The current literature suggests that the more severe the clients’ symptomology, the more sessions required to achieve clinically significant change (Wolgast, Rader, Roche, Thompson, Zuben, and Goldberg, 2005). Lunardi, Webb, and Widseth (2006) found that 25% of college students that attended more than 20 sessions had a more severe psychopathology. In addition, 57.6-67.2% of students seeking treatment have shown improvement on average of 12.7 sessions. Conversely, one study found a statistical decrease in symptomology for college students in as little as six sessions (Nafziger, Couillard, & Smith, 1999).

The results of the current study indicated that there was a small significant increase in treatment demand over the eight-year span. Overall, there was a minor significant increase in treatment demand over time, however, there was no change in off-campus referrals or total number of counseling sessions. Returns over time appeared to be the contributing factor to the minor increase in treatment demand. There was a slight significant increase in number of times students returned for counseling over the eight-year span. This was consistent with previous findings that there was a positive relationship between treatment demand and severity (Wolgast, Rader, Roche, Thompson, Zuben, and Goldberg, 2005). Since there was not much change in
either severity or complexity of symptoms in this study, there was not much change in the overall treatment demand. This appears to extend our knowledge by suggesting that students are willing to return for more counseling after already completing a course of counseling.

**Integrating the Findings**

Essentially, severity, complexity, and disruptiveness seemed to remain relatively constant over time. Treatment demand, however, appeared to have a small significant increase over time. Gender had no significant relationship with any of the variables. The results for disruptiveness were congruent with the results for severity and complexity. Minimal decreases in both severity and complexity can explain a minimal decrease to no change in disruptiveness. Interestingly, severity had a slight decrease over time while treatment demand had a slight increase. This incongruence may be due to there being less of a stigma associated with mental health services. Students may be more aware of early symptoms and therefore willing to seek services earlier rather than later when symptoms are more severe. Golberstein, Eisenberg, and Gollust (2008) suggests that stigma may not be as important of a barrier to mental health services as other factors such as knowledge of availability.

Another explanation may be that students with modest but more complex concerns are demanding more services. This demand for more services combined with students reporting an increase in presenting problems may be influencing counselors’ perceptions of an increase in severity of problems. Sharkin (1997, 2014) has previously suggested that the perceived increase in severity could be due to counselors’ perceptions. Other researchers have argued that complexity of college students’ symptoms have increased over time as well as the treatment demand needed by the counseling center (Humphrey, Kitchens, & Patrick, 2000).
Implications for Counseling Knowledgebase

This study contributes to the counseling knowledgebase by providing additional empirically derived results from a large, longitudinal data base regarding the debate of whether severity of mental health symptoms has increased over time. The study implemented methods as suggested by previous researchers to effectively study severity. The results concluded that severity in symptoms essentially had not changed significantly over the eight-year span. This supports Sharkin’s (1997; 2012) reports that an increase in severity are based on the perceptions of the directors and clinicians at the counseling centers rather than actual increases in severe presentations. Limitations and suggestions for future research are also provided for scholars to further the research.

In addition, previous research often interchanged the terms severity and complexity in regards to college students’ mental health symptoms and psychopathology. This study differentiated and operationalized the two terms as well as operationalizing returns over time and treatment demand.

Finally, the information obtained from these results can be interpreted using a theoretical framework to provide implications. Directors of counseling centers, institutions, and college counseling professionals can implement strategies based on the results and Drum and Lawler’s (1988) tripartite model. Using empirical results with a theoretical framework can address students’ mental health concerns, and equip university counseling centers with strategies and interventions to meet the treatment demand of students (Schwitzer & Van Brunt, 2015).

Implications for College Counseling Directors and Institutional Leaders
Drum and Lawler’s (1988) tripartite model will be used as a theoretical framework to discuss the implications of this study for college counseling directors and institutional leaders as well as college counseling professionals. The model suggests university counseling centers can intervene based on three different characteristics of students: current level of need, perceived sense of urgency, and motivation for change (Schwitzer, 2012). In congruence with the model, implications will be discussed according to the three different approaches for intervention: Preventative Intervention, Intermediate Intervention, and Psychotherapeutic Intervention (Schwitzer, 2012; Schwitzer, Bergholz, Dore, & Salimi, 1998).

Preventative intervention is aimed at preventing the onset of problems or personal-emotional needs (Schwitzer, 2012; Schwitzer, Bergholz, Dore, & Salimi, 1998). Based on the results, it is suggested that directors of counseling centers and institutions allocate funding towards providing services such as educational classes focused on mental health, and psycho-educational groups available to students on and off campus. This may help to continue to decrease the stigma but also help students become aware of their own symptoms and to know resources available to them to help prevent the symptoms from becoming more severe, and to return for counseling when needed. Using a preventative approach can help reduce the impact for a student with mental health problems and the secondary impact for faculty, staff, and institution (Schwitzer & Van Brunt, 2015).

Intermediate intervention is applied when students are experiencing existing adjustment or psychosocial problems. The results of this study indicated that as severity decreased the number of times students returned for counseling increased yet the total number of sessions did not change. This suggests that brief therapy may be an optimal approach for counseling centers. Research has shown that change can happen within clients in as little as the first few sessions
(Cooper & Archer, 1999). Training clinicians in brief solution focused therapy will allow clinicians to help clients in a more efficient use of sessions and possibly allow students to have available session left if they need to return to counseling later in the year.

Psychotherapeutic intervention may be implemented with students who have recurrent issues that are causing severe disruptiveness and dysfunction. The results of the current study indicated there was not any change in off-campus referrals over time. This suggests that the need for students to seek further services neither increased nor decreased. Counseling centers and institutions should try to provide the necessary resources and qualified personal to avoid off-campus referrals. Minimalizing off-campus referrals can decrease the issues of students’ difficulties following through with referrals, being able to pay for the services, and accessibility to services (Owen, Devdas, & Rodolfa, 2007).

**Implications for College Counseling Professionals**

College counseling professionals will be the ones implementing the interventions of the tripartite model. It is important that college counseling professionals use the appropriate interventions for each level. College counseling professionals can provide psycho-education groups and create information fliers regarding education about mental health, common disorders, coping strategies, and resources. Keeping up to date with the current literature will help college counseling professionals pick topics that address the most current trends in college counseling. For intermediate and psychotherapeutic intervention, college counseling professionals can focus on proper training and continuing education to provide effective solution focused therapy as well as qualified to help students with more severe cases. Establishing a relationship with students and establishing goals will more likely ensure that the student will return for more sessions and courses of counseling (Tracy 1977).
Implications for Students

The results of the current study indicated that students were willing to return for more courses of counseling despite the slight decrease in severity of symptoms. In addition, students reported more presenting problems. This suggests that students are more aware of their problems and more willing to seek treatment for them. Advocacy and peer education may help students educate other student about mental health concerns and consequences. Also, creating their own support groups, online blogs, use of social media may help reduce the stigma but also provide resources for other students.

Limitations

This research study has a number of limitations. The limitations for generalizability and research design will be further discussed. The limitations should be taken into account when interpreting the results of this study.

Generalizability of Findings

The generalizability of this study is limited for assorted reasons. This study cannot be generalized to all institutions or college students due to data being collected from one counseling center at one institution in the southeastern United States. Qualifications for clinicians, availability of sessions, and services provided may differ depending on the counseling center and institution. The assessments and intake forms will also differ by counseling center and institution. This can impact the clinical treatment received by students as well as the diagnoses of clinicians and therefore may vary results. In addition, location of university, type of school (community college, 4 year institution, public, private, etc.), and student population can all have varying impacts on students seeking services, their presenting problems, and diagnoses. Due to
the larger alpha and low effect size, the significance of this study can only be applied to this particular population and institution. Furthermore, demographic information collected was limited to age, ethnicity, gender, and college class. Therefore, it cannot be assumed that the results of this study are generalizable to students of specific socioeconomic status, sexual orientation, religious and spiritual beliefs, abilities, etc.

**Limitations of the Research Design**

Some of the limitations of this study are specific to the research design. Convenience sampling was the method used to collect data. One institution and one counseling center was the source of data collection which affects the generalizability of the study. Also, the dataset is eight years old and therefore does not represent the most current trends in college counseling. Due to the age of the dataset, the diagnoses are based on the *DSM-IV-TR* instead of the *DSM-V* (the current accepted diagnosis manual). Missing data was another contributing factor to limitations. Most of the variables had a minimal amount of missing data (< 45) considering the large sample size (*n* = 2101). However, intake GPA was missing for 761 entries (*n* = 1340) which may have influenced the results. In addition, the dataset provided limited demographic information. Gender was limited to the binary options of male or female and did not include an option for transgender, gender fluidity or other. Also, no information was collected regarding sexual orientation, religious or spirituality preferences, ability, and socioeconomic status. Finally, this dataset examined an eight year time span, while research suggests that to properly examine the severity and changes in symptoms, a study should be over the course of at least 10 years (Sharkin, 1997).

Next, limitations of the actual research design and variables will be discussed. The design of this study was non-experimental and therefore did not control for confounding
variables. Causation cannot be determined when using a non-experimental design due to the confounding variables affecting the validity of the study (Lord, 1973).

Another limitation of the study is the high alpha used to determine significance which increases the chance of a Type 1 error. Additionally, the models only accounted for less than 4% of the variance with half the models accounting for less than 1% of the variance. Low variance can be explained by the large sample size. Significance is more likely to be found with a larger sample size (Tabachnick & Fidell, 2007). Although gender was controlled for in the study, the other demographics were not analyzed to determine their relationship with the variables.

Finally, the internal validity may have been threatened by the subjectivity of the measures. The diagnoses, presenting problems, and intake GAF were all based on the perceptions of the counselors and students. Additionally, the severity level and referral source level were also susceptible to being subjective due to being created by expert panels. Another threat to internal validity is that students with more severe or complex problems being more likely to seek treatment.

**Recommendations for Future Research**

Taking into consideration the results and the limitations of this study, many recommendations are suggested for future research.

**Recommendation One**

The first recommendation is to replicate the study with data from multiple institutions and from recent cohorts. Using recent data will give a more accurate depiction of the current trends regarding students’ mental health symptoms, disruptiveness, and treatment demand. Also,
by using multiple institutions, it will provide a more accurate portrayal of college students’ mental health concerns’ across the country as opposed to one specific location.

**Recommendation Two**

The second recommendation is to collect more thorough demographic information and to analyze the demographics. Although there was essentially no change overall for each of the variables, there may be significant change for each variable for different groups of students. This will allow for the research to be generalizable in a more specific nature. It will provide institutions, counseling centers, and professional more information to help specific students. Archer and Cooper (1998) suggested that student are more likely to have concerns regarding gender, racism, sexual orientation, sexual violence, and oppression.

**Recommendation Three**

As Sharkin (1997) recommends, future studies should use more objective measures. The results of this study suggested that counselor’s perceptions of increase in severity may be due to students’ presenting with more problems even though the number of diagnoses decreased. Using perceptions as measures can lead to many limitations in studies (Sharkin, 1997). Objective measure will allow for a more precise diagnosis, a more empirical study, and may decrease the discrepancies found in some studies.

**Recommendation Four**

The fourth recommendation is to further examine students’ complexity of problems. Humphrey, Kitchens, and Patrick (2000) suggested that students’ may have more complex problems due to students presenting a multitude of problems such as: eating disorders, anxiety disorders, personality disorders, mood disorders, substance abuse, violence as well as
developmental and relational problems. A more intentional intake capturing the important variables to assess complexity if assessing topic quantitatively. A qualitative study may help get a better understanding of the complexity of today’s college students’ mental health. Universities and colleges can join the Center for Collegiate Mental Health to have access to more standardized forms and contribute to current research in college counseling.

**Recommendation Five**

The final recommendation is to further investigate the stigma of mental health in relation to college students and treatment demand. This study found that college students were willing to return for more counseling services after already completing counseling sessions. An online survey conducted by Harris Poll on behalf of the Anxiety and Depression Association of America (ADAA), the American Foundation for Suicide Prevention, and the National Action Alliance for Suicide Prevention (ADAA, 2016) found that college-aged adults have more accepting views of mental health care than older adults. This suggests that the stigma of mental health has decreased among college students, however, more empirical research needs to be conducted.

**Conclusion**

This study examined whether severity, complexity, disruptiveness, and treatment demand of college students’ mental health concerns had increased over time. The purpose of this study was to provide empirical evidence to contribute to the debate of whether the severity of mental health symptoms have increased over time. The study also differentiated severity of symptoms and complexity of symptoms as well as examining if disruptiveness and treatment demand had increased over time.
Findings from this study suggested that essentially there has been no change in severity or complexity of symptoms, and disruptiveness. While treatment demand had a small significant increase over time. However, there were some notable findings suggesting that although there was a slight decrease in severity of symptoms, while the total number of presenting problems and the amount of times students returned for a second course of counseling slightly increased over the years. From these findings, counseling centers can implement strategies, such as utilizing brief solution focused therapy and preventative measures, to accommodate today’s college students’ mental health needs. These findings also suggest the need for future replication and further research due to the limitations of the study. Finally, this study and its findings contribute to the ongoing debate in the counseling literature and provide counselors, administrators, and researchers additional knowledge and suggestions to utilize for future practice and research.
REFERENCES

Anxiety and Depression Association of America (2016). *College students more likely to seek mental health treatment than older adults*. Washington DC. Retrieved from http://www.adaa.org/college-aged-adults-face-less-mental-health-stigma


St. John, D. J. (2014). *College health and mental health outcomes on student success* (Unpublished doctoral dissertation). Old Dominion University, Norfolk, VA


APPENDICES
APPENDIX A

INFORMATION ON DARDEN COLLEGE OF EDUCATION EXEMPT RESEARCH STATUS
Hi Woody:

I received your update. This update was not necessary according to our procedures. Once an exempt application has been approved, there is no expiration date. Only substantial changes from the original application must be reported to the college Human Subjects Committee.

Best wishes with this research project.
Ted

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(757) 683-6695 (office)
APPENDIX B

ANALYSIS OF ASSUMPTIONS
Table 6

*Descriptive Statistics for Continuous Variables*

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>M</th>
<th>SD</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intake GAF</td>
<td>65.04</td>
<td>6.58</td>
<td>0.01</td>
<td>1.27</td>
</tr>
<tr>
<td>Total Number of Diagnosis</td>
<td>2.05</td>
<td>0.75</td>
<td>0.08</td>
<td>-0.75</td>
</tr>
<tr>
<td>Total Number of Presenting Problems</td>
<td>9.29</td>
<td>6.45</td>
<td>1.09</td>
<td>1.50</td>
</tr>
<tr>
<td>Cumulative GPA semester of Counseling</td>
<td>2.69</td>
<td>0.75</td>
<td>-0.59</td>
<td>0.28</td>
</tr>
<tr>
<td>Total Number of Sessions</td>
<td>3.54</td>
<td>3.32</td>
<td>1.62</td>
<td>2.42</td>
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</tbody>
</table>

*Note.* GAF = Global Assessment of Functioning; GPA = Grade Point Average
Table 7

**Correlation Table**

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Time</td>
<td>----</td>
<td>-009</td>
<td>.060*</td>
<td>.058*</td>
<td>-043</td>
<td>.029</td>
<td>-089*</td>
<td>.075*</td>
<td>-004</td>
<td>.190*</td>
<td>.005</td>
</tr>
<tr>
<td>2. Female or Not</td>
<td>----</td>
<td>-087*</td>
<td>.047*</td>
<td>.019</td>
<td>.130*</td>
<td>-074*</td>
<td>-148*</td>
<td>.002</td>
<td>-002</td>
<td>.012</td>
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</tr>
<tr>
<td>3. Intake GAF</td>
<td>----</td>
<td>-189*</td>
<td>.072*</td>
<td>.095*</td>
<td>.017</td>
<td>-031</td>
<td>.071**</td>
<td>.018</td>
<td>-043</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Severity Level</td>
<td>----</td>
<td>.316*</td>
<td>.248**</td>
<td>-035</td>
<td>-033</td>
<td>-053*</td>
<td>.045*</td>
<td>.322**</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>5. Total Diagnoses</td>
<td>----</td>
<td>.268**</td>
<td>.001</td>
<td>-059*</td>
<td>-006</td>
<td>.070**</td>
<td>.155**</td>
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<td></td>
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</tr>
<tr>
<td>6. Total Presenting Problems</td>
<td>----</td>
<td>-085*</td>
<td>-019</td>
<td>-030</td>
<td>.028</td>
<td>.199**</td>
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<td></td>
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<td></td>
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<td>7. Referral Source</td>
<td>----</td>
<td>-069*</td>
<td>.042</td>
<td>-123**</td>
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<td></td>
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</tr>
<tr>
<td>8. Intake GPA</td>
<td>----</td>
<td>.029</td>
<td>.041</td>
<td>-021</td>
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<td></td>
<td></td>
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<td></td>
<td></td>
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<td>9. Number of Sessions</td>
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<td>10. Number of Courses</td>
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<td></td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>11. Off Campus Referrals</td>
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<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

*Note. GAF = Global Assessment of Functioning; GPA = Grade Point Average

* p < .05 ** p < .01
APPENDIX C
ANALYSIS TABLES
Table 8

Regression Analysis Summary for Severity Predicting Time (N = 2097)

<table>
<thead>
<tr>
<th>Step and predictor variable</th>
<th>B</th>
<th>SE B</th>
<th>β</th>
<th>R²</th>
<th>Δ R²</th>
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</thead>
<tbody>
<tr>
<td>Step 1</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Female or not</td>
<td>-0.218</td>
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<tr>
<td>Step 2</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female or not</td>
<td>-0.388</td>
<td>1.120</td>
<td>-.008</td>
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</tr>
<tr>
<td>Incoming GAF</td>
<td>0.115</td>
<td>0.087</td>
<td>.032</td>
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<tr>
<td>Diagnosis level</td>
<td>-1.340</td>
<td>0.716</td>
<td>-.045</td>
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</table>

*Note.  GAF = Global Assessment Functioning
* p < .05

Table 9

Regression Analysis Summary for Complexity Predicting Time (N = 2056)

<table>
<thead>
<tr>
<th>Step and predictor variable</th>
<th>B</th>
<th>SE B</th>
<th>β</th>
<th>R²</th>
<th>Δ R²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1</td>
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<td></td>
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<tr>
<td>Female or not</td>
<td>-0.313</td>
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<td></td>
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<tr>
<td>Step 2</td>
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<td></td>
<td></td>
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<td>Female or not</td>
<td>-0.700</td>
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<tr>
<td>Total Number of Presenting Problems</td>
<td>0.195</td>
<td>0.085</td>
<td>.053*</td>
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</tr>
<tr>
<td>Total Number of Diagnoses</td>
<td>-1.805</td>
<td>0.722</td>
<td>-.057*</td>
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* p < .05
### Table 10

*Regression Analysis Summary for Disruptiveness Predicting Time (N = 1340)*

<table>
<thead>
<tr>
<th>Step and predictor variable</th>
<th>$B$</th>
<th>$SE$</th>
<th>$\beta$</th>
<th>$R^2$</th>
<th>$\Delta R^2$</th>
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</thead>
<tbody>
<tr>
<td>Step 1</td>
<td></td>
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<tr>
<td>Female or not</td>
<td>-0.702</td>
<td>1.411</td>
<td>-.015</td>
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<tr>
<td>Step 2</td>
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<td></td>
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<tr>
<td>Female or not</td>
<td>-2.042</td>
<td>1.426</td>
<td>-.043</td>
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<td>.024***</td>
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<tr>
<td>Intake GPA</td>
<td>2.707</td>
<td>0.888</td>
<td>.092**</td>
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<tr>
<td>Referral Source</td>
<td>-1.635</td>
<td>0.436</td>
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</table>

**Note.** GPA = Grade Point Average  
** ** $p < .01$  *** $p < .001$

### Table 11

*Regression Analysis Summary for Treatment Demand Predicting Time (N = 2095)*

<table>
<thead>
<tr>
<th>Step and predictor variable</th>
<th>$B$</th>
<th>$SE$</th>
<th>$\beta$</th>
<th>$R^2$</th>
<th>$\Delta R^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1</td>
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<tr>
<td>Female or not</td>
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<td>-.007</td>
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<td>.036***</td>
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<td>Off-Campus Referral</td>
<td>0.154</td>
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</tr>
<tr>
<td>Total Number of Sessions</td>
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<td>0.157</td>
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<td>Total Number of Courses</td>
<td>10.034</td>
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</tbody>
</table>

*** $p < .001$
VITA

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EDUCATION

Old Dominion University, Ph.D. May 2016
Counselor Education and Supervision (CACRE) Norfolk, VA

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Florida Gulf Coast University, B.A. May 2006
Major: Psychology Fort Myers, FL

PROFESSIONAL PROFILE

Old Dominion University May 2013-May 2016
Graduate Teaching and Research Assistant Norfolk, VA

Eastern Virginia Medical School January 2015-May 2016
Counselor in Residence; Counseling Intern Norfolk, VA

Community Services Group August 2012-May 2013
Group Therapist Lancaster, PA

SELECTED PUBLICATIONS


SELECTED PRESENTATIONS

