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Attention Deficity Hyperactivity Disorder, College Students, and Identity

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Walden University

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Jeanne Vandenberg

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Walden University

2017

Abstract

Attention Deficit Hyperactivity Disorder, College Students, and Identity

by

Jeanne M. Vandenberg

M Ed, Bridgewater State College 1993

BS, Bridgewater State College 1981

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Human Services

Walden University

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Abstract

Attention Deficit Hyperactivity Disorder (ADHD) is a growing societal problem that has been increasing among college students. Previous research on this population is limited and even fewer studies focus on women. The purpose of this quantitative study is to understand the developmental task of ego identity status for female college students with and without a diagnosis of ADHD based on Erikson's psychosocial theory. The study used the Objective Measure of Ego Identity Status (OMEIS) to measure identity diffusion, foreclosure, moratorium, and achievement status as a means to assess identity status in female college students. Data analysis included descriptive statistics, independent sample *t* tests, and the phi coefficient correlation. There was a lack of statistically significant findings for four of the five proposed research questions, indicating that 28 female undergraduate students in this purposive sample with and without a diagnosis of ADHD do not differ in the developmental task of ego identity. However, results for the research question regarding the choice of major among participants were statistically significant. Specifically, a *p* value of .022 was found using the phi coefficient for the research question concerning the choice of major, resulting in rejecting the null hypothesis. Implications for positive social change include the provision of exploration of major choices for female college students with a diagnosis of ADHD, implementation of a specific course that is designed to support students in the choice of majors, and opportunities to connect with faculty to discuss and discover major options.

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Dedication

This study is dedicated to Artie, Megan and Julia Vandenberg. From Alaska, to San Diego, to Humarock, and back to Stoughton, not once in this long process did you waver in your belief that I would accomplish this goal. I am eternally grateful for your love and support.

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Chapter 1: Introduction to the Study

The Americans with Disabilities Act (ADA) of 1990 and the Americans with Disabilities Act Amendment Act (ADAAA) of 2008 have provided a roadmap for students with learning disorders to attend institutes of higher education in greater numbers than ever before possible (Shaw, Madaus, & Dukes, 2010). The ADA entitles college students with a diagnosed learning disability to receive educational support (Cleveland & Crowe, 2013; Weydant et al., 2013). Conservative estimates from the Children and Adults with Attention Deficit Hyperactivity Disorder (CHADD) report that between 2% and 8% of college students have ADHD and approximately 35%-65% of adolescents have ADHD that persists into adulthood (2016). Furthermore, additional studies indicate that the number of students diagnosed with ADHD attending college is also increasing from 11.6% of undergraduate students in 2004 to 19.1% in a 2008 (Stamp, Banerjee, & Brown, 2013). Also, approximately 20% of high school students diagnosed with ADHD that went on to college received support in high school, and about 19% of college students utilized the resources available to them at institutes of higher learning (CHADD, 2016). Recent research has indicated that the symptoms of ADHD do not wane as individuals grow older, but continue into adulthood (Prevatt & Young, 2014). This presents a new challenge for professionals working in higher education.

There is a lack of current knowledge concerning college students with ADHD and how this diagnosis affects their academic, psychological, and social growth, particularly identity formation. Several studies reported that college students with ADHD often exhibit lower grade point averages (GPA), have difficulty with time management, and demonstrate lower retention rates compared with their peers (Fleming & McMahon,

2012; Prevatt, Osborn, & Coffman, 2016; Weyandt et al., 2013). For college students and adults with ADHD, stimulant medication is one of the most common forms of treatment and needs to be monitored by professionals (Fleming & McMahon, 2012). Parker and Boutelle (2009) reported that college students with ADHD are the second largest group of students served by the offices of students with disabilities. College students with ADHD are more apt to have higher cognitive abilities and better adaptability skills than their peers that do not commit to college; however, the college environment presents a new set of challenges for these students including self-management, sustained attention, organization, and the setting and achieving short and long term goals (Buchanan, 2011; Fleming & McMahon, 2012). Furthermore, college students with ADHD often experience difficulty with social and emotional adjustment to college (Kearns & Ruebel, 2011).

Professionals in the field of both secondary and higher education need more research and historical knowledge of ADHD. As an educator for over 25 years working with students with language based learning disabilities including ADHD, I believe that the key is to establish new data to fill the gap in the present research concerning ADHD students and identity development. The increase in the number of students attending college with ADHD has warranted a look at how to serve these students more effectively. Fleming and McMahon (2012) reported that approximately 80% of individuals that had a childhood diagnosis of ADHD have symptoms that significantly impact their lifestyle in a negative manner in the areas of social, academic, and work domains as adults. In addition, the subset of college students with ADHD are more likely to be on academic probation, are less likely to graduate from college once they initially attend, and are often

unprepared for the transition to college (Fleming & McMahon, 2012; Prevatt & Young, 2014; Weydant et al., 2013). Understanding these problems can help support professionals recognize the negative impacts of ADHD in college students and provide new insights and perspective to college and academic support personnel, ADHD life coaches, counselors, and educators both on and off campus.

Waterman and Waterman (1969) reported in an early study on the relationship between ego identity statuses that ego identity status is a key factor in how a student reacts to college, and searching through available alternatives at college was important for identity achievement and a significant premise for further psychological growth. Additionally, the study indicated that colleges can render an environment that aids the students' productive resolution of his or her identity crisis. Furthermore, by attending college, students can explore opportunities to recreate developing identities that aid in identity formation, with the support of family, peers, and faculty (Azmitia, Syed, & Radmacher, 2013).

Eleanor Roosevelt stated that "ideas move people" (as cited in Wronka, p.5, 2008). Social change stems from research that leads to social action (Wronka, 2008). Hamman and Hendricks (2005) reported that the role of adults in supporting the identity of adolescents was critical, and that educators in particular were able to assist students to consider, investigate, and uncover the students' capabilities and communicate to them their talents and potentials.

Problem Statement

There is a growing societal problem that needs to be addressed in higher education. Information is quite limited on research that has focused on how identity

development may affect college students, especially female college students with ADHD. CHADD (2016) reported that between 412,856 and 1,651,425 college students with ADHD were enrolled in colleges across the U.S. in 2012. Statistically, approximately 3-5% of the college population has a diagnosis of ADHD; however, the number of actual college students with this disorder is probably higher due to nonreporting (Weydant et al., 2013). Studies have shown that college students with ADHD often have issues in the area of academics, social interactions, and personal adjustment (Cleveland & Crowe, 2013; Stamp, Banerjee, & Brown, 2013). For example, Prevatt and Young (2014) identified problems for college students with ADHD to include poor time management skills, deficient test-taking skills, and greater difficulty managing their academic responsibilities on their own. The underlying causes that contribute to academic failure of college students with ADHD may be associated with impaired organizational skills, study skill deficits, or deficits in executive functioning (Weydant et al., 2013). In addition, it is not clear if there is a direct association between psychiatric and social problems such as depression, anxiety disorders, substance abuse and legal issues with students with ADHD (Kearns & Ruebel; 2011; Pazol & Griggins, 2012; Weydant et al., 2013).

However, few studies have been conducted that focus on how ADHD is manifested in adults, particularly women, even though approximately 4% of adults in the U.S. are diagnosed with ADHD, and 1.7% of these individuals have a classification of severe in relation to how the disorder is exhibited in their lives (National Institute of Mental Health [NIMH], 2016). Babinski et al. (2011) reported that female college students with ADHD often exhibit more depressive symptoms, have an increase in relationship problems with family and peers, and earn lower levels of academic

achievement than their peers. Bolton, Hughes, and Kessler (2008) and Quinn (2005) reported in separate studies that female college students often internalize some symptoms of ADHD but show symptoms of disorganization, anxiety, and low self-esteem. Therefore, female college students with ADHD have a number of issues that must be dealt with as well as the normal transition from high school to college and the associated developmental processes that occur.

Weydant et al. (2012) conducted a comparison study with college students with and without ADHD that determined that students with ADHD had lower academic performance and greater difficulty with social adjustment. Furthermore, successful academic achievement has also been linked to identity development (Chorba, Was, & Isaacson, 2012). While previous research has focused on the academic issues concerning college students with ADHD, none have looked at how identity development may be affected by this diagnosis. Luyckx, Klimstra, Duriez, Schwartz, and Vanhalst (2012) reported that identity formation was an essential normative, developmental requirement for adolescents and the coping strategies utilized during this process are predicted to influence one another. Furthermore, the study indicated that adolescents that were able to show strong coping skill progressed in identity exploration, and continued to develop better coping skills. This is important information as college students with ADHD often exhibit poor coping skills (Kearns & Ruebel, 2011; Luyckx et al., 2012).

Whitbourne and Tesch (1985) previously studied identity development in college students and alumni provided evidence that identity achievement status was more frequently reported for alumni than college seniors, who were most often reported in the foreclosure status. In an even earlier study, Marcia and Friedman (1970) described how

ego identity statuses were originally developed and validated using college male students as study participants. Johnson, Buboltz, and Seemann (2003) examined the relationship between identity formation and differentiation of self in college students reporting that the development of a distinct identity was critical for sound psychological development. Pazol and Griggins (2012) reported that college students, while functioning to establish autonomy and establish their identity, often discover their academic choices or major may not fit their abilities or needs, and suggested a comprehensive assessment is necessary to help these students to clearly identify their strengths and weaknesses, and connect with supports, particularly for students with a diagnosis of ADHD. Hamman and Hendriks (2005) described how educators were key figures in the intergenerational communication between adults and adolescents, and these educators support students in their progress toward an honest, feasible and genuine identity. Schwartz, Zamboanga, Luyckx, Meca and Ritchie (2013) reported that although earlier studies had focused on identity status in terms of adjustment and development through comparison and contrast, the authors criticized the work as being too basic understand the significance of identity development. A review of these studies indicated that there is a gap in current data on identity development in college students, with a larger gap on information concerning female college students and identity formation (Schwartz et al., 2013). Therefore, this study aimed to understand the developmental task of identity involving undergraduate, female college students with a diagnosis of ADHD.

Theoretical Framework

Erikson was a leader in the development of a psychosocial theory that focused on identity development as well as other issues in adolescence and during the human life

cycle (Marcia, 1966). Erikson's (1968) theory reported that identity development was a crucial task of adolescents and young adults. Furthermore, Erikson (1950) described the adolescent mind as being in a condition of standstill; somewhere between childhood and adulthood with the growth of identity as a process of mastering particular stages of life. He hypothesized that identity development, although it appeared to take place during adolescence, was an evolving, ongoing process (Erikson, 1968).

Psychosocial development theory (Erikson, 1968) helped guide the progress of this study. Erikson's theory was utilized in the development of the research questions, hypotheses, and research tools for this particular study. Schwartz (2012) acknowledged Marcia (1966) as the theorist that further examined and expanded Erikson's research to develop empirically measurable constructs to allow for and support additional scientific research in the area of identity status.

Erikson's (1968) psychosocial development theory posited that each individual follows an eight-stage process that is lifelong. During each of these stages, individuals need to resolve a precise crisis (Erikson, 1968). This process, for many in the U.S., has lengthened to include not only the traditional adolescent time period beginning at about age 13, but continuing until the early 20's (Schwartz, Zamboagna, Luyckx, Meca, & Ritchie, 2013). Furthermore, Erikson's theory described the adolescent identity crisis as an age of reflection that included trying out new roles, scenarios, and life choices.

Erikson's efforts continued through the work of Marcia who described specific identity statuses (Marcia, 1966). Marcia established separate dimensions from Erikson's work by defining two criteria, crisis and commitment, to help define the particular ego status the adolescent was located (Marcia & Friedman, 1970). Furthermore, crisis or

exploration examines how adolescents approach identity through investigating a range of identity options, while commitment reflects how dedicated the adolescent becomes to a specific set of goals, values, and beliefs (Adams, Berzonsky, & Keating, 2006). Marcia and Friedman (1970) provided terminology to give a formal description of ego identity statuses.

Ego identity status is a term that describes four specific methods in which adolescents cope with Erikson's identity crisis (Marcia & Friedman, 1970; Schwartz, Zamboanga, Meca, & Ritchie, 2012). These constructs, developed by Marcia, include identity achievement, moratorium, identity foreclosure, and identity diffusion. Individuals that are in the identity achievement stage have made a choice in their ideology and have resolved to move forward with a strong sense of self-esteem (Marcia, 1970). Moratorium individuals are at the crisis stage of identity with no specific movements towards resolving this issue (Marcia, 1970). Identity foreclosure, for adolescents, is marked by a strong belief in identifying with the values of their parents without going through a crisis period (Marcia, 1970). Finally, individuals involved in the identity diffusion construct have made no specific commitment towards resolving their identity crisis (Marcia, 1970). The theoretical framework of this study utilized Erikson's psychosocial theory after the establishment of constructs that can be measured quantitatively and analyzed.

Purpose of the Study

The purpose of this quantitative research was to understand the developmental task of ego identity status for female college students with and without a diagnosis of ADHD based on Erikson's psychosocial theory. The study focused on the construct of ego identity and the testing of the relationship between this construct and ADHD. The

objective of this study was to gather original data on the impact of ADHD on female college students in order to provide new insights into supporting these students on campus and in other areas.

Nature of the Study

The nature of this study was quantitative, with a correlational design. The study aimed to look at two specific variables; the independent variable being the diagnosis of ADHD and the primary dependent variable of ego identity status. A survey design with a specific instrument that measures the concept of ego identity status was utilized to gather statistical data for analysis. I also gathered demographic information concerning the participants' age, class rank, current GPA, and major.

Research Questions and Hypotheses

The primary research question for this study was: How does ADHD affect ego identity status among female college students? The following hypotheses were tested:

Null Hypothesis (H₀1) There are no differences in ego identity status between undergraduate college women diagnosed with ADHD and undergraduate college women not diagnosed with ADHD.

Alternative Hypothesis (H_a1) There are differences in ego identity status between undergraduate college women diagnosed with ADHD and undergraduate college women not diagnosed with ADHD.

Furthermore, with the other demographic variables of current age, class rank, current GPA and major, additional research questions and corresponding hypotheses were addressed as follows:

RQ2: Is age related ego identity status among female college students with a diagnosis of ADHD or no diagnosis of ADHD?

Null Hypothesis (H_02) There are no differences in ego identity status between undergraduate college women diagnosed with ADHD and undergraduate college women not diagnosed with ADHD when compared by age.

Alternative Hypothesis (H_a2) There are differences in ego identity status between undergraduate college women diagnosed with ADHD and undergraduate college women not diagnosed with ADHD when compared by age.

RQ3: How is class rank associated with ego identity status among female college students with a diagnosis of ADHD or no diagnosis of ADHD?

Null Hypothesis (H_03) There are no differences in ego identity status between undergraduate college women diagnosed with ADHD and undergraduate college women not diagnosed with ADHD when compared by class rank.

Alternative Hypothesis (H_a3) There are differences in ego identity status between undergraduate college women diagnosed with ADHD and undergraduate college women not diagnosed with ADHD when compared by class rank.

RQ4: How is GPA related to the ego identity status of female college students with a diagnosis of ADHD or no diagnosis of ADHD?

Null Hypothesis (H_04) There are no differences in ego identity status between undergraduate college women diagnosed with ADHD and undergraduate college women not diagnosed with ADHD when compared by current GPA.

Alternative Hypothesis (H_{a4}) There are differences in ego identity status between undergraduate college women diagnosed with ADHD and undergraduate college women not diagnosed with ADHD when compared by current GPA.

RQ5: How is choice of major related ego identity status among female college students with a diagnosis of ADHD or no diagnosis of ADHD?

Null Hypothesis (H₀₅) There are no differences in ego identity status between undergraduate college women diagnosed with ADHD and undergraduate college women not diagnosed with ADHD when compared by major.

Alternative Hypothesis (H_{a5}) There are differences in ego identity status between undergraduate college women diagnosed with ADHD and undergraduate college women not diagnosed with ADHD when compared by major.

Definition of Terms

Americans with Disabilities Act of 1990: Federal legislation prohibiting discrimination against persons with disabilities in employment, transportation, public access, local government, and telecommunications; as applied to secondary and postsecondary settings (Woolfolk, 2008, p. 140).

Attention Deficit Hyperactivity Disorder: A persistent pattern of inattention and/or hyper- impulsiveness that interferes with functioning or development as characterized by inattention and/or hyperactivity and impulsivity (American Psychiatric Association, 2013, p.59).

Commitment: From Marcia's early work on identity, represents the choice to pursue a specific set of goals, values and beliefs (Schwartz, 2002, p. 610).

Developmental Crisis: A specific conflict whose resolution prepares the way for the next stage (Woolfolk, 2008, p.89).

Ego identity status: Term used to describe four specific ways of coping with adolescent identity crisis: identity achievement, identity foreclosure, moratorium, and identity diffusion (Marcia & Friedman, 1970).

Erikson's psychosocial theory: A description of tasks to be accomplished that emphasized the emergence of self, the search for identity, the individual's relationship with others, and the role of the environment throughout the process (Erikson, 1968)

Exploration: From Marcia's early work on identity, the search for a revised and refined sense of self (Schwartz, 2002, p. 610).

Gender: The public and usually legally recognized lived roles as a boy or girl, man or woman (American Psychiatric Association, 2013, p. 822).

Identity: Experience oneself as unique, with clear boundaries between self and others; stability of self-esteem and accuracy of self-appraisal; capacity for and ability to regulate a range of emotional experience (American Psychiatric Association, 2013, p. 823).

Identity achievement: One of four identity statuses in which after a consideration of alternatives and options, the individual makes a commitment to a choice (Woolfolk, 2008, p.79).

Identity diffusion: One of four identity statuses in which there is confusion about who one is and what one wants (Woolfolk, 2008, p.89).

Identity foreclosure: One of four identity statuses in which the individual accepts the life choices of others without exploration of own choices (Woolfolk, 2008, p. 79).

Learning disability: A problem with the acquisition and use of language which may appear as a difficulty with reading, writing, reasoning or math (Woolfolk, 2008, p. 112).

Moratorium: One of four identity statuses in which the individual is in an identity crisis; exploration with a delay in commitment to a choice (Woolfolk, 2008, p. 79).

Self-concept: A cognitive structure that describes an individual's knowledge and beliefs about themselves; their ideas, feelings, attitudes, and expectations (Woolfolk, 2008).

Specific Learning disability: Persistent difficulties learning keystone academic skills, with onset during the years of formal schooling; individuals perform well below average for age in reading, math, and/or written expression (American Psychiatric Association, 2013, p. 66).

Variables

Dependent Variable

The primary dependent variable was defined as ego identity status. Through the use of Marcia's measurable constructs, ego identity could be classified into one of four specific identity statuses: identity achievement, identity diffusion, identity foreclosure, or moratorium (Njus & Johnson, 2008).

Independent Variables

The diagnosis of ADHD was the primary independent variable. The identity statuses of female students with and without this diagnosis were compared. In addition, with demographic data other independent variables included age, class rank, current GPA, and major were also measured.

In order to determine the impact of ADHD and ego identity on college women, a specific scale was used to examine ego identity according to psychosocial development. A review of numerous scales that focus on this particular construct demonstrated that most measures were based on Erikson's theory of human development. However, four specific scales reviewed used samples of young adults ages 18+ and college students, as well as being self-administered. Bennion and Adams (1986) formed the Extended Object Measure of Ego Identity Status (EOM-EIS). Enright, Olsen, Ganiere, Lapsley, Daniel, and Bass (1984) developed the 36 Item Ego Identity Scale (EIS). Balistreri, Busch-Rossnagel, and Geisinger (1995) formed the Ego Identity Process Questionnaire (EIPQ). Adams (2010) revised the Objective Measure of Ego Identity Status (OMEIS). However, the OMEIS specifically assesses the construct of ego identity status in adolescents and young adults. Using a Likert-type scale ranging from 1-6, the OMEIS allows participants to rate how closely they agree or disagree with the survey statements.

Assumptions

The instrument used in this study was the OMEIS. I assumed that no student in my study had taken this measurement tool in the recent past. Additionally, I also assumed that the students were honest in their answers on the measurement tool. It was assumed that the instrument, the OMEIS, accurately measured the concept of this study, ego identity status. Female college students that participated in this study were assumed to be diagnosed with ADHD prior to attending college.

Scope, Delimitations, and Limitation

Undergraduate college women ages 18-25 who attended one private, liberal arts college in New England were participants in this study. The participants in the study were volunteers and selection was based on availability, diagnosis, and random sampling. During the recruitment process, an explanation of the criteria that was required to participate in the study was provided. Furthermore, several boundaries were established for participants. The study will only include females because there is a lack of research concerning female college students (Bolton, Hughes, Kessler, 2008). Therefore, it would be critical to obtain data concerning this population. In addition, females outside the ages of 18-25 were excluded since the focus of the study was on those participants actively involved in the ego identity process as college student.

The delimitations of this study included the uniqueness that limits the scope of the problem; the generalization of this study is limited to female college students. Additionally, a key limitation of the study was that Erikson's theory was based on men's psychosocial development, bringing criticism of this theory as it applies to women (Markstrom & Kalmanir, 2011). Also, Marcia's identity statuses may be considered a limitation in that the development of an identity is an internal process rather than one that may also be influenced by external forces (Schwartz et al., 2013).

Another limitation to this research was the design of the study. The sample size was limited to one specific school. Furthermore, the nonprobability sample design with purposive samples allow for subjective judgment by this researcher to select samples that represent a particular population; female college students with and without the diagnosis of ADHD (Frankfort-Nachmias & Nachmias, 2008).

Ethical Issues

Wronka (2008) described the importance of ethical codes utilized by researchers and other practitioners and the responsibility they have in interpreting these codes and putting them into action. In addition, quantitative research can provide statistics that allow others to view the present problem and furnish solid credibility. Emanuel, Abdoler, and Stunkel (2009) stated that ethical principles were established to insure that participants in research studies were not hurt. Furthermore, if participants in studies did not feel safe, they would not participate in studies, limiting research. Leentjens and Levenson (2013) reported that researchers should be concerned with evidence of coercion, or any influence that makes participants less than voluntary. However, college students may be hesitant to communicate their own feelings or doubts about participating in studies, particularly if their own professor was conducting the research. It was important that recruitment methods and privacy issues were guided by appropriate codes; group settings can violate the privacy of a student, or they may feel peer pressure to participate (citation). Furthermore, compensation for college students that includes earning extra credit for a particular academic course may be an incentive to students who have obtained a low grade, rather than wanting to freely participate.

Several ethical issues were addressed in this research study. Participants had a higher amount of anonymity due to the collection of data through the use of student email. This provided greater anonymity and assurance of confidentiality of information. Additionally, proper informed consent procedures were followed, respecting the rights of participants during data collection, data analysis, and interpretation of information.

Cross cultural comparisons in identity research is limited (Schwartz et al., 2012). Marcia's work on identity status was based primarily on white, American youths and the idea of an ethnic identity is not a part of his original research (Schwartz et al., 2012).

Significance of Study

The significance of this research study could have an impact on the needed social change in the field of higher education. The study data can bring new knowledge to an area of study that is lacking information. College students with ADHD experience a decreased graduation rate and employ fewer adaptive coping skills that could support their academic and social transition to higher education venues (Weydant et al., 2013). Furthermore, research on college students indicates that those diagnosed with ADHD generate lower grade point averages, increased academic problems, and have difficulty with social relationships (Overbey et al., 2011; Prevatt & Young, 2014; Safren et al., 2010).

Ego identity status has had few studies involving women, and in particular undergraduate college women. The use of a quantitative measuring tool supports a faster processing of data that can be disseminated to specific populations similar to those in the research study. All of these issues affect college students with ADHD as well as tackling the developmental task of ego identity status during the early college years.

Summary

Research concerning ego identity formation has lagged behind the defining of specific constructs that have been established (Schwartz, 2002). Data from this researcher's study may lead to contributing information in the assistance of college

students with ADHD in postsecondary environments. Social change can only occur when the data from research provides a new understanding of the problem. The education, training, and support of female college students with ADHD may change with this key information.

The next chapter is the review of the literature. The literature review includes prior research related to ADHD and college students as well as identity development.

Chapter 2: Literature Review

Introduction

The term ADHD, according to the *Diagnostic and Statistical Manual of Mental Disorders*, (5th ed.; *DSM-5*; American Psychiatric Association [APA], 2013) “is a persistent pattern of inattention and/or hyperactivity-impulsivity that interferes with functioning or development” (p.61). In addition, this pattern of behavior, present in multiple settings (e.g., school and home), that can result in performance issues in social, educational, or work settings” (APA, p.61, 2013). An update to the manual characterizes two subtypes rather than three as in previous editions; inattention, and hyperactivity and impulsivity as well as an increase in the age of onset to age 12 (APA, 2013). ADHD affects approximately 3%-7% of the school age population, and is one of the most common childhood mental health issues (Buchanan, 2011; Weydant et al., 2013). Prior to the development of the DSM-5, a diagnosis of ADHD in adults was based on diagnostic criteria that focused on children and applied to adults (Johnson & Smith, 1998; Reilly, 2005). Furthermore, studies have demonstrated that between 50- 60% of children diagnosed with ADHD will continue to exhibit symptoms into adulthood (Prevatt, Osborn, & Coffman, 2016; Weydant et al., 2013).

A limited number of research studies have been conducted on college students with adult ADHD, however, the prevalence rate is estimated at 3% to 5% of the college population (Buchanan, St. Charles, Rigler, & Hart, 2010; Fleming & Snell, 2008; Kearns & Rubell, 2011). Reilly (2005) reported the difficulty of applying a diagnosis of ADHD to adults since the criteria established for ADHD focused on clinical trials with children.

Johnson and Smith (1998) reported that there were no studies focused on college students and the factor structure of ADHD. Also, professionals disagree on the specific criteria for adults, particularly in the areas of social and work functioning (Heiligenstein et al., 1999; Reilly, 2005). The development of DSM-5 provided changes to the criteria for adults including the need to exhibit only five of the six symptoms from either or both of the criteria for inattention or impulsivity and hyperactivity, and the use of examples of behaviors older adolescents or adults (age 17 and over), would most likely to exhibit (APA, 2013).

Literature Search Strategy

A number of library databases and search engines were used in the development of the literature review. The primary search engines for this research study included Walden University Library Home, Curry College Academic Resources/Levin Library, Google Chrome, and Google Scholar. A listing of the accessed library databases used, in alphabetical order, is as follows:

- Academic Search Complete
- Assessments
- Education Research Complete
- ERIC
- Mental Measurements Yearbook with Tests in Print
- Pro Quest Central
- PsyARTICLES
- PsycINFO

- PsycTESTS
- SAGE Premier
- SocINDEX with FULL TEXT

The key search terms, listed alphabetically, included the following:

- Academic Success and College Students
- Attention Deficit Hyperactivity Disorder (ADHD)
- ADHD and Adolescents
- ADHD and Adolescents and College Students
- ADHD and College Students
- ADHD and College Students and Identity
- ADHD and Diagnosis
- ADHD and Gender
- ADHD and Treatment
- Adolescents and Identity
- Adolescents and Identity Crisis
- College Students
- College Students with Learning Disabilities
- College Women
- Erikson
- Erikson and College Students
- Erikson's Theory of Psychosocial Development
- Ego Identity

- Ego Identity and Adolescents
- Ego Identity and College Students
- Ego Identity and College Women
- Ego Identity Scale
- Ego Identity Status
- Emerging Adults and ADHD
- Executive Functioning
- Higher Education and ADHD
- Higher Education and Identity
- Identity and ADHD
- Identity Development
- Identity Development Assessments
- Learning Strategies and College Students
- Psychosocial Development
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- Self-Advocacy and College Students
- Self-Advocacy and ADHD
- Social Development and Adolescents
- Social Development and College Students

The scope of this literature review, in terms of years searched, included data and articles from 1961 to 2016. There was little current research concerning female college students with ADHD or identity development of undergraduate female students.

Therefore, I looked at both peer-reviewed literature from 1961 to the present as well as seminal literature including works on identity development by Erikson (1950, 1968, 1997), Marcia (1966, 1970) on ego identity status, and Barkley's (1990) handbook on ADHD for additional original information on the topic of ADHD and identity, and Hallowell's (1994) literature on recognizing and coping with ADHD.

ADHD and College Students in Literature

Across the U.S. an increasing number of students with a diagnosis of ADHD are attending college (Weyandt et al., 2013). Kerns and Ruebell (2011) reported that ADHD is the second most common developmental disorder among college students. The American Disabilities Act entitles students with ADHD to educational support services in college; however, students with ADHD are not required to disclose their disability status making the actual number of college students with ADHD an approximation (Weyandt & DuPaul, 2008). In addition, there are few studies of college students and ADHD in the literature (Kern et al., 1999; Reaser, Prevatt, Petscher, & Proctor, 2007). Furthermore, Bolton, Hughes, and Kessler (2008) reported that female college students were also understudied. Add summary to fully conclude the paragraph and connect back to your study.

Research indicated that there are a range of impairments that affect the academic, social, and emotional performance of college students with ADHD. The new academic and organizational demands of a college setting can be overwhelming to students with ADHD due to the decrease in external structure that can be found in high school and home settings (Costello & Stone, 2012; Parker, Hoffman, Sawilowsky, & Roland, 2011). Additionally, ADHD can be defined as a persistent impairment in the area of self-

regulation of behavior and affect, as a result of developmental difficulties concerning executive functioning (Buchanan, 2011; Kaminski, 2006; Parker & Boutelle, 2009; Parker, Hoffman, Sawilowsky, & Rolands, 2011). Weyandt and DuPaul (2008) described one of the underlying factors that contribute to academic struggles and failure in college students with ADHD may be related to weakened organizational skills, study skills deficits, and deficits in executive functioning and other cognitive shortfalls. Buchanan (2011) and Meaux, Green, and Broussard (2009) reported that college students with ADHD display poor time management skills and deficient test taking skills compared to their peers. The variety of impairments facing college students with ADHD indicate that further studies with this group of individuals are needed.

Meaux, Green, and Broussard et al. (2009) reported that college students with ADHD have more difficulty transitioning from high school than students with no diagnosis of ADHD. Many college students with ADHD have little experience as self-advocates or comprehend the full consequences of ADHD. Ramsey and Rostain (2006) reported students with ADHD who were having few problems in high school were now having significant issues transitioning. However, Reaser et al. (2007) reported college students with ADHD have average to above average intelligence, and possess the intellectual ability to learn. Hallberg, Klingberg, Setsaa, and Moller (2010) indicated that during the stage of identity development, the individual equates him or herself to significant others and wishes to be like them, however, adolescents with ADHD often have difficulty viewing themselves as a whole person due to their diagnosis; they feel different from their peers.

Studies indicate that college students with ADHD have significantly more academic struggles than college students without disabilities (Prevatt, Osborn, & Coffman, 2016; Weyandt et al., 2013). In the area of academics, these students have significantly lower mean GPA's, and increased risk of being on academic probation, and report more academic problems (Heiligenstein et al., 1999; Ramsey & Rostein, 2006). Weyandt and DuPaul (2008) and Costello and Stone (2012) reported that there is a statistically significant relationship between inattentive symptoms and academic achievement of students in the first year of college and attention problems are a key predictor of GPA. Kane, Walker, and Schmidt (2011) reported that college students with ADHD display poor academic coping skills and lower graduation rates. On the other hand, students with ADHD learn well when the student is extremely interested in the material being presented, particularly curriculum that is novel, significant, and new (Reaser et al., 2007). Academic problems add to the issues college students with ADHD must navigate as well as their ADHD symptoms.

College students with ADHD also demonstrated higher levels of psychological and/or social problems including inadequate family and peer relationships, anxiety, depression, conduct issues, early substance experimentation and abuse, as well as difficulties in adult social relationships (Realmuto et al., 2009; Schepman, Nicholas, Stahelski, & Fennerty, 2010; Weyandt & DuPaul, 2008). One study reported on internal restlessness of adults with ADHD that rather than displaying symptoms of hyperactivity, these adults often report having problems with daydreaming, a continuous flow of ideas, and focusing on the task at hand (Weyandt et al., 2003). The APA description of ADHD in adults also refers to this internal restlessness as one of the criteria for adults (APA,

2013). This internal restlessness may interfere with other developmental tasks of young adults, as they move towards relationships with others, and self-identity as college students.

Consistently, research studies have indicated that there is a strong degree of comorbidity between ADHD and psychiatric disorders (Kane, Walker, & Schmidt, 2011; Kearns & Ruebel, 2011; Schepman, Nicholas, Stahelski, & Fernnerty, 2010).

Specifically, Kearns and Ruebel (2011) reported that young adults with ADHD displayed higher rates of depression, 28% compared to 12% of control group, and 24-43% of adults diagnosed with ADHD have also been diagnosed with generalized anxiety disorder, while 16-31% of these adults have also been diagnosed with depression. Realmuto et al. (2009) concluded from the study of ADHD in young adults that alcohol use was increased by 2.4%, marijuana use by 2.7%, and tobacco use by 2.2%. The issue of comorbidity of psychiatric disorders and ADHD will continue to need to be addressed in research studies.

Weyandt and DuPaul (2008) reported that college students report a greater degree of psychological distress, a lower quality of life, and are at risk for difficulties with social relationships and adjustment to college life. However, there are few studies reported to have examined the possible social functioning deficits demonstrated by college students with ADHD.

Identity Development

Literature concerning Erik Erikson's psychosocial theory of human development is marked by the defined eight specific stages that occur across a lifespan (Erikson, 1950; Erikson, 1968). Each of the stages adds to the development of basic ego strength of an

individual, and with the successful resolution of the stage, the individual is better able to manage new psychological and social challenges (Erikson, 1968). Erikson defined ego identity as an individual's consciousness or understanding that tasks that are mastered can be integrated into a sense of self that is recognized by both the individual and this same self is recognized by the community in which the individual is living. Furthermore, personal identity is the actual existence of the individual, that is recognized by this individual, and others also see the same personal identity in this individual. The process of ego development is how the individual preserves himself as a coherent personality as he understands himself and as others see his experiences.

The ego identity process begins in childhood as an infant and the end of childhood is distinguished by the achievement of a sense of internal distinctiveness or wholeness as an individual (Erikson, 1968). For young children, Erikson (1950) described play as the essential function of the ego in order to coordinate the developmental process both physically and socially. The psychosocial identity of an individual grows through a process of assimilation of different attempted identities; however, a permanent sense of identity develops only through a sequence of stages beginning with trust.

Erikson (1968) postulated that each stage of human development transpires within a social environment; however, the progress through the stages provided a stronger sense of inner cohesiveness for the individual. Every individual ascends through the eight-stage process with the resolution of the major crisis associated with that stage. Stage I, Erikson described as trust vs. mistrust, Stage II, autonomy vs. shame and doubt, Stage III, initiative vs. guilt, Stage IV, industry vs. inferiority, Stage V, identity vs. identity confusion, Stage VI, intimacy vs. isolation, Stage VII, generativity vs. stagnation, and

Stage VIII, integrity vs. despair. The successful resolution of each stage brings about a new viewpoint for the individual, or turning point in their lives. However, each basic conflict or crisis persists within the individual, in some shape, as an adult.

Erikson's (1968) description of the development of ego identity stated that it is more than the total of the childhood identities, but the amassed experience of the ego's ability to combine all these identifications while the changes and alterations are occurring in the sexual drive or sexual instincts of the individual, and also during the time in which skills are furnished from opportunities, and with the situations presented in social roles.

During adolescence, the individual finally establishes a primary, optimistic ego identity (Erikson, 1968). However, this ego identity depended on the types of support that the individual received from his own significant social groups including his class, country and culture. Failure of an individual at this stage of identity vs. identity confusion lead to role confusion; and a deficiency in a cohesive sense of self, with lead to aimlessness and a lack of purpose in life.

Erikson's lifespan theory of human development is the theoretical framework for the construction and validation of the OMEIS, the instrument to be employed in this study. Utilized in over 1,000 published studies, this extensively used instrument to measure identity formation was the result of Erikson's descriptions of the identity crisis (Adams, 2010). Furthermore, James Marcia (1966) defined the term ego identity status based on Erikson's work, providing specified criteria and definition to empirically quantifiable constructs.

Female College Students and ADHD

In relationship to gender, research with female students with ADHD in the literature is scarce. Studies indicated that women with ADHD exhibit symptoms that are different from males, including less hyperactivity and increased cognitive disablement (Babinski, Pelham, Molin, Wacchbusch, Gnagy, Yu, Sibley, & Biswas, 2011; Henry & Jones, 2011). Specifically, females display less hyperactivity, more inattentiveness, and hyper-talkativeness (Bolton et al., 2008; Quinn, 2005). Since most of the research concerning college students with ADHD has focused on male students; there is a question as to how gender may play a role in this diagnosis.

Bolton, Hughes, and Kessler (2008) research study focused on the psychological and physical health of female college students with and without ADHD. Participants in the study were provided with an electronic survey and statistical analysis was conducted on the data. The results of dependent sample *t*-test indicated that there was no significant difference between groups concerning stress and mental health; however, there was a significant difference with women having ADHD and an increased level of fatigue and greater role overload. Clearly, female college students with ADHD have different issues than their peers.

Several research studies indicated that females with ADHD experienced more issues with depression, higher levels of stress and anxiety, and an increase in problems with family and peers (Babinski et al., 2011; Bolton et al., 2008; Kearns & Ruebell, 2011; Quinn, 2005). More specifically, female college students exhibited symptoms of forgetfulness, disorganization, low self-esteem and poor self-concept, and inattentiveness

(Bolton et al., 2008). Again, the differences between male and female students appear to indicate the need for further exploration of the topic.

Female college students diagnosed with ADHD also are more apt to internalize problems, and this internalization frequently leads to feelings of inadequacy, blame and embarrassment (Bolton et al., 2008). The study also demonstrated that these students had the additional pressure of a diagnosis of ADHD which transferred to difficulties in concentration, organization, and more psychological distress (Bolton et al., 2008). Quinn (2005) reported that female's battle with a sense of insufficiency in their identity that is more difficult than males due to the varying roles they need to achieve by both their families and society.

Erikson in Research Studies

Marcia and Friedman (1970) continued to utilize the work of Erikson in a study that proposed ego identity status can be quantified as a construct for both college men and women. In addition, Markstrom, Sabino, Turner, and Berman (1995) reported that the Psychosocial Inventory of Ego Strengths was developed as an instrument to measure the components of Erikson's psychosocial theory using undergraduate female students. Additionally, Balistreri, Busch-Rossnagel, and Geisinger (1995) reported on a pilot study that developed a questionnaire to measure ego identity that focused on the processes of commitment and exploration. A longitudinal study followed students from the time of college to midlife using Inventory of Psychosocial Development, which measured the first six stages of Erikson's theory (2009). Again the Extended Objected Measure of Ego Identity Status 2 along with the Erikson Psychosocial Stage Inventory was utilized in a study to further data on Erikson's identity formation (Njus & Johnson, 2008). Azmitia,

Syed, and Radmacher (2013) reported on the developing sense of identity for college students utilizing Erikson Psychosocial Scale Inventory to hypothesize how college students use emotional support from friends and family and professors to contribute to their identity formation.

Brittian and Lerner (2013) reported in a study on the construct of fidelity, as identified by Erikson, was present in adolescence, and extended the literature on this construct. Erikson explained ego strengths as basic virtues, and during adolescence the major conflict that needs to be resolved is that of identity versus identity confusion; the virtue or ego strength associated with this stage being fidelity. Furthermore, Markstrom and Kalmanir (2001) reported that fidelity was an ego strength of identity under Erikson's theory, and reported utilizing the Extended Objective Measure of Ego Identity Status in their study that there was a correlation between the two variables, supporting Erikson's suggestions.

Luyckx et al. (2012) reported that young people who struggled with coping strategies, as students diagnosed with ADHD, have more difficulty addressing issues of identity. In extension, identity formation during adolescence brings the danger of role diffusion or confusion, with the inability to resolve this crisis (Erikson, 1968). Many students with ADHD found the transition to college, with the level of self-responsibility and independence increasing was challenging without the development of strong coping skills (Meaux et al., 2009). Although ADHD was often was part of the self-identity of college students, the question of whether to keep this part concealed became critical to identity formation; insight and understanding of ADHD appeared to support students to become more self-aware. In addition, research has indicated that identity formation can

have strong implications concerning the well-being and ability to handle new psychological and social challenges (Sneed, Whitbourne, Schwartz, & Huang, 2012).

Erikson's lifespan theory of human development is the theoretical framework for the construction and validation of the OMEIS, the instrument to be employed in this study. Utilized in over 1,000 published studies this extensively used instrument to measure identity formation was the result of Erikson's descriptions of the identity crisis (Adams, 2010). Prior studies of ego identity status have been reported utilizing the Extended Version of the Ego Identity Status that supported Erikson's work (Johnson, Buboltz, & Seeman, 2003).

Summary

The literature of college students with ADHD is inadequate. The literature on female, undergraduate college students with ADHD is insufficient. A review of the literature indicated that most studies conducted with college students focuses on academic issues, and lacks data on psychosocial issues. Reilly (2005) reported that college students with ADHD demonstrated a range of impairments including academic struggles, difficulty with social and emotional adjustment to college life, lower self-esteem, and difficulty with self-regulation and self-monitoring. With the increasing number of students with ADHD attending college, it is critical that more research studies are conducted in this area.

The purpose of this quantitative study was to understand the developmental task of identity, according to Erikson's Psychosocial Theory of Human Development, for female college students with and without a diagnosis of ADHD. The study can impact social change for women, particularly in the area of higher education, since current

evidence shows a lack of information in this field. Innovative data concerning the effect of ADHD on college women can bring new insights and perspectives on how to support and educate these students while attending college as well as after their college careers. Furthermore, social change can only occur when the scope of a problem is understood, and a plan of action is formulated from the data.

Weyandt and DuPaul (2008) reported that college students with ADHD were significantly dissimilar from their peers and developed a higher percentage of negative social relationships, obtained lower scores on concepts of self-esteem, and also displayed poorer social skills. Additional research data concerning female college students with ADHD and how they understand the concept of identity can bring a new perspective of these students which leads to new teaching and support strategies for professionals working with this vulnerable population. Erikson's construct of identity is the core task of adolescence. College students are in the process of building a stronger sense of self, with the maximum gains of this task formed during the college years (Luyckx et al., 2012; Waterman, 1982).

Chapter 3: Research Method

Introduction

I employed methods similar to Schwartz (2002) and Adams, Berzonsky, and Keating (2005), both of whom engaged female and male college students in their studies. In addition, Johnson, Buboltz, and Seemann (2003) and Njus and Johnson (2008) utilized the Extended Objective Measure of Ego Identity Status as the study instrument. Empirical evidence was also found in the Schwartz (2002) study that indicated objective identity measures can be utilized to explore correlations between ego identity status in adolescents and young adults. For this study, the OMEIS, the updated 2010 version, was utilized to measure identity diffusion, foreclosure, and moratorium and achievement status as a means to assess identity status in female college students. Research was conducted over a 3-week period at a small, liberal arts college.

Overview of the Design

This research design was a quantitative correlational study using a nonprobability sample, utilizing purposive sampling. Bernard (2000) described the objective of nonprobability sampling as a way to generalize data. However, the study utilized two groups with members of each group being categorized into one or the other (diagnosis of ADHD or no diagnosis of ADHD), and then measured with respect to the dependent variable; ego identity status. A specific survey instrument to measure the concept of ego identity status was employed in hope that the participants would answer questions honestly. All participants in the study were ensured of confidentiality.

Population and Sample

The sample included female undergraduate students from one private, liberal arts college in a suburb south of Boston, MA. Volunteers for the study were required to indicate their diagnosis of ADHD on the survey. Those participants with no diagnosis of a language based learning disability and/or ADHD also indicated this information on the survey data sheet. Participation in the study was voluntary and all female students that met the specified criteria were eligible for the study. The approximate population of undergraduate female students at this college was under 900, and those identified as having a diagnosis of ADHD was approximately 50 female students. However, no students that currently work with me were asked to volunteer. An explanation of the study as well as consent forms was provided for those who volunteered.

An adequate response rate for the survey was difficult to determine since purposive or judgment sampling does not provide a detailed design to establish the number of participants necessary, and this number was usually small (Bernard, 2000). Furthermore, the nature of purposive samples is the reliance on researcher judgment to select participants from an identified population that was representative of that population (Frankfort-Nachmias & Nachmias, 2008).

Bernard (2000) reported that small samples often utilize the t distribution for studies with 20 or fewer participants. When using this distribution in a sample, it is also important to understand and calculate the confidence interval with the mean of the sample used in the study (citation). Most importantly, the sample needs to be as similar to the population under study as possible to allow for generalization to this population. Field (2009) reported that a researcher needs to have a minimum of 10-15 participants in the

study for each variable measured with a total sample size of approximately 20-30 students.

Alternative Research Methods

Several different data selection strategies and research methods were considered before the decision to use a survey questionnaire. Interviewing female college students was considered since this may provide more detailed data regarding ego identity. However, one of the major drawbacks of interviewing is that this method can be time consuming and costly for the researcher (Balistreri, Busch-Rossnagel, & Geisinger, 1995). Narrative identity as a research method focuses on the life story of an individual and is typically used in qualitative research (Schwartz et al., 2013). The survey questionnaire appeared to be the best choice for this study since the use of the specific test instrument; the OMEIS provided specific data concerning ego identity status for the participants. The reliability and validity of this instrument was also examined

Surveys as a Data Collection Strategy

Creswell (2009) reported that the purpose of survey research is to be capable of generalizing from the sample to a specific population and allow inferences to be drawn about particular characteristics of the study. In a quantitative research study, these inferences can be analyzed utilizing descriptive statistics. Furthermore, the use of a questionnaire provides the researcher with specific questions that can provide data to test a hypothesis (Frankfort-Nachmias & Nachmias, 2008).

The survey instrument was self-administered, cross-sectional, and it used a rating scale. Researchers most commonly use survey questionnaires with rating scales in order

to obtain data concerning the research objectives of the study (citation). In addition, survey questionnaires allow the researcher to collect data by asking participants about particular phenomena that may not be directly observable (Frankfort-Nachmias & Nachmias, 2008).

Survey instruments have several strengths and weaknesses. According to Bernard (2000) some of the strengths include:

- Allows the researcher to collect data from a larger group at one time, at a low cost.
- Each participant receives the same questions to limit interviewer bias.
- Anonymity of survey can provide more security for participant.
- More complex questions can be asked of the participant.
- Self-administered surveys can be programmed into the computer.

According to Bernard (2000), some weaknesses include:

- Researcher has no control over how participants interpret questions.
- An increased risk of sampling problems can occur.
- Response rates can be lower.
- Does not include participant response effects.

Instrumentation: Survey

The survey instrument that was used in this study is the OMEIS, Revision 2010 (Adams, 2010). This 24-item self-administered questionnaire uses a 6 point Likert scale with values ranging from 1= *strongly disagree*, 2= *moderately disagree*, 3=*slightly disagree*, 4=*slightly agree*, 5= *moderately agree*, 6=*strongly agree*. Furthermore,

demographic information including age, class rank, current GPA, major, and diagnosis or no diagnosis of ADHD was collected from each participant to add to data. Adams (2014) reported that the OMEIS is an instrument that can measure, in a short time, the current ego identity status of a young adult while acknowledging that identity formation is an ongoing and evolving process for most individuals.

Variables

The primary independent variable that was used in this study is the diagnosis of ADHD, utilizing two groups of female, undergraduate students; those with a diagnosis of ADHD and those with no diagnosis of ADHD. Additional independent variables of age and GPA were continuous variables, while class rank and major were defined as categorical variables. The dependent variable was ego identity status as measured by the OMEIS.

Data Collection

Data was collected once permission in writing had been obtained from the administration at the college as well as Institutional Review Board (IRB) approval from both Walden University and Curry College. The questionnaire was distributed to volunteers that were willing to participate through student email. A brief introduction and consent form of the purpose of the study was provided for potential participants.

Participants completed the questionnaire after downloading the information from their student email. A cover letter explaining the purpose of the study was provided for each potential participant and was reviewed prior to the start of the survey. Frankfort-Nachmias and Nachmias (2008) reported that a cover letter needs to include the

sponsoring organization, the purpose of the study, why the study is important for the participant, and assures confidentiality. All of these requirements were included in the cover letter for this research study. Raw data collected from the questionnaires was placed on a file using the statistical package SPSS.

Data Analysis

Due to the fact that the research study was quantitative in nature, statistical tests were used to analyze the data on SPSS. Salkind (2008) reported that descriptive statistics can be used to explain, illustrate, and organize the characteristics of a collection of data. Descriptive analysis of the raw data was conducted including measures of central tendency. An alpha level of .05 ($\alpha = .05$) was utilized to minimize the chance of Type II errors. Also, in order to visualize the data distributions tables were utilized in this research study. A comparison between the two groups was examined. Since there are several variables including age and GPA, as continuous variables, and ego status, class rank, and major as categorical variables, t-tests and phi coefficient was conducted.

Adams (2014) reported that a 6 point scale on the OMEIS provides a subscore scale for each of the ego identity statuses namely: identity diffusion, identity foreclosure, moratorium, and identity achievement. The Cronbach's alpha ranged from .76 to .88 on the Adam, Shea & Fitch (1979) study.

Threats to Validity

Creswell (2009) and Frankfort-Nachmias and Nachmias (2008) identify numerous threats to validity that will be addressed:

1. *History*. Low threat. The survey will be administered during a 3-week period. There will be no longevity to consider and the likelihood of an event to occur during this period will be minimal.
2. *Maturation*. No threat. This study is not a longitudinal one and the participants did not significantly age during the 3-week research period.
3. *Regression*. Medium threat. Some participants in the study may have had other underlying characteristics or disabilities that may affect or cause extreme scores.
4. *Selection*. Medium threat. Participants were volunteers and not required to complete the survey. Participants were a purposive sample.
5. *Mortality*. No threat. Participants were asked to participate only once in the study.
6. *Diffusion of treatment*. Low threat. This study had no control group and the two groups may have had some contact with one another.
7. *Compensation*. No threat. This study did not provide any compensation for participants.
8. *Compensatory rivalry*. No threat. This study did not have a control group.
9. *Testing*. No threat. The surveys were based on a single time administration.
10. *Instrumentation*. No threat. The instrument to be used in this study was standardized.

11. *Interaction of selection and treatment.* Medium threat. Data concerning participants was not generalized to other populations without the same characteristics.
12. *Interaction of setting and treatment.* Medium threat. A specific setting with the characteristics of the participants was used in this study.
13. *Interaction history and treatment.* No threat. Data from participants in this study was used only for this study.

In general, history, regression, and interaction of setting and treatment could have been obstacles for this research study. In addition, the selection of participants from one, small college that contains a program for students with ADHD may be a threat to validity. However, this research study did provide anonymity to each participant allowing for honest perceptions of their ego identity status.

Feasibility and Appropriateness

I conducted this research by distributing the survey instrument to eligible participants through student campus email.. The general cost of this survey was minimal and feasible. The necessary paper, envelopes, copies of survey, consent forms, and lock box was purchased.

Informed Consent and Ethical Considerations

All participants were provided with an informed consent form that indicated the questionnaire was completely voluntary. Confidentiality was maintained as each survey has a referral number, not the participant name attached so that there was no possible way for the participants in the study to be identified. Furthermore, questionnaires emailed

from students with responses from volunteers were printed and given a referral number. All data obtained, as well as researcher written notes, was stored in a locked file cabinet in the researcher's office at the college during initial data collection. Questionnaires were placed in privacy envelopes. SPSS data outcomes was kept on a separate, removable storage drive and locked in same cabinet as paper data. Only this researcher has access to the data and other documents pertaining to the study.

Permission was requested for this research study through the Institutional Review Board at Walden University and at the college where the research was taking place. The IRB approval number for my study was 10-26-16-0175942. All documents pertaining to this research study, after completion, was kept by the researcher in a locked box in the home of the researcher and will be kept for ten years. Data disposal will occur ten years after the conclusion of the research. External hard drives will be erased; written completed paper questionnaires and notes will be shredded.

Summary

This chapter includes the design and methodology, and method of inquiry of this quantitative correlational study. The use of a specific questionnaire, the OMEIS, provided this researcher with measurable data concerning the construct of ego identity status as it pertains to female, undergraduate students with and without a diagnosis of ADHD. In addition, a description of the population sample, data collection and analysis, and ethical considerations were addressed.

The next chapter presents the results of the questionnaire, including descriptive statistics relating to the research questions posed in this study.

Chapter 4: Results

Introduction

The purpose of this study was to investigate whether there is a significant difference in the development of ego identity status between female college students with a diagnosis of ADHD and those without this diagnosis. Information on age, class rank, current GPA, and major was also gathered for these two groups. The research questions and hypotheses are presented jointly with the study's results. This chapter will include a summary of these data.

The research questions for this study are: How does ADHD affect ego identity status among female college students? Is age related to a diagnosis of ADHD among female college students? Is class rank associated with a diagnosis of among female college students? Is GPA related to a diagnosis of ADHD among female college students? Is the choice of a major affected by a diagnosis of ADHD among female college students? The null and alternative hypotheses for these questions are examined separately including the results of the data analysis.

Data Collection

The data was collected from November 1 to November 11, 2016 and I used student email to recruit students. Possible participants were invited to participate in the study through an initial email invitation from the director of the program for the advancement of learning (PAL) on my behalf. The invitation letter was sent to all students enrolled at the college. Additionally, several attachments were added to the email that included an invitation to participate in the study, a consent form for the participant to read, and the survey questionnaire, and the OMEIS. Students had to

download, fill out, and return the OMEIS to a locked box marked “survey” outside my university office. The response rate for students included a total of 28 female undergraduate students participating in the study; 12 participants with a diagnosis of ADHD, and 16 students with no diagnosis of ADHD. The aim of the study was to have approximately 20-30 participants, with 10-15 participants for each independent variable measured.

Demographics

The two groups from the sample population included female undergraduate students with and without a diagnosis of ADHD. The total student population on campus during the Fall 2016 semester was over 2,000 traditional undergraduate students, with approximately 60% female students. The total student population enrolled at PAL at this time was 327 students, with approximately 50% female students. The number of female students with a diagnosis of ADHD was about 50% during this same time period. Therefore with a response rate of 12 students with ADHD this was approximately 7% of this specific population. All participants in the study completed the survey questionnaire in its entirety. Tables 1 through 6 report the demographics of ADHD and non-ADHD participants.

Table 1

Frequency and Percentage of ADHD (n=28)

	Frequency	Percentage
ADHD	12	42.9
No ADHD	16	57.1

Other demographic data was collected including age of participants, class rank, major, and GPA. Table 2 reports age with the frequencies, and diagnosis of ADHD or no ADHD listed.

Table 2

Frequency of Age and Diagnosis of ADHD (n=28)

Age	Frequency	ADHD	No ADHD
18	4	2	2
19	4	0	4
20	7	3	4
21	6	1	5
22	4	3	1
23	3	3	0

Table 3 reports class rank with the frequencies and percentages listed.

Table 3

Frequency and Percentages of Class Rank (n=28)

Rank	Frequency	Percentage
Freshman	6	21.4
Sophomore	3	10.7
Junior	16	57.1
Senior	3	10.7

Major is reported in Table 4 with the frequency and diagnosis of ADHD or no ADHD listed.

Table 4

Frequency of Majors (n=28)

Major	Frequency	ADHD	No ADHD
Business	1	1	0
Criminal Justice	3	1	2
English	1	0	1
Psychology	8	4	4
Education	2	1	1
Sociology	1	1	0
Graphic Design	1	1	0
Nursing	10	2	8
Communication	1	1	0

GPA was reported in Table 5.

Table 5

Frequency of GPA (N =28)

GPA	Frequency	Percent	Cumulative Percent
2.17	1	3.6	3.6
2.30	1	3.6	7.1
2.40	1	3.6	10.7
2.48	1	3.6	14.3
2.71	1	3.6	17.9
2.82	1	3.6	21.4
2.85	1	3.6	25.0
2.90	2	7.1	32.1
3.01	1	3.6	35.7
3.23	1	3.6	39.3
3.30	2	7.1	46.4
3.35	1	3.6	50.0
3.38	1	3.6	53.6
3.40	2	7.1	60.7
3.44	1	3.6	64.3
3.50	3	10.7	75.0
3.60	1	3.6	78.6
3.70	3	10.7	89.3
3.79	1	3.6	92.9
3.80	1	3.6	100.0

Additionally, ego identity status was obtained for each participant utilizing the OMEIS questionnaire. Table 6 reports the frequency and percentage of each status and number of participants with a diagnosis of ADHD and participants with no diagnosis of ADHD.

Table 6
Frequencies and percentages of ego identity status

Ego Identity Status	Frequency	Percentage	ADHD	No ADHD
Diffusion	14	50	6	8
Foreclosure	1	3.6	1	0
Moratorium	11	39.3	5	6
Achievement	2	7.1	0	2

Data Analysis and Findings

In order to determine if there are any differences between the groups on one or more variables, an independent t-test was utilized (Salkind, 2014). The Statistical Package for the Social Sciences (SPSS 21.0) was used to analyze the data collected from the OMEIS. The two groups, female undergraduate students with a diagnosis of ADHD and female undergraduate students with no diagnosis of ADHD were examined for any significant differences in means between the two variables studied. A two-tailed alpha of 5% ($\alpha = .05$) was used for each statistical test. Furthermore, a phi coefficient was used to determine if there was a relationship between ego identity status and ADHD and the variable of major. Since the variable major is a nominal variable, the use of a phi coefficient was utilized.

H_01 : There are no differences in ego identity status between undergraduate female college students diagnosed with ADHD and undergraduate female college students not diagnosed with ADHD.

H_{a1}: There are differences in ego identity status between undergraduate female college students diagnosed with ADHD and undergraduate female college students not diagnosed with ADHD.

There was no significant effect for ego identity status, $t(26) = -0.49, p > .05$, between female college students with ADHD and female college students with no diagnosis of ADHD. On average, participants with ADHD achieved lower ego identity status ($M=1.91, SD .99$) compared to participants with no ADHD ($M=2.12, SD 1.20$).

H₀₂: Age does not differ between undergraduate female college students diagnosed with ADHD and undergraduate female college students not diagnosed with ADHD.

H_{a2}: Age does differ between undergraduate female college students diagnosed with ADHD and undergraduate female college students not diagnosed with ADHD.

There was no significant effect for age, $t(26) = 1.88, p > .05$, with female college students with ADHD being older than female college students with no diagnosis of ADHD. On average, participants with ADHD were older ($M = 21.00, SD .1.80$) compared to participants with no ADHD ($M = 19.93, SD 1.18$).

H₀₃: Class rank does not differ between undergraduate female college students diagnosed with ADHD and undergraduate female college students not diagnosed with ADHD.

H_{a3}: Class rank differs between undergraduate female college students diagnosed with ADHD and undergraduate female college students not diagnosed with ADHD.

There was no significant effect for class rank, $t(26) = 1.70, p > .05$, with female college students with ADHD and female college students with no diagnosis of ADHD

receiving similar ranks. On average, participants with ADHD achieved a slightly higher class rank ($M = 2.92$, $SD .99$) compared to participants with no ADHD ($M = 2.31$, $SD .87$).

H_{04} : Current GPA does not differ between undergraduate female college students diagnosed with ADHD and undergraduate female college students not diagnosed with ADHD.

H_{a4} : Current GPA does differ between undergraduate female college students diagnosed with ADHD and undergraduate female college students not diagnosed with ADHD.

There was no significant effect on GPA, $t(26) = -1.50$, $p > .05$, with female college students with ADHD achieving a lower GPA than female college students with no diagnosis of ADHD. On average, participants with ADHD achieved a lower GPA ($M = 3.05$, $SD .44$) compared to participants with no ADHD ($M = 3.32$, $SD .48$).

H_{05} : There are no differences in major between undergraduate female college students diagnosed with ADHD and undergraduate female college students not diagnosed with ADHD.

H_{a5} : There are differences in major between undergraduate female college students diagnosed with ADHD and undergraduate female college students not diagnosed with ADHD.

Phi coefficient correlation was used to assess the relationship between major and ego identity status and ADHD. The phi coefficient was .32 with a p -value of .022. Since the p -value is less than the value of alpha (.05) the null hypothesis would be rejected.

There was a significant effect on major, with female college students with ADHD and no

ADHD. Specifically, 50% of students in all majors in this study were in the diffusion status and 40% of all students in the study were at the moratorium status, with an average of half of these students been diagnosed with ADHD and the other half not. This indicated that approximately 90% of the study participants were either choosing to not commit to a major or were not exploring other majors (diffusion status) or participants were actively exploring but noncommittal in their final choice of major (moratorium status). This was significant since foreclosure students have represented more than 25% of the sample in most studies (Shaffer & Zalewski, 2011).

Summary

The purpose of this chapter was to analyze the data to determine if there were significant differences between female college students with ADHD and female college students with no diagnosis of ADHD relating to ego identity status. The research and null hypotheses were included along with noteworthy demographic information collected from the participants in the study.

The results of the *t*-tests for each hypothesis would lead this researcher to accept the null hypothesis for four of the five hypotheses. Furthermore, the Phi coefficient correlation also indicated that the fifth null hypothesis would be rejected. Chapter 5 will include my interpretations of these findings; addressing each of the stated research questions. Additionally, implications for social change and possible future studies will be discussed.

Chapter 5: Discussion, Conclusions, Recommendations

Introduction

Chapter 5 provides the researcher's views and interpretations for this quantitative survey study. The study was developed to examine whether ADHD affects the ego identity status of female college students with and without a diagnosis of ADHD. Independent t tests indicated that there were no significant differences in ego identity status for female college students with and without a diagnosis of ADHD.

Independent t tests were conducted using SPSS to determine if a significant difference existed between the primary independent variable; ADHD and other independent variables of age, class rank, and GPA, with respect to mean scores on the dependent variable; ego identity status. Analysis of this data revealed no significant differences between ADHD, age, class rank, and GPA and the dependent variable. Salkind (2014) reported that the interpretation of the independent t -test scores is determined by comparing the obtained value of the t score with the critical value. With each research hypothesis, the obtained value of this score was less than the critical value; therefore, the null hypothesis is the most likely explanation for the observed differences.

A phi coefficient correlation was obtained for the variable major and ego identity status. The data shows there is a significant relationship between major and ego identity status. Therefore, the null hypothesis for these research questions is rejected. The null hypothesis in all of the remaining research questions was accepted.

The chapter will also review the interpretation of findings, summary of theoretical framework, limitations, recommendations for action, and implications for further study.

Interpretation of Findings

The intent of this study was to determine if a significant difference existed in the ego identity status of female college students with ADHD compared to female college students with no ADHD. Prevatt and Young (2014) reported that the diagnosis of ADHD is not confined to children, but for many persists into adulthood. Furthermore, ADHD is the second most common learning disability reported in college students and the number of students continues to increase (Kerns & Ruebell, 2011).

The findings of this study confirm the knowledge that female college students in this study, with a diagnosis of ADHD, demonstrated average to above average GPA scores. This seems to substantiate Reaser et al.'s (2007) study that college students with ADHD have the capacity to learn and show average to above average intelligence. Data from this study did show that female college students with ADHD obtained lower mean GPA's compared to female college student with no diagnosis of ADHD. However, the difference was not statistically significant.

Sneed, Whitbourne, Schwartz, and Huang (2012) reported that college students with ADHD often concealed their diagnosis, but this frequently was a critical point in their identity formation. This study permitted students to self-identify their diagnosis of ADHD while remaining anonymous; allowing this identity to remain concealed.

Luyckx, Klimstra, Duriez, Schwartz, and Vanhalst (2012) reported that adolescents that progressed in identity exploration were able to continue developing improved coping skills. Findings from this study did not confirm or disconfirm this knowledge; however, both groups of students, with and without a diagnosis of ADHD were able to progress in identity formation. Additionally, Whitbourne and Tesch (1985)

studied identity development in college students and alumni and reported identity achievement status was more frequently reported for alumni than college seniors, who most often reported in the foreclosure status. My study findings show seniors reported a scattering of ego identity statuses. However, several issues were not confirmed or disconfirmed within my study.

This research study did not confirm or disconfirm any knowledge concerning college students with ADHD and comorbid issues such as psychiatric disorders. Furthermore, the study did not examine any correlations between male and female college students, but suggests this may be a project for further study. Past research on college students with ADHD have focused on academic issues as a priority over psychological or social problems.

Findings and Theoretical Framework

Erikson (1963) and Marcia (1966) reported on and further developed the theory of ego identity statuses. Marcia (1966) described the stage of diffusion as a status where adolescents are unable to engage in or reject any type of commitments and often ignore the consequences of their decisions, and build their identity by relying on their external environment. In this study, 50% of the participants were placed in the identity diffusion status. Additionally, Marcia described the state of moratorium, with adolescents questioning the views and values of their parents in order to support the development of their own identity. This research study had almost 40% of the participants in the moratorium identity status. However, the participants were all between the ages of 20 and 23 at this status level.

Adams (1998) described ego identity status as a psycho-social construct that had allows social influences and active imitation and self-creation to be a part of this growth process. Identity has a practical purpose; to support understanding of self, to provide meaning and direction to self through commitments, values and goals, and permitting of potential through choices and alternative decisions (Adams, 1998). Adams' study allowed participants to look briefly at themselves and their current choices and decisions relating to their values and beliefs. The theoretical framework of my study did follow the evidence presented by both Adams (1998), Marcia (1966) and Erikson (1963).

Erikson (1963) reported that identity formation is a parallel process to the development of increasingly more mature cognitive abilities and these abilities help to integrate information gathered from personal experiences. The progression from lower to higher, more mature ego identity statuses is expected as cognitive abilities also mature (Erikson, 1963). In my study, most participants, as they aged and rose in class rank, progressed from lower to higher ego identity status. Studies of ego identity status may present findings that support the constructs that Erikson (1963) and Marcia (1966) developed, providing guidelines for adolescents as they progress through their own identity crisis stage. As age increased, and cognitive development matured, adolescents have more tools to develop a sense of who they are through their experiences as college students.

Limitations of the Study

There were several limitations to this research study as was outlined in Chapter 1. Only one, private, liberal arts college was utilized in this study. The participants of the study were selected based on student choice to participate in an e-mail survey and to

those participants that chose to self-disclose a diagnosis of ADHD. In addition, female students ages 18-23 were participants. In addition, the generalization of this study is limited to this university since the sample size of this population was small (N=28), therefore any generalizations should be made with caution. A larger sample size may produce similar or different results and reduce one of the limitations of the study.

Adams (1998) reported the OMEIS estimates of test-retest reliability to have a median correlation of .76. Furthermore, internal consistency with the OMEIS, measured by Cronbach alpha, had a median alpha of .66. Split-half correlations for the OMEIS ranged from .37 to .64. All of these estimates of reliability indicate a strong consistency for this test.

Implications for Social Change

This research study can add to the limited amount of literature currently concerning female college students with ADHD and could be a catalyst for the needed social change in the field of higher education. Studies have indicated that college students with ADHD experience a lower graduation rate, have difficulty with the transition from high school to college, and have difficulty with time management (Fleming & McMahon, 2012; Prevatt, Osborn, & Coffman, 2016; Weyandt et al., 2013) Furthermore, studies report that college students with ADHD struggle with social relationships (Overbey et al., 2011; Prevatt & Young, 2014; Safren et al., 2010). Data from research studies of college students with ADHD can provide guidelines for supporting these vulnerable students. Information from this researcher's study may lead to contributing information in the assistance of college students with ADHD in postsecondary environments. Female undergraduate students identified as being diagnosed with ADHD could potentially

receive specific support in their choice of major. Ideally, faculty in a variety of majors could be supportive in connecting with this group of students to discuss and discover major possibilities and opportunities. This may be seen as a change in the way in which students at this university identify their chosen major. Social change occurs when supporting data provides a clearer picture of the current problem.

The study revealed that female college students with ADHD are capable of moving through the developmental stages as described by Erikson, however, these students may benefit from a period of exploration. The establishment of a roadmap, guidelines, or strategies outlining course programs may support these students in their exploration of their identity as it relates to their choices in college. Furthermore, the study indicates that other developmental issues faced by this population may be worth exploring in the future. For example, additional studies of this vulnerable group should be made with a larger population sample. Furthermore, a comparison study with male students may provide important data.

Recommendations for Action

This study pointed out no significant relationship between female students with a diagnosis of ADHD and ego identity status. However, data indicated that a choice of major may influence ego identity status for this population of students. Recommended action for these students would be to allow students to continue to explore their values, roles, behaviors, and beliefs. For example, a period of exploration may provide these students with the opportunity to investigate majors before making the decision to declare a specific major. Perhaps, allowing for students to take courses not necessarily in their majors or to participate in clubs, organizations, or teams can strengthen, investigate and

evaluate their values and beliefs. Specific actions may include 5 year programs for female college students with ADHD rather than traditional 4 year programs to allow for extra time and support; however this may become a cost factor. Preferably, a specialized course in which students are allowed to explore a variety of majors may be beneficial. Also, it may be helpful for this population of students to enter college as undeclared majors rather than beginning in a focused program, allowing the student more time for exploration of studies.

Past and present research has indicated that further studies of college student with ADHD are needed. Recommendations for further study include a comparison study of male college students with ADHD to further assess these students' similarities and differences. Furthermore, the study may be repeated with a larger population, and the addition of other colleges for a greater data pool. A longitudinal study may also indicate how female students with ADHD progress through the stages of development in a more detailed manner.

Conclusion

The purpose of this study was to determine if a diagnosis of ADHD would affect the ego identity status of female college students with and without this diagnosis. Developmentally, college students are progressing through the identity stage, according to Erikson's theory of psychosocial development. It appears that these students are capable of progressing through the four stages of ego identity status. Data from this study indicates that these students need to explore major choices to aid in searching to discover who they are, what they believe, and what values they want to exhibit.

References

- Adams, G. (2010). *Ego-identity formation in adolescence and early adulthood: Theory and measurement*. San Bernardino, CA: CreateSpace Publishing.
- Adams, G., Berzonsky, M., & Keating, L. (2006). Psychosocial resources in first-year university students: The role of identity process and social relationships. *Journal of Youth and Adolescence*, 35(1), 81-89. doi:10.1007/s109640090190
- Americans with Disabilities Act (ADA) of 1990, PL 101-336, 42 U.S.C. §§ 12101 *et seq.*
- Americans with Disabilities Act Amendments Act (ADAAA) of 2008, PL 110-325, 42 U.S.C. §§ 12101 *et seq.*
- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Washington, DC: Author.
- Azmitia, M., Syed, M., & Radmacher, K. (2013). Finding your niche: Identity and emotional support in emerging adults' adjustment to the transition to college. *Journal of Research on Adolescence (Wiley-Blackwell)*, 23(4), 744-761. doi:10.1111/jora12037
- Babinski, D., Pelham, W., Molina, B., Waschbusch, D., Gnagy, E., Yu, J., Sibley, M., & Biswas, A. (2011). Women with childhood ADHD: Comparisons by diagnostic group and gender. *Journal of Psychopathology and Behavioral Assessment*, 33(1), 420-429. doi:10.1007/s1086201192474
- Baker, F. (1971). Measures of Ego Identity: A multitrait multimethod validation. *Educational and Psychological Measurement*, 31(1). 165-173.

- Balistreri, E., Busch-Rossnagel, N., & Geisinger, K. (1995). Development and preliminary validation of the Ego Identity Process Questionnaire. *Journal of Adolescence, 18*, 179-192.
- Barkley, R. (1990). *Attention Deficit Hyperactivity Disorder: A handbook for diagnosis and treatment*. New York: Guilford Press.
- Bolton, J. M., Hughes, J. L., & Kessler, E. D. (2008). Comparing the psychological and physical health of ADHD and Non-ADHD Female College Students. *Psi Chi Journal of Undergraduate Research, 13*(1), 14-19.
- Brittian, A., & Lerner, R. (2013). Early influences and later outcomes associated with developmental trajectories of Eriksonian fidelity. *Developmental Psychology, 49*(4), 722-735. doi:10.1037/a0028323
- Buchanan, T. (2011). Attention Deficit/Hyperactivity Disorder and well-being: Is social impairment an issue for college students with ADHD? *Journal of Postsecondary Education and Disability, 24*(3), 193-210.
- Buchanan, T., St. Charles, M., Rigler, M., & Hart, C. (2010). Why are older faculty members more accepting of students with Attention-Deficit Hyperactivity Disorder? A life-course interpretation. *International Journal of Disability, Development and Education, 57*(4), 351-369.
doi:10.1080/1034912X.2010.524407
- Castens, A., & Overbey, G. (2009). ADHD, boredom, sleep disturbance, self-esteem, and academic achievement in college students. *Psi Chi Journal of Undergraduate Research, 14*(2), 52-58.

- Children and Adults with Attention Deficit Hyperactivity Disorder. (2016). *Long-term outcomes*. Retrieved from <http://www.chadd.org/Understanding-ADHD/About-ADHD/Data-and-Statistics/Long-Term-Outcomes.aspx>
- Chorba, K., Was, C., & Isaacson, R. (2012). Individual differences in academic identity and self-handicapping in undergraduate college students. *Individual Differences Research, 10*(2), 60-68.
- Cleveland, J., & Crowe, M. (2013). Cognitive interventions for students with attention deficit disorder transitioning from secondary school settings: A meta-analytic review. *The Delta Kappa Gamma Bulletin, 79*(4), 22-28.
- Costello, C. A., & Stone, S. M. (2012). Positive psychology and self-efficacy: Potential benefits for college students with Attention Deficit Hyperactivity Disorder and Learning Disabilities. *Journal of Postsecondary Education & Disability, 25*(2), 119-129.
- Creswell, J. (2009). *Research Design, (3rd ed.), Qualitative, quantitative and mixed methods approaches*. Los Angeles, CA: Sage.
- Dunkel, C., & Papini, D. (2005). The role of ego-identity status in mating preferences. *Adolescence, 40*(159), 489-501.
- Emanuel, A., & Stunkel, L. (2016). Research ethics: How to treat people who participate in research. In A.E. Kazdin, A.E. Kazdin (Eds.) *Methodological issues and strategies in clinical research (4th ed.)* (pp.513-523). Washington, D.C., US: American Psychiatric Association.
- Enright, R., Olson, L., Ganiere, D., Lapsley, D., & Buss, R. (1985). 36-Item Ego Identity Scale (EIS). *Journal of Adolescence, 7*(72).

- Erikson, E. (1950). *Childhood and society*. New York, NY: W.W. Norton & Company.
- Erikson, E. (1997). *The life cycle completed. Extended version*. New York, NY: W.W. Norton & Company.
- Erikson, E. (1968). *Identity: Youth and crisis*. New York, NY: W.W. Norton & Company.
- Field, A. (2009). *Discovering statistics using SPSS* (3rd ed.). Thousand Oaks, CA: Sage.
- Fleming, A., & McMahon, R. (2012). Developmental context and treatment principles for ADHD among college students. *Clinical Child & Family Psychology Review*, 15(4), 303-329. doi:10.1007/s105670120121z
- Fleming, C., & Snell Jr, W. E. (2008). Emotional intelligence in adults with ADHD. *Psi Chi Journal of Undergraduate Research*, 13(2), 86-95.
- Frankfort-Nachmias, C., & Nachmias, D. (2008). *Research methods in the social sciences* (7th ed.). New York, NY: Worth Publishers.
- Gardner, H. (1993). *Multiple Intelligences: The theory in practice*. New York, NY: Basic Books.
- Garnier-Dykstra, L., Pinchevsky, G., Caldeira, K., Vincent, K., & Arria, A. (2010). Self-reported adult Attention-Deficit/Hyperactivity Disorder symptoms among college students. *Journal of American College Health*, 59(2), 133-136. doi:10.1080/07448481.2010.483718
- Griggs, M., & Mikami, A. (2011). The role of maternal and child ADHD symptoms in shaping interpersonal relationships. *Journal of Abnormal Child Psychology*, 39(1), 437-449.

Grotevant, H., & Adams, G. (1986). Extended Objective Measure of Ego Identity Status (EOM-EIS). *Journal of Youth and Adolescence*, 13(5).

Hallberg, U., Klingberg, G., Setsaa, W., & Moller, A. (2010). Hiding parts of one's self from others-a grounded theory study on teenagers with ADHD. *Scandinavian Journal of Disability Research*, 12(3), 211-220. doi:10.1080/15017410903478964

Hallowell, E., & Ratey, J. (1994). *Driven to distraction: Recognizing and coping with attention deficit disorder from childhood through adulthood*. New York, NY: Touchstone.

Hamman, D., & Hendricks, B. (2005). The role of the generations in identity formation: Erikson speaks to teachers of adolescents. *Clearing House*, 79(2): 72-75.

Heiligenstein, E., Guenther, G., Levy, A., Savino, F., & Fulwiler, J. (1999). Psychological and academic functioning in college students with Attention Deficit hyperactivity Disorder. *Journal of American College Health*, 47(4), 181-185.

Henry, E., & Jones, S.H. (2011). Experiences of older adult women diagnosed with attention deficit hyperactivity disorder. *Journal of Women & Aging*, 23(3), 246-262. doi: 10.1080/089528412011589285

Hinckley, J., & Alden, P. (2005). Women with attentional issues: Success in college learning. *Journal of Developmental Education*, 29(1), 10-27.

Hosain, G., Berenson, A., Tennen, H., Bauer, L., & Wu, H. (2012). Attention deficit hyperactivity symptoms and risky sexual behavior in young adult women. *Journal of Women's Health*, 21(4), 463-468. doi:10.1089/jwh.20112825

Individuals with Disabilities Education Improvement Act (IDEA) of 2004, PL 108-446, 20 U.S.C. §§ 1400 *et seq.*

- Jaret, C., & Reitzes, D. (2009). Currents in a stream: College student identities and ethnic identities and their relationship with self-esteem, efficacy, and grade point average in an urban university. *Social Science Quarterly*, *90*(2), 345-367.
doi:10.1111/j.15406237200900621x
- Johnson, B., & Smith, E. (1998). Factor structure of the DSM-IV criteria for college students using the adult behavior checklist. *Measurement and Evaluation in Counseling and Development*, *31*(3), 164-183.
- Johnson, P., Buboltz, W., & Seemann, E. (2003). Ego identity status: A step in the differentiation process. *Journal of Counseling & Development*, *81*(2), 191-195.
- Kaminski, P., Laster, S., Rosen, L., & Turnock, P. (2006). Predictors of academic success among college students with attention disorders. *Journal of College Counseling*, *9*(1), 60-71.
- Kane, S., Walker, J., & Schmidt, G. (2011). Assessing college-level learning difficulties and “At Riskness” for learning disabilities and ADHD: Development and validation of the learning difficulties assessment. *Journal of Learning Disabilities*, *44*(6), 533-542.
- Kearns, T., & Ruebel, J. (2011). Relationship between negative emotion and ADHD among college males and females. *Journal of Postsecondary Education and Disability*, *24*(1), 31-42.
- Leentjens, A., & Levenson, J. (2013). Ethical issues concerning the recruitment of university students as research subjects. *Journal of Psychosomatic Research*, *75*(1), 394-398.

- Linville, D. (2011). The relationship between student identity development and the perception of political bias in the college classroom. *College Teaching*, 59(2), 49-55. doi:10.1080/875675552010511312
- Lucas, M. (1997). Identity development, career development, and psychological separation from parents: Similarities and differences between men and women. *Journal of Counseling Psychology*, 44(2), 123-132. doi:10.1037/00220167442123
- Luyckx, K., Klimstra, T., Duriez, B., Schwartz, S., & Vanhalst, J. (2012). Identity processes and coping strategies in college students: Short-term longitudinal dynamics and the role of personality. *Journal of Youth and Adolescence*, 41(9), 1226-1239. doi:10.1007/s1096-0129753z
- Mackinnon, S., Noska, A., Pratt, M., & Norris, J. (2011). Intimacy in young adults' narratives of romance and friendship predicts Eriksonian generativity: A mixed method analysis. *Journal of Personality*, 79(3), 587-617. doi:10.1111/j.14676494.2011.00692x
- Marcia, J. (1966). Development and validation of ego identity status. *Journal of Personality and Social Psychology*, 3(5), 551-558. doi:10.1037/h0023281
- Marcia, J., & Friedman, M. (1970). Ego status in college women. *Journal of Personality*, 38(2), 249-263. doi:10.1111/14676494ep8933330
- Markstrom, C., & Kalmanir, H. (2001). Linkages between psychosocial stages of identity and intimacy and the ego strengths of fidelity and love. *Identity: An International Journal of Theory and Research*, 1(2), 179-196.

- Markstrom, C., Sabino, V., Turner, B., & Berman, C. (1997). The psychosocial inventory of ego strengths: Development and validation of a new Eriksonian measure. *Journal of Youth and Adolescence*, 26(6), 705-732.
- Meaux, J. B., Green, A. A., & Broussard, L. L. (2009). ADHD in the college student: a block in the road. *Journal Of Psychiatric & Mental Health Nursing*, 16(3), 248-256. doi:10.1111/j13652850200801349x
- Morgan, K., & Norris, G. (2010). An exploration into the relevance of Dickman's functional and dysfunctional impulsivity dichotomy for understanding ADHD-type behaviors, *Individual Differences Research*, 8(1), 34-44.
- Munro, G., & Adams, G. (1977). Ego-identity formation in college students and working youth. *Developmental Psychology*, 13(5), 523-524. doi:10.1037/00121649135523
- National Institute of Mental Health. (2016). *Attention Deficit Hyperactivity Disorder*. Retrieved From http://www.nimh.nih.gov/health/statistics/prevalence/file_148060.pdf.
- Njus, D., & Johnson, D. (2008). Need for cognition as a predictor of psychosocial identity development. *The Journal of Psychology*, 142(6), 645-655.
- Norwalk, K., Norvilitis, J. M., & MacLean, M. G. (2009). ADHD symptomatology and its relationship to factors associated with college adjustment. *Journal of Attention Disorders*, 13(3), 251-258. doi:10.1177/1087054708320441
- Overbey, G. A., Snell, W. B., & Callis, K. E. (2009). Subclinical ADHD, stress, and coping in romantic relationships of university students. *Journal of Attention Disorders*, 15(1), 67-78. doi:10.1177/1087054709347257

- Parker, D., & Boutelle, K. (2009). Executive function coaching for college students with learning disabilities and ADHD: A new approach for fostering self-determination. *Learning Disabilities Research & Practice, 24*(4), 204-215.
doi:10.1111/j.15405826200900294x
- Parker, D. R., Hoffman, S., Sawilowsky, S., & Rolands, L. (2011). An examination of the effects of ADHD coaching on university students' executive functioning. *Journal of Postsecondary Education & Disability, 24*(2), 115-132.
- Pazol, R. B., & Griggins, C. (2012). Making the case for a comprehensive ADHD assessment model on a college campus. *Journal of College Student Psychotherapy, 26*(1), 5-21. doi:10.1080/87568225.2011.605689
- Prevatt, F., Osborn, D., & Coffman, T. (2015). Utility of the Barkley deficits in executive functioning scale for career planning in college students with ADHD. *Career Planning and Adult Development Journal, 31*(4), 69-79.
- Prevatt, F., & Young, J. (2014). Recognizing and treating Attention-Deficit/Hyperactivity Disorder in college students. *Journal of College Student Psychotherapy, 28*: 182-200. doi:10.1080/875682252014914825
- Quinn, P. O. (2001). *ADD and the college student: A guide for high school and college students with attention deficit disorder*. Washington, D.C.: Magination Press.
- Quinn, P. O. (2005). Treating adolescent girls and women with ADHD: Gender-specific issues. *Journal of Clinical Psychology, 61*(5), 579-587. doi:10.1002/jclp20121
- Ramsay, J., & Rostain, A. L. (2006). Cognitive behavior therapy for college students with Attention-Deficit/Hyperactivity Disorder. *Journal of College Student Psychotherapy, 21*(1), 3-20. doi:10.1300/J035v21n0102

- Realmuto, K., Winters, K., August, G., Lee, S., Fahnhorst, T., & Botzet, A. (2009). Drug use and psychosocial functioning of a community-derived sample of adolescents with childhood ADHD. *Journal of Child & Adolescent Substance Abuse, 18*(1), 172-192. doi:10.1080/10678280902724176
- Reaser, A., Prevatt, F., Petscher, Y., & Proctor, B. (2007). The learning and study strategies of college students with ADHD. *Psychology in the Schools, 44*(6), 627-638. doi:10.1002/pits20252
- Reilley, S. P. (2005). Empirically informed attention-deficit/hyperactivity disorder evaluation with college students. *Journal of College Counseling, 8*(2), 153-163. doi:10.1002/j216118822005tb00082x
- Safrin, S. A., Sprich, S. E., Cooper-Vince, C., Knouse, L. E., & Lerner, J. A. (2010). Life impairments in adults with medication-treated ADHD. *Journal of Attention Disorders, 13*(5), 524-531. doi: 10.1177/1087054709332460
- Salkind, N. (2008). *Statistics for people who (think they) hate statistics* (3rd ed.). Thousand Oaks, CA: Sage Publications.
- Schwartz, S. (2002). Convergent validity in objective measures of identity status: Implications for identity status theory. *Adolescence, 37*(147), 610-625.
- Schwartz, S., Zamboagna, B., Meca, A., & Ritchie, R. (2012). Identity around the world: An overview. In S.J. Schwartz (ed.). *Identity around the world and new directions for child and adolescent development, 138*, 1-18.
- Schwartz, S., Zamboagna, B., Meca, A., & Ritchie, R. (2013). Identifying in emerging adulthood: Reviewing the field and looking forward. *Emerging Adulthood, 1*(2), 96-113.

- Schepman, S., Nicholas, J., Stahelski, A., & Fennerty, D. (2010). The relationship between ADHD symptoms, maximization and regret. *National Social Science Journal, 34*(2), 139-147.
- Schultheiss, D., & Blustein, D. (1994). Contributions of family relationship factors to the identity formation process. *Journal of Counseling & Development, 73*(2), 159-166.
- Shaffer, L., & Zalewski, J. (2011). "It's what I have always wanted to do." Advising the foreclosure student. *NACADA Journal, 31*(2), 62-77.
- Shaw, S., Madaus, J., & Dukes, L. (2010). *Preparing students with disabilities for college success: A practical guide to transition planning*. Baltimore, MD: Paul H. Brooks Publishing Co.
- Sibley, M., Evans, S., & Serpell, Z. (2010). Social cognition and interpersonal impairment in young adolescents with ADHD. *Journal of Psychopathology and Behavior Assessment, 32*(1), 193-202. doi:10.1007/s1086200991522
- Snarey, J., & Bell, D. (2006). Erikson, Erik H. In E. Dowling, & W. Scarlett (Eds.), *Encyclopedia of religious and spiritual development*. (pp. 147-152). Thousand Oaks, CA: SAGE Publications, Inc. doi:10.4135/9781412952477.n84
- Sneed, J., Whitbourne, S., Schwartz, S., & Huang, S. (2012). The relationship between identity, intimacy, and midlife well-being: Findings from the Rochester Adult Longitudinal Study. *Psychology and Aging, 27*(2), 318-323.
- Stamp, L., Banerjee, M., & Brown, F. (2013). Self-Advocacy and perceptions of college readiness among students with ADHD. *Journal of Postsecondary Education and Disability, 27*(2), 139-160.

- Stein, M. (2008). Impairment associated with adult ADHD. *Primary Psychology, 15*(8), 9-12.
- Tesch, S., & Whitbourne, S. (1982). Intimacy and Identity Status in Young Adults. *Journal of Personality and Social Psychology, 43*(5), 1041-1051.
doi:10.1037/002235144351041
- Toder, N., & Marcia, J. (1973). Ego identity status and response to conformity pressure in college women. *Journal of Personality and Social Psychology, 26*(2), 287-294.
- Vance, T., & Weyandt, W. (2008). Professor perceptions of college students with attention deficit hyperactivity disorder. *Journal of American College Health, 57*(3), 303-308.
- Waterman, A. (1982). Identity development from adolescence to adulthood: An extension of theory and a review of research. *Developmental Psychology, 18*(3), 341-358.
doi:10.1037/00121649183341
- Waterman, A., & Waterman, C. (1971). A longitudinal study of changes in ego identity status during the freshman year of college. *Developmental Psychology, 5*(1), 167-173. doi:10.1037/h0031139
- Weyandt, L., & DuPaul, G. (2008). ADHD in college students: Developmental findings *Developmental Disabilities Research Reviews, 14*(4), 311-319. doi:10.1002/ddrr38
- Weyandt, L., DuPaul, G. J., Verdi, G., Rossi, J. S., Swentosky, A. J., Vilaro, B. S., & Carson, K. S. (2013). The performance of college students with and without ADHD: Neuropsychological, academic, and psychosocial functioning. *Journal of Psychopathology and Behavioral Assessment, 35*(4), 421-435. doi:10.1007/s1086201393518

- Weyandt, L.L., Iwaszuk, W., Fulton, K., Ollerton, M., Beatty, N., Fouts, H., Schepman, S., & Greenlaw, C. (2003). The internal restlessness scale: Performance of college students with and without ADHD. *Journal of Learning Disabilities, 36*(4), 382-389. doi:10.1177/00222194030360040801
- Whitbourne, S., Sneed, J., & Sayer, A. (2009). Psychosocial development from college through midlife: A 34-year sequential study. *Developmental Psychology, 45*(5), 1328-1340. doi:10.1037/a0016550
- Whitbourne, S., & Tesch, S. (1985). A comparison of identity and intimacy statuses in college students and alumni. *Developmental Psychology, 21*(6), 1039-1044. doi:10.1037/001216492161039
- Woolfolk, A. (2008). *Educational Psychology: Active learning edition* (10th ed.). Boston, MA: Pearson Education, Inc.
- Wronka, J. (2008). *Human rights and social justice: Social action and service for the helping and health professions*. Los Angeles, CA: Sage Publications.

Appendix A: Objective Measure of Ego-Identity Status, (Revision 2010)

Please specify the following information to assist in data collection:

I have a diagnosis of ADHD: No Yes

Age: _____

Class Rank: Freshman Sophomore Junior Senior

Current GPA: _____

Major: _____

Directions: Read each item carefully and decide if you Disagree or Agree with it as it applies to you. Then select the level of disagreement or agreement from slightly, through moderately, to strongly agree. Mark it as a 1 if you strongly disagree through 6 to strongly agree.

Disagree			Agree		
Strongly	Moderately	Slightly	Slightly	Moderately	Strongly
(1)	(2)	(3)	(4)	(5)	(6)

1. I haven't thought about politics and they aren't important to me.

2. I have thought a little about what a job means to me but I mostly follow whatever my parents believe or think.
3. When it comes to religion I haven't really looked for any belief or faith I want to follow.
4. My parents decided what occupation I should have and I'm following their plans for me.
5. There are many different political parties and opinions; I can't decide which to follow until I figure it all out.
6. I don't give much thought to religion and it doesn't bother me.
7. I'm pretty much like my parent(s) when it comes to politics and I vote like they do.
8. I haven't chosen the occupation I really want to get into and I'm just getting along the best I can.
9. I've considered and reconsidered my faith and I know what I now believe.
10. It took me time to decide but now I know the career to pursue.
11. I don't have a firm stand one way or the other on politics.
12. I haven't made up my mind about religion because I'm not done exploring options.
13. I've thought about my political beliefs and know what I believe in now.
14. It took me time to figure it out, but now I know what I want for a career.
15. Religion is confusing to me and I keep searching for views on what is right and wrong for me.

16. I'm sure it will be pretty easy for me to change my occupational goals when something better comes along.
17. My folks have always had their own political and moral beliefs about issues like abortion or mercy killing and I've always gone along accepting what they believe.
18. I've gone through a serious questioning about faith and can now say I understand what I believe in as an individual.
19. I'm not sure about my political beliefs, but I'm trying to figure out what I can truly believe in.
20. I just can't decide how capable I am as a person and what job will be right for me.
21. I attend the same church as my family always attended and I've never questioned why.
22. I just can't decide what to do for an occupation, there are so many possibilities.
23. I've never questioned my religious belief, my parents know what is right for me.
24. I have thought about political issues and I have found my own viewpoints.

“Purchase of this manual includes permission to utilize the Objective Measure of Ego Identity Status for personal or clinical assessments or use in original research”
(Adams, 2010, p. 3).