Ego Identity Development as a Mediator Between Negative Affectivity and Wellness of College Students

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Abstract

For emerging adults, the college experience is a time for new experience that create excitement, lifelong memories, spiritual enrichment, cultural development, and success. Yet for many, the college experience presents with a series of physical, emotional, and psychological challenges, and for some even failure. It is expected that many of these students will experience such stressors, given the complexity of the stage of development, as they move away from adolescence and into adulthood. As college students move away from parental figures and develop more independence, a prominent time for identity development to thrive is created. There is a great deal of scholarly literature on the college experience, especially the stressors that students face and how college counselors can support their overall wellness. Additionally, there has been a large body of research over the past several decades on identity development of emerging adults. Yet there is scant research that explores how identity development shapes the overall wellness of college students. This research studied the relationships between negative affectivity (i.e., depression, anxiety, and stress), ego identity development, and wellness of traditionally-aged undergraduate college students. It also tested if ego identity development mediates the relationship between negative affectivity and wellness. Despite significant relationships between the constructs, the results were surprising, indicating that ego identity development has less of an impact, if any, on negative affectivity and wellness as predicted. However, the results did suggest there is much more to wellness than mental health. Therefore, this study served as a foundation for a new direction in wellness research, as well as provided new ways for college counselors to engage students in supporting their overall wellness and helping them developing resiliency and the skills they need to thrive.

EGO IDENTITY DEVELOPMENT AS A MEDIATOR BETWEEN NEGATIVE
AFFECTIVITY AND WELLNESS OF COLLEGE STUDENTS.

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Forward

My career in mental health and counseling began a decade ago. Prior to college counseling, I specialized in working with families with severe mental illness. Many of my clients, not only struggle with mental health issues, but at the same time presented with comorbid medical conditions, such as diabetes, hepatitis, and chronic pain. As a counselor, as I was trained that it was necessary to rule-out complications from medical conditions that could be contributing to one's mental health. This part of the counseling process, led to my interest in wellness-based counseling. Particularly, I wanted to better understand my clients through assessing the whole person and provide them support that would lead to a better quality of life. As I transitioned into college counseling, I continued to practice from a wellness-based orientation.

In recent years, either through research findings (ACHA, 2013; Reetz, Barr, Krylowicz, 2013) or the media, there are reports of increased levels of mental illness among college students, particularly for depression and anxiety. Yet, I found that although depression, anxiety, and stress often are reported as presenting problems by students seeking counseling—that is the reason they sought services—there were underlying issues of identity development that influenced the mental health of such students. For example, it is neither uncommon nor unexpected for students to question their values and beliefs, especially when considering majors, relationships, spirituality, etc. Yet, identity development is not something to be discussed much, when in context to its relationship with college student mental health. Therefore, this study sought to seek the gap in literature, as well as challenge college counselors to consider ego identity development as an area to further explore in counseling.

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Chapter 1

Introduction

It seems ludicrous to prepare a student for a lifetime career in their area of interest and not

prepare them for the responsibilities of maintaining their life. –Bill Hettler (1984)

The college experience is a time for learning and inquiry, cultural and spiritual

enrichment, excitement, lifelong memories, and success. Unfortunately, college often presents

challenges, emotional, physical, and psychological stressors, as well as failure, as the experience

is considerably different than high school (Chang et al., 2007; Dusselier, Dunn, Wang, Shelley,

& Whalen, 2005). It is expected that college students will experience many of these stressors

(Chang et al., 2007; Dunkel-Schetter & Lobel, 1990), especially given the complexity of their

chronological age and stage of development (Osborne, 2005). In addition to the stressors that

come from the college experience alone, emerging adults (i.e. ages 18 to 25) are in the midst of a

transitional stage of development, in which they are moving away from childhood and

adolescence and into adulthood. Within the college experience, comes the responsibility

separating from parental figures and learning to take care of oneself (Hermon & Davis, 2004).

Arnett (2000) argued that during this phase of life, individuals are challenged with many

directions in life, creating a prominent time for identity development to thrive (Arnett, 2000,

2006; Settersten, Furstenberg, & Rumbaut, 2005).

Ego Identity Development

Erikson's (1946, 1950a, 1950b, 1951, 1956, 1959) post-Freudian theory of the

psychosocial stages development argued that development did not end in adolescence and

marked this transitional period for emerging adults as a time in which individuals integrate what

they have come to known in childhood with eleents of a renew identity. This developmental

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stage is what Erikson (1950a) referred to as identity versus role confusion. During this stage, emerging adults are challenged with the question "Who am I?" Furthermore, Erikson (1950a) asserted that successful outcomes in this stage were marked by individual, conscious exploration in search of identity. On the other hand, unsuccessful outcomes ending in *crisis* occur when individuals do not forge past previous development, prohibiting new experiences in order to make meaning of his or her identity (Erikson, 1950a).

A contemporary elaboration of Erikson's psychosocial stages of development was postulated by Marcia (1980), contending that development is not dichotomous, ending in either a successful resolutions or a crisis. Rather it is a time in which explorations take place and commitments are formed (Anthis, 2002; Grotevant, 1987). This process of identity exploration is fluid and dynamic (Marcia, 1980). However, this does not imply that individuals will not experience struggles or resistance to change. Healthy ego identity development is achieved through genuinely exploring opportunities in life that are personally meaningful, followed forming interpersonal (e.g., family, friendships, career) and ideological (e.g., politics and religion) commitments based on interests and abilities (Marcia & Archer, 1993).

Marica's (1980) model of identity development classifies four identity statuses, based on an individual's level of exploration and commitment forming. An achievement status is defined as an individual who has formed solid commitments after a period of exploration. It is considered to be the healthiest status (Bosma & Kunnen, 2001). Foreclosure status is defined as individuals who has formed solid commitments, but based upon family expectations, with little exploration. These individuals rarely question their roles in the family (Bosma & Kunnen, 2001; Marcia & Archer, 1993a). Moratorium status is defined as individuals who have ideas about their future and actively explore. Yet, often because anxiety and caution around such decisions

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they struggle to form solid commitments (Marcia & Archer, 1993). Finally diffusion status, the least healthy, is defined as individuals who usually lack in engaging in exploration and forming commitments (Bosma & Kunnen, 2001).

Even though college is believed to be a positive phenomenon that is useful in stimulating emerging adults towards identity development (Waterman, 1993), it can be a demanding and stressful environment for many students. The American College Health Association (ACHA; 2013) reported that 28.5% of college students identified stress to be a factor affecting their academic performance. For some students, their stress may be linked to and experienced as emotional distress (i.e., negative affectivity) (Chang et al., 2006; Oaten & Cheng, 2005).

Depression, Anxiety, and Stress

Increasingly, college students are presenting with histories of mental illness (Bishop, 2002, 2010; Schwitzer, 2009a). Depression and anxiety are common presenting problems by college students when seeking counseling services. In the most recent survey conducted by the Association for University and College Counseling Center Directors (AUCCCD), it was reported that anxiety and depression are the predominant presenting problems in college counseling. Within one year, the number of anxiety cases had risen from 41.6% to 46.2%. Likewise, depression cases had risen from 36.4 % to 39.3% (Reetz, Barr, Krylowicz, 2013). An executive report released by ACHA (2013) summarized that in 2013 11% of college students reported having been diagnosed and/or treated for depression, 12.9% for anxiety, and 7.6% for both depression and anxiety.

These rates should alert counselors to not only be aware of the increasing prevalence of serious mental health concerns affecting students, but also the possibility of higher rates of suicidal ideation among students, as it is often brought on by depression and anxiety. As with the

prevalence of depression and anxiety, over the past two years suicidal ideation has increased. ACHA (2013) reported that within this past year, 7.4% of students have seriously considered suicide, an increase from 6.6% two years prior (ACHA, 2011). Of course, this does not mean that all students who will experience depression and/or anxiety at a clinical level will also experience suicidal ideation. Yet, there is a good chance they will experience symptoms during period of their college experience. Brief descriptions of depression and anxiety are presented below.

      Depression. Everyone experiences sadness and what is colloquially referred to as the blues, from time to time. These feelings are normal and part of healthy living. However, it can become problematic when such feelings begin to consume us and inhibit our ability to live our daily productive lives. Depression is a mood state in which these feelings are accompanied by other symptoms, such as fatigue, difficulty concentrating, hopelessness, and sometimes physical aches (American Psychiatric Association, 2013). Approximately, 6.7% of adults and 3.3% of adolescence in the United States experience depression (NIMH, 2014).

      Anxiety. Like depression, everyone has probably felt anxious from time to time. Anxiety can be a normal reaction to stress (Grayson & Cooper2006; Seward, 2015). Among college students, it is normal for them to experience anxiety when adjusting to making new friends, navigating campuses for the first time, taking tests, and presenting in a class (Grayson & Cooper, 2006). As with other mental health concerns, anxiety becomes problematic feelings of worry and fear begin to consume us, hindering our daily function (American Psychiatric Association, 2013). Approximately, 18% of adults and eight percent of adolescence in the United States experience anxiety (NIMH, 2014).

Stress. Conventional wisdom has it that stressors have existed as long as humans have been in existence. Undergraduate students taking psychology classes will learn about stressors when they discuss the body's natural stress response known as *flight-or-fight* coined by Walter Cannon (1932). As mentioned above, not only will students experience stressors, but for many it will affect their academic performance (ACHA, 2013) and presumably their overall well-being. Stress affects individuals in a variety of different ways, sometimes positively and other times negatively. In other words, in short bursts, stress can help us reach immediate outcomes and push us to achieve short-term goals (McGonigal, 2011; Sapolsky, 2003; Selye, 1974; Seward 2015). Yet, despite the short-term beneficial effects of stress, research has shown that repeated, chronic stress can have serious effects on the physical and mental health of individuals (Seward, 2015). Repeated stress can over time cause damage to bodies (Seeman, Singer, Row, Horwitz, & McElwen, 1997), leading to cardiac disease, inflammation, and impaired memory (Kiecolt-Glaser, McGuire, Robles, & Glaser, 2002; McEwen, 2006; Rose, et al., 2013; Sapolsky, 2003). Additionally, college students often report depression and anxiety as common psychological symptoms of stress (Arthur, 1998). When stress is considered an emotional state, it has clear correlations to anxiety (Lovibond & Lovibond, 1995).

Over many years, there have been different global understandings of stress. Among Eastern philosophies, stress is believed to be an absence of inner peace; whereas, in Western culture, stress is often thought of as a loss of emotional control (Seward, 2015). Renowned psychologist, Richard Lazarus argued that psychological stress is a state of anxiety when an individual is unable to cope with daily hassles (Lazarus, 1984; Seward, 2015). For the context of this present study and pertaining to college student experience, stress is understood to be real or

imagined threats to one's well-being, resulting from physiological and psychological responses (Seward, 2015).

Coupled with the challenge of becoming secure with their own identity, as rates of depression, anxiety, and stress continue to increase (ACHA, 2013; Bishop, 2002, 2010; Schwitzer, 2009a; Reetz et al., 2013), it can be presumed that a substantial number of students will seek support from college counselors. Recent news reports have shown increased usage of counseling centers by college students (Murphy, 2014). Accordingly, it is necessary for college counselors to utilize counseling approaches that provide not only short-term relief for a client's symptomology, such as depression and anxiety, but also help students develop the skills necessary to grow and improve overall well-being. By taking a wellness-based approach to counseling, college counselors may be able to assist students in addressing their presenting problems, as well support them in overall development (Hettler, 1980, 1984).

Wellness

Wellness is a concept that has been around for a long time. Whereas many people believe that wellness is simply the opposite of illness, others have argued that wellness is comprised of much more than just the absence of illness (Hettler, 1976, 1980, 1984; Myers & Sweeney, 200; Travis & Ryan, 2004; World Health Organization, 1958). Among those who have a holistic view of wellness, there is general consensus that wellness accompanies way of life in which individuals make active choices toward optimal health of the mind, the body, and the spirit (Crose, Nicholas, Gobble, & Frank, 1992; Hettler, 1976, 1980, 1984; Myers & Sweeney, 2004; Myers, Sweeney, & Witmer, 2000; Travis & Ryan, 2004; World Health Organization, 1958).

The Indivisible Self wellness model (IS-Wel), developed by Myers and Sweeney (2004), is the only empirically supported wellness models found in counseling literature. It was created after a series of empirical studies, designed to establish the validity of the original wellness model, the Wheel of Wellness (WoW; Sweeney & Witmer, 1991; Witmer & Sweeney, 1992; and Myers, Sweeney, and Witmer, 2000). Through a series of factorial analyses, the following factors were determined to be included in the wellness model: (a) the essential self, comprised of spirituality, self-care, gender and cultural identity; (b) the creative self, comprised of thinking, emotions, control, positive humor, and work; (c) the coping self, comprised of realistic beliefs, stress management, self-worth, and leisure; (d) the social self, comprised of friendship and love; and (e) the physical self, comprised of exercise and nutrition (Myers & Sweeney, 2004). The application of the IS-Wel or a similar wellness-based counseling approach to counseling is an excellent fit for the care of college students, as it is developmental, strength-based, and holistic (Ivey, Ivey, Myers, & Sweeney, 2005; Myers & Sweeney, 2004).

It is helpful to recognize that while many students will experience depression, anxiety, and stress, what matters more than whether they experience these challenges, is how they manage these symptoms. When faced with stressors, some individuals have better coping styles and problem solving abilities to help them quickly alleviate negative affectivity (Maddi, 1999; Maddi & Kobasa, 1984; McGrath, 2006). On the outside, negative affectivity and ego identity might not seem related. However, identity exploration has been defined as "problem solving behavior aimed at eliciting information about oneself or one's environment in order to make a decision about an important life choice" (Grotevant, 1987, p. 204). As such, problem solving is paramount when dealing with identity issues and negative affectivity. Given the likelihood of college counselors working with students who present with issues around identity development

and negative affectivity, striving for overall wellness can help students to better manage these issues, improve other aspects of their well-being, and empower them to make better lifestyle choices (Ivey et al., 2005; Myers & Sweeney, 2004).

Furthermore, it makes sense that struggles with negative affectivity and the development of one's unique identity, may impact an individual's overall wellness. Existing research has shown that ego identity statuses that struggle with higher levels of negative affectivity tend to have lower levels of wellness (Azmitia, Syed, & Radmacher, 2013; Claes, Luyckx, & Bijttebier, 2014; Grotevant, 1987; Josselson, 1973; Marcia, 1967). Therefore, a next step in the research is to determine if ego identity development is a mediating factor among the relationship between negative affectivity and wellness.

Potential Implications of the Proposed Study

Though a vast amount of wellness research samples college student populations (Osborne, 2005), few empirical studies have considered overall, holistic wellness of college students and its relation to mental health and development (Louden, 2005; Myers & Mobley, 2004; Sinclair & Myers, 2004; Spurgeon & Myers, 2010). Of those that do explore wellness and identity, they tend to focus on racial and culture identity (Chow, 2010; Oguz-Duran & Tezer, 2009; Ratanasiripong & Rodriguez, 2011; Spurgeon, 2009; Spurgeon & Myers, 2003; Spurgeon & Myers, 2010), as opposed to ego identity. Similarly, few recent empirical studies explore ego identity development and negative affectivity (Azmitia et al., 2013; Claes et al., 2014), while none could be identified that investigate if ego identity development is a mediating factor for negative affectivity and wellness.

This study seeks to begin to fill this gap in the literature, as a means to provide counselors insight on ways to, better understand identity development and use this knowledge to help

students develop healthy coping skills to manage negative affective states. By understanding the underlying change mechanism (i.e., ego identity development) and how it critically influences the outcome (i.e., wellness), counselors may find improved ways to better support their clients in improving overall wellness (Frasier, Tix, & Barron, 2004). Furthermore, including developmental concepts will aid in helping student who find themselves stuck in moving forward past their childhood identities or are cautious about where the future is taking them. Additionally, a developmental perspective supports a wellness-based approach by further creating a holistic view of the student and awareness of how he or she adapts to life's challenges.

In summary, the purpose of this study is to (a) assess levels of negative affective states and level of wellness among college students, (b) examine the relationships between negative affectivity, ego identity development, and wellness, and (c) determine if ego identity development mediates the relationship between negative affective states and wellness. To achieve these goals, a series of six research questions will be answered.

Research Questions

1. What are the levels of negative affectivity, wellness, and ego identity development among undergraduate college students?

2. Is there a significant relationship between negative affectivity and wellness among undergraduate college students?

3. Is there a significant relationship between negative affectivity and ego identity development among undergraduate college students?

4. After controlling for negative affectivity is ego identity development significantly related to wellness among undergraduate college students?

5. After controlling for ego identity development is negative affectivity significantly related to wellness among undergraduate college students?

6. Does ego identity development mediate the relationship between negative affectivity and wellness among undergraduate college students?

Definition of Terms

Identity is ""self-structure - an internal, self-constructed, dynamic organization of drives, abilities, beliefs, and individual history" (Marcia, 1980, p. 159). Three aspects are considered in the construction of identity: structural, phenomenological, and behavioral. The structural aspect refers to the consolidation of ego growth and processes leading up to late adolescence. The phenomenal aspect concerns an individual's experience of having or not having a sense of identity. The behavioral aspect refers to the observable components of identity development (Marcia, 1995).

Identity exploration is "problem-solving behavior aimed at eliciting information about oneself or one's environment in order to make a decision about an important life choice" (Grotevant, 1987, p. 204). Identity development is experiential and dependent on how explorations are handled and what experiences are considered to be important (Marcia, 1995).

Ego identity is a construct used to denote "comprehensive gains which the individual, at the end of adolescence, must have derived from all of his pre-adult experience in order to be ready for the tasks of adulthood" (Erikson, 1956, p. 56). Here an individual's identity is unique to his or her values, history, and culture. At the same time, an individual begins to understand his or her sameness in oneself, while also sharing characteristics with others (Erikson, 1956).

Negative affectivity is "the general factor of subjective distress and dissatisfaction" (Watson & Kendall, 1989, p. 9). For this present study, negative affectivity will be represented by three constructs: depression, anxiety, and stress.

Depression is a mood state in which a collection of negative feelings (e.g., sadness, hopelessness, irritability, etc.) are accompanied by symptoms such as fatigue, anhedonia, difficulty concentrating, appetite concentration (e.g., increase or decrease), decreased sex drive, and suicidal ideation. Everyone occasionally gets these feelings and they are usually short-lived, passing within a few days. However, for some individuals depression can become a serious illness, requiring clinical treatment that might include counseling and psychotherapy, medication, and other healthcare methods (NIMH, 2014).

Anxiety is a future-oriented mood state that is usually accompanied by worry and/or fear in preparation for future events that are believed to be negative (Craske et al., 2009). It can be a normal reaction to stress, and last for brief periods of time. Though, for some it can become excessive affecting their day-to-day living. At a clinical level, individuals usually recognize that their anxiety is excessive, but have trouble controlling it. These individuals might benefit from counseling and psychotherapy, as well as psychiatric care to help managing it and be able to function in their daily lives (NIMH, 2014).

Stress is "the experience of a perceived threat (real or imagined) to one's mental, physical, or spiritual well-being, resulting from a series of physiological responses and adaptations" (Seward, 2015, p. 579). Today, the term distress is often abbreviated and commonly said as stress. Distress refers to negative interpretations of an experience or event that invoked feelings of fear or anger (Seward, 2015).

Wellness is "…a way of life oriented toward optimal health and well-being in which body, mind, and spirit, are integrated by the individual to live more fully within the human and natural community" (Myers, Sweeney, & Witmer, 2000, p. 252). Though many assume that wellness is simply the absence of disease, the World Health Organization (WHO; 1958) has

argued for many years that this is not so and emphasizes the importance of having a state of

physical, mental, and social well-being.

Chapter 2

Literature Review

The following presents a review of the literature of the construct ego identity development is presented first, followed by the constructs negative affectivity and wellness. The review will reveal that ego identity development may play a mediating role in the relationship between negative affectivity and wellness in an undergraduate college sample. The chapter will also demonstrate negative relationships between negative affectivity and wellness. Ego identity development has not been previously studied in terms of its relationship between both negative affectivity and wellness. In order to take the next step in this exploration, relationships between these constructs need to be identified.

In addition to academic success, college counseling has a tradition of working with students to support them in developing healthy coping skills that will allow them to address adjustment issues, relationship problems, and struggles with alcohol and other drugs (Choate & Smith, 2003; Schwitzer, 2009a). Yet today, many college counselors are faced with clients who present with other mental health concerns (Schwitzer, 2009a), such as depression and anxiety. As college counselors to continue to navigate a wider reach of students, the mission is to help "students work through psychological and emotional issues that may affect their academic success and personal development" (Dungy, 2003, p. 345), all while continuing to promote wellness (Schwitzer, 2009a; Watson & Schwitzer, 2010). In order to better serve clients, it is necessary for counselors to further explore how the development of college students is associated with negative affectivity, a common presenting problem (American College Health Association, 2013) and wellness. The following literature review will illustrate how ego identity development may play a role in mediating the relationship between negative affectivity and ego wellness of

traditional-aged college students. The chapter will also discuss previous research that suggests

correlations between ego identity development, negative affectivity, and wellness. For the most

part, extant research has not studies ego identity in terms of wellness; therefore the next step is to

identify the associations between these constructs through a review of the literature.

Emerging Adulthood

Today, many people use the term ego to represent someone who presents as vain or

opinionated and perhaps not even know the actual origin of the construct. Within this document

the term ego will represent the "individual center of organized experience and individual

planning" (Erikson, 1968, p. 46). The ego is capable of integrating well within a social reality

and coincides with one's meaning and need for significant others in the immediate community.

Likewise, ego identity has been used by Erikson (1946, 1950a, 1951, 1956, 1959) to mean the

comprehensive gains an individual derived throughout childhood and adolescence in order to be

ready for adulthood. The ego functions to integrate new elements of identity with current

psychosocial aspects of development. Already established identities can exhibit conflict and

crisis when conflicting social demands and beliefs cause previous adjustments to no longer be

sufficient. Yet, this is understood to be part of typical development individuals experience and

differs from imposed, traumatic, and neurotic crises (Erikson, 1959).

Erikson contributed to the field of human growth and development through his

psychosocial developmental theory, positing eight stages of psychosocial development (Erikson,

1950). Each of the stages is tied to chronological age and relevant age-specific crises (Erikson,

1950; Marcia, 1993). Within this document and for the purpose of this study, the focus will be

on the late adolescence and early adulthood, primarily Erikson's fifth stage of development

(Marica, 1966). As late adolescent begin to move away from youth and towards adulthood,

concern about how to consolidate who they are—inner sameness and inner capital—and their role within society, often with preoccupations about how they perhaps to achieve social continuity. Through this consolidation and gradual integration of identifications, the forming of the ego identity will take place (Erikson, 1950, 1956). Erikson theorized that one of the greatest challenges during this period of development is for the individual to separate from early life and resist pressure to over-identify with parental figures. The emerging ego identity will then bridge early childhood development with later stages of development (Erikson, 1959; Marcia, 1966).

Traditional aged undergraduate students are those between the ages of 18 and 23 years old. During this time, college students are faced with a variety of developmental challenges as they become young adults. Erikson (1950) theorized that from ages 12-20 years old, individuals were in a stage of development known as identity vs. role confusion. A key feature of this stage is that individuals question how they fit in with society and where they are going in life, common questions asked by college students. As individuals progress into young adulthood (ages 19-40), they are faced with creating successful, loving and intimate relationships. These developmental takes take place in the stage known as intimacy vs. isolation (Erikson, 1950; Schwartz, 2007).

Identity development is an integral part of overall lifespan development that is presumed to have profound growth during late adolescence and early adulthood (Schwartz et al., 2011). Traditional student development and wellness theories share similar beliefs in regards the college experience being a point in time in which students move away from their parents, taking greater responsibility and direction for themselves (Hermon & Davis, 2004). Given the span of new encounters that students will face as they enter college that impact them academically, socially, physically, emotionally, etc., it makes sense that these emerging adults (Arnett, 2000; Schwartz, Côté, & Arnett, 2005; Schwartz & Montgomery, 2002) will experience the developmental

challenges Erikson theorized (Azmitia et al., 2013). It is not uncommon for college mental health counselors to work with students who present with developmental struggles, as well as mental health concerns which have been increasingly prevalent (Bishop, 2002, 2010; Deckro, et al. 2002; Schwitzer, 2009).

In recent times, the beliefs around young adulthood have been conceptualized and redeveloped as *emerging adulthood* (Arnett, 2000). Arnett (2000) defined emerging adults to be individuals aged 18-25 years old and argued that they are neither experiencing a developmental period of adolescence nor adulthood. Rather these individuals experience a distinct phase of life, in which they are challenged with many different directions in life, leaving them to experience a future that presents as wide-open, creating a critical point in time for identity development to flourish (Arnett, 2000, 2006; Settersten et al., 2005). With many choices to be made, the skill of problem solving becomes necessary for this group of young individuals as they negotiate all that future holds for them.

Problem solving has been conceptualized as "…involving cognitive, behavioral, and affective coping activities aimed at altering the cause of a stressful problem" (Heppner, Cook, Wright, & Johnson, 1995, p. 280). Although it is possible that the task of problem-solving does not only occur in stressful situations, rather individuals' problem-solve every day when faced with multiple avenues as a way to an end point. This action can be view as exploration. As emerging adults continue to navigate different independent and interdependent roles and build develop their identity, exploration is an important life task. Grotevant (1987) defined identity exploration as, "problem solving behavior aimed at eliciting information about oneself or one's environment in order to make a decision about an important life choice" (p. 204).

Overview of Ego Identity Development

Erikson (1968) suggested that identity provided, "a subjective sense of invigorating sameness and continuity" (p. 19) leading young adults to understand how he or she is both alike yet distinctive from others. Marcia's contemporary elaboration of the seminal work of Erikson (Grotevant, 1987) suggested that this stage of development did not consist identity resolution or confusion, rather is a time during which one had explorations and formed commitments towards an identity (Anthis, 2002). This theory was expanded by Marcia (1980) who purported ego identity to be major event and central component of personality development marking the end of childhood and the beginning of adulthood (Marcia, 1993). In his theory, identity was defined as, ""self-structure - an internal, self-constructed, dynamic organization of drives, abilities, beliefs, and individual history" (Marcia, 1980, p. 159). Here identity development was not understood in dichotomous terms as Erikson's theory, rather Marcia (1980) believed identity development to be fluid and unique processes.

Marcia's (1964, 1966) initial research was conducted with a sample of 86 male students who were enrolled in psychology or religion courses at Hiram College. Identity status was determined through the administration of 15 to 30 minute semi-structured interviews. A scoring manual for the interviews was created though Marcia's (1964) dissertation study. Participants were evaluated for the presence or absence of crisis, in addition to commitment in the areas of occupation, religion, and politics. Randomly selected interviews were measured for inter-rater reliability. Interviewers were found to be in agreement 75% of the time. Participants also completed measures on overall ego identity, task performance, and self esteem. This early research validated four identity statuses that are characterized by identity crises and exploration, later redirecting the focus from crises to commitments (Bosma & Kunnen, 2001; Marcia, 1964, 1966, 1967; Marcia & Freidman, 1970).

The following provides an overview of ego identity development literature. While the theory and research has existed for some time, there is relatively limited literature over the course of the past almost 50 years. A search conducted through the PsycINFO database presented 111 hits for the terms "ego identity development." Among the subject headings of those hits the following terms were identified, 49 = ego identity, 23 = ego, 23 = personality development, 23 = self-concept, 20 = ego development, and 15 = ethnic development. For this chapter, the review will focus on research from influential findings and themes of ego identity development.

Ego Identity Status

To achieve healthy ego identity development, it is assumed that an individual genuinely explores personally meaningful alternatives (i.e., ideological and interpersonal areas of life), which is then followed by a selection of interests and abilities (Marcia & Archer, 1993). The four ego identity statuses are referred to as: achievements, foreclosures, moratoriums, and diffusions (Marcia, 1966). This model of identity development has been selected for this present study, as it has been found to be well-suited for describing patterns of identity development in North American emerging adults (Schwartz et al., 2011). Presented below is a deconstruction of the four statuses.

Achievement. Among the four statuses, achievements, as in the title, are believed to be the healthiest, in that they have strong commitments after a period of exploration (Bosma & Kunnen, 2001). At a vocational level, achievements have considered at least one option and begin to identify it. Likewise, when it comes to spiritual and religious matters, achievements have traditionally considered at least one belief system outside of their own. When considering family and career priorities, achievements tend to think about their options, weighing the pros

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and cons, along with behavior that serves as a reflection of their choices (Archer & Marcia , 1993).

In a college setting, these individuals would likely appear to have solid ideas about their careers, selecting majors that are congruent with their future professions. They would be consider other ideas and belief systems, yet understand that they can hold onto their values and beliefs, while considering others at the same time. When it comes to future priorities, they take time to determine which choices are best for them and their decisions are mirrored within their behavior. Given the healthy ego development in this population, they may not find a need for counseling that often.

Foreclosure. Foreclosures are believed to have strong commitments, but lack exploration as they typically follow life plans determine by their family or close guardians (Bosma & Kunnen, 2001). They tend to follow a career-path that had been selected by them at an early-age by parental figures, with little thought about alternative vocational opportunities. Similar to their decision making around their careers, when it comes to spirituality and religion they remain firm believers in the faith of their childhood. Traditionally, children remain the highest priority when it comes to career and family planning, with significant others often playing important roles. Foreclosures rarely question their roles within the family (Marcia & Archer, 1993; Josselson, 1973; Marcia, 1966).

Among a college population, foreclosure would likely appear relatively healthy and stable in their presentation. They will likely select majors that will lead them to future professions their parents believe are admirable. For example, a student will major in biology because her parents believe that she should pursue medical school. They will also hold firm spiritual and/or religious beliefs that they have been brought up with and likely will not consider

other creeds. As expected family is important to them and creating future families with children will likely rank high among their priorities. In counseling, this population may rely heavily on what is right for their family and turn towards parental figures for decision-making.

Moratorium. Individuals with a moratorium status do not establish commitments, yet actively explore new possibilities (Bosma & Kunnen, 2001). Like achievements, moratorium individuals have ideas about their career-path; however, they tend to have concerns about their interests and actively explore alternatives. Typically moratoriums will consider alternative spiritual and religious beliefs, but at a very esoteric level. In regards to career and family priorities, this often presents as a difference between the genders, in which moratorium women tend to have more concerns and conflicts when it comes to balancing the work life and motherhood (Marcia & Archer, 1993).

Moratorium college students would likely present with some ideas about their future, as far as career, relationships, and family planning. However, they may exhibit anxiety and concern about such decisions and cycle between different options. If a new experience does not go as planned, they may quickly move on to the next. In counseling, this may be portrayed through all-or-nothing, black or white, thinking.

Diffusion. Finally, individuals with a diffused status are believed to be the least healthy, in that they lack commitments and exploration (Bosma & Kunnen, 2001).   Individuals with a diffusion status tend to not have solid ideas about their careers and often wait for someone to offer good opportunities to them. Diffusions typically believe that spiritual and religious issues are a waste of time and may create a spiritual façade of what they would like others to believe that they embrace. Men tend to be more diffuse than women when it comes to career and family priorities, yet overall, diffusions tend to exhibit apathy in this domain (Marcia & Archer, 1993).

As undergraduate students, those within the diffusion status would likely present with struggles to determine how to move forward in their lives. It is likely that they will lack solid ideological and interpersonal goals. They may show up to counseling presenting with issues around major life and academic decisions, while struggling to formulate their own counseling goals. It is likely that they might rely heavily on their counselors to provide direction in the counseling sessions and to help formulate outcome goals.

Marcia's (1966, 1967, 1970) early research which served as the groundwork for ego identity development theory, was normed through an all male sample population. Josselson's (1973) seminal research sought to transpose the work of Marcia (1966), accurately reflecting interpersonal identity of women, and thereby to validating the ego identity statuses among women. A qualitative design was employed through interviewing 48 college women, in their early 20s, selected from three universities in Boston. Each participant met with a psychologist for an hour to an hour and a half for an identity status interview that was modified for women, assessing the presence or absence of crisis, as well as levels of commitment regarding occupations, religion, and political beliefs. Reliability for the interviews was determined by a "two raters out of three" criterion. Though the sample was described as, "extraordinarily diverse" (Josselson, 1973, p. 8), the diversity seems to refer more to their college careers than demographics. Diversity of the sample was provided through a description of post-college plans, the educational background of the parents, and the occupational status of the participants' mothers.

Josselson's (1973) study focused solely on female, college seniors who were about to graduate from college, of which many had begun looking for employment. The results of this study reflect a critical point in time, in which identity development will likely influence the next

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step of the participants lives as they move away from the security that college often provides and into more independent, adult lives. Though there were no significant differences for the educational background of parents, overall the sample lacked in diversity. The majority of the sample was first generation college students. Additionally, many of the women were in relationships with men and several had been engaged (Josselson, 1973).

Overall in the study, Josselson (1973) found that the developmental turning point for these women is the realization that their consolidation from childhood to middle adolescence could no longer serve them as adults. Many specific findings among the individual statuses echo findings from other research on ego identity, such as the importance of role of parental figures for foreclosure status (Marcia & Archer, 1993; Berzonsky & Adams, 1999; Marcia, 1988; Waterman, 1993), independent thought for achievements (Schenkel, 1975; Marcia & Archer, 1993), indecisiveness of moratoriums (Marcia & Archer, 1993), and apathy within diffusions (Marcia & Archer, 1993), validating that the theory can be applied to women. Also noted in the findings of Josselson's study was the psychological well-being of the participants. Moratoriums were found to exhibit more anxiety than achievements, resembling anxiety experience by diffusions as well. Yet diffusions were found to experience more underlying depression. Though all statuses will likely experience anxiety at times, achievements were better able to manage it by not allowing relinquish older issues around self-esteem and childhood expectations (Josselson, 1973).

The findings from Josselson's early research on ego identity development among college-aged women bear likeness to findings in other identity development research (Marcia & Archer, 1993; Berzonsky & Adams, 1999; Marcia, 1988; Schenkel, 1975; Waterman, 1993). However, it is necessary to question if the findings of Josselson's study would yield similar results to today's

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population of emerging adults in the United States. As stated above, Josselson's work lacked a diverse sample, though likely to be reflective of female college students of the time. When applying Josselson's findings to current female college students one must consider the cultural relevance with respect to social expectations of femininity, especially concerning sexuality and motherhood. This present study seeks to eliminate such limitations by utilizing a contemporary measure of ego identity development.

Fluidity of Status

One specific limitation of Josselson's study was the single focus on college seniors. This prevents determining if it was possible that the ego identity statuses of the participants had shifted throughout their college careers. Though this is not possible to determine from Josselson's work, findings from other studies have suggested that ego identity status is not static, and suggest that ego identity development exists along a spectrum (Bosma & Kunnen, 2001; Berzonsky & Adams, 1999; Meeus, 1996; Meeus, Iedema, Helsen, & Volleberg, 1999, Waterman, 1993, 1999a, 1999b). This then obscures the ability to rank some statuses as more healthy or falling along a spectrum (Berzonsky & Adams, 1999; Bosma & Kunnen, 2001; Waterman, 1999a).

Research on the individual experience of time, in addition to ecological research, supports this claim. Recent findings indicate that the personalities, values, and preferences of people change over time, despite a common individual belief in that who we are today will be who we are tomorrow (Quoidbach, Gilbert, & Wilson, 2013). This idea is further supported by Brofenbrenner's (1989) fundamental ecological systems theory, which purports that different bidirectional systems (i.e., microsystem, mesosystem, exosystem, and macrosystem) influence one another throughout time and powerfully shape development. Therefore, it can be assumed

that various ecological factors will likely influence emerging adults, leading to fluctuations in identity development. Thus, even if we determine that one status is less healthy than another, we must recognize that these statuses are not static identities; rather, as research has determined, ego identity development is fluid, especially among emerging adults (Bosma & Kunnen, 2001; Berzonsky & Adams, 1999; Meeus, 1996; Meeus et al., 1999, Waterman, 1993, 1999a, 1999b).

Yet, some research proclaims that some statuses are considered to be more mature than others. Typically, achievement and moratorium are considered to be mature statuses, whereas foreclosure and diffusion are thought to be less mature statuses (Bosma & Kunnen, 2001; Goossens, 1995). It has also been stated that pattern change can be indicative of stable, progressive, or regressive developmental pathways (Bosma & Kunnen, 2001). However, as expected in typical development research has established that identity development pathways often reflect shifts from less mature statuses in early adolescence to more mature statuses in late adolescence (Bosma & Kunnen, 2001; Berzonsky & Adams, 1999; Meeus, 1996; Meeus et al., 1999, Waterman, 1993, 1999a, 1999b). Furthermore, such shifts tend to be progressive, rather than regressive (Berzonsky & Adams, 1999). Yet, van Hoof (1999a, 1999b) offers a conflicting view, reporting that in her review of developmental literature prior to the 2000s, only just over half of the finding show progression, while the rest suggest regression.

Developmental Trajectories

Another finding that has been reported is that within each identity status might lie different trajectories. For example, in a longitudinal, two year, study of 131 undergraduate students (84 female and 47 male) enrolled in education, sociology, and law classes at a New Zealand University (Kroger,1995). The findings indicated evidence for firm and developmental foreclosure status. Participants in this study were assessed using three measures (two interviews

and an instrument) of ego identity development, separation and individuation, and early memories. Ego identity development and early memories were determined through interviews. Kroeger (1995) utilized the Marica Ego Identity Status interview, which is able to classify participants within one of the four identity status. The early memories interview elicits four early memories: the participants' earliest memory, the second earliest memory, the first memory of mothers, and the first memory of fathers. The memories are assessed for bringing about positive or negative affect in the participants. Lastly, separation and individuation were determined through an instrument (Separation-Individuation Test of Adolescence; SITA) with 103 questions, using a 5-point scale.

At the onset of Kroger's (1995) study, those with foreclosure status were rated as developmental foreclosure (i.e., likely to change) or firm foreclosure (i.e., unable to consider the possibility of change). The results of this study indicate statistical support for both subcategories of foreclosure status. Participants who were rated as developmental foreclosure significantly changed more over a two year period than those who were rated as firm foreclosure (Kroger, 1995).

These findings further support that ego identity status is not static for all and that change in status can be expected for many individuals (Bosma & Kunnen, 2001; Berzonsky & Adams, 1999; Meeus, 1996; Meeus et al., 1999, Waterman, 1993, 1999a, 1999b). However, there were only 11 participants in this study who were rated foreclosure at the onset and were available to be interviewed two years later. While the results suggest non-homogeneity among individuals with a foreclosure status, the small sample bears to question the generalizability of the findings to greater populations. Although this present study is not longitudinal, therefore not having the ability to reveal change in status, it is important for college counselors to be aware of the

possibility of change in status when working with clients who present issues around identity development, especially if change in status leads to better overall wellness.

Identity Determinants

Based on a comprehensive review of ego identity development literature, both theoretical and empirical, Bosma (2001) suggested that there are three themes to identity determinants. The first theme regards an individual's openness to change, which ultimately affects stability, thinking styles, and the simply acceptance that change might occur. The second theme deals with the outcomes from previous developmental stages, in which dependency and autonomy are of importance. The final theme that impacts identity determinants considers the support and environmental opportunities that are presented to individuals (Bosma, 2001).

Openness to change. In further elaboration of his paradigm, Marcia (1980) explained in more detail that identity development does not simply begin and end during adolescence. A well-developed identity structure must be flexible and open to change, of course this does not mean that individuals will not allow previous beliefs and experiences impact their experience to change. Yet, this highlights the critical role that openness to change has on the movement of identity pathways. For example, it is possible for one to move from achievement to foreclosure if one rigidly maintains commitments at the cost of structural change (Bosma, 2001).

Previous development. The second theme impacting identity development is the outcome(s) from previous stages of development. One way to look at this is the idea from a perspective in which a new developmental stage begins where the last stage ended. Dependent upon how issues (crises) were resolved in the previous stage impacts how the direction as to how future matters will be managed (Bosma, 2001). When looking at specific statuses, we can see how previous development continues to influence ego identity. For achievements, previous

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consolidation and integration of beliefs, options, choices, and identifications carry on. Foreclosure overly identify with parental figures, causing them to continue to rely on family for decision-making. On the other hand, for moratoriums a period of destabilization with parental figures tend to occur, which leads to increased greater individualization (Berzonsky & Adams, 1999; Marica, 1988). For individuals falling within a diffusion status, it can be assumed that a history of unsuccessful decision-making and commitment formation continues to negatively influence their ego identity development.

Another possible factor related to this second theme, not directly reported by Bosma (2001), though mentioned as an individual characteristic that might influence identity exploration, is ego resiliency. Ego resiliency refers the degree of flexibility a person exhibits when confronting new challenges. Those with low ego resiliency experience inflexibility and struggle to adapt to new situations. Whereas, those with high ego resiliency are better able to adjust to new situations and are more flexible and open to change (Block & Block, 1980; Grotevant, 1987). Returning to the individual statuses, we can imagine that someone who has low ego resiliency during youth might continue to struggle with new experiences as his or she progresses into early adulthood. Contrarily, someone who has high ego resiliency will likely be open to new experiences and be able to better manage challenging situations.

Support and environmental opportunities. A final theme to identity development is environmental factors, particularly family and school variables. As expected, those with a foreclosure status (i.e., little exploration, strong commitments) have been found to have the strongest relationships with parents across the four statuses (Waterman, 1993). In college students, these might be students who pursue majors and make vocational decisions based on what their guardians believe are good career choices. The opposite has been found for those in

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the diffusion status, as they reported the most distant relationships with their parents (Waterman, 1993). Both moratorium and achievement statuses have been found to have critical relationships with parents. Young men of these statuses have been found to not turn to their parents when making important decisions. However, it has been suggested that successful identity development may lead to better familial relationships (Waterman, 1993).

Despite these reports from Waterman (1993), it appears that gender might also play a role in autonomy and identity development. An early study by Schenkel (1975) found that achievement and foreclosure women to be the most independent. Among men, foreclosure along with diffusions, were found to be the least autonomous (Schenkel, 1975). Other early studies have indicated similar findings, with foreclosure men to be reliant on their families when making decisions (Waterman & Goldman, 1976; Waterman & Waterman, 1975).

Other determinants. Other recent research has suggested other possible determinants of identity development. Specifically, the effect of social support, in addition to mental health, have been factors recognized as effecting ego identity development. Azmitia and colleagues (2013) conducted a study on identity and emotional support of students' adjustment to college. Participants consisted of 167 first-year college students of diverse ethnic and socioeconomic backgrounds in Northern California. Three measures on identity synthesis, emotional support, and self-esteem were completed. The findings of this study revealed four distinct mental health clusters when screening for depression and self-esteem: greatly improving mental health, maintaining positive mental health, poor mental health declining, and good mental health declining) played a role in identity development. More specifically, maintaining positive mental health and greatly improving mental health showed greater identity synthesis over time. Moreover, positive mental health and greatly improving mental health clusters not only reported

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higher levels of identity synthesis, but were also found to have greater perceived emotional support from parents and friends (Azmitia et a., 2013).

The findings from Azmitia et al. (2013) support earlier research findings that indicated the importance of social support and its role in identity development (Waterman, 1993, 1995). Contrary to earlier findings (Schenkel, 1975; Waterman & Goldman, 1976; Waterman & Waterman, 1975), Azmitia et al. (2013) found no overall significant differences were found across gender, ethnicity, and socioeconomic variables. Perhaps this is due to generational changes in parenting and increased forms of technological social communication of the millennial generation. One limitation of Azmitia et al. (2013) findings that will be addressed in this current study, is that they only sampled first-year students. Therefore, it is unclear if they findings remain significant for adjustment over the course of undergraduate studies.

It can be expected that a positive college experience contributed to good mental health, which might have contributed to the findings above. Overall, the college experience is believed to be a positive phenomenon in that it is conducive to identity development by stimulating emerging adults to make critical decisions, consider alternative choices, and hopefully provide support needed for successful resolutions of identity crises (Waterman, 1993). For this reason, this current will sample participants across college years, not limiting the sample to first-year students.

Research findings on the fluidity of identity development (Bosma & Kunnen, 2001; Berzonsky & Adams, 1999; Meeus, 1996; Meeus et al., 1999; Waterman, 1993, 1999a, 1999b) and determinants of identity development (Adams, 1999; Azmitia et al., 2013; Block & Block, 1980; Bosma, 2001; Grotevant, 1987; Marcia, 1988; Schenkel, 1975; Waterman, 1993; Waterman & Goldman, 1976; Waterman & Waterman, 1975) support the belief that positive

college experience contributes to the formation of ego identity. Yet, college students face a plethora of life stressors, ranging from social pressures to academic challenges and financial struggles (Dusselier et al., 2005). It is said that it is during the college years that individuals achieve the greatest gains from identity development (Waterman, 1985, 1993). Coupled with such stressors, it is plausible that identity development can influence how individuals' problem-solve and manage stress. Dating, going to college, which college, sexual relationships, studying or playing, and political affiliations, all have identity-forming implications (Marcia, 1980, p. 161). Such diverse experiences trigger considerations and resolutions to identity issues (Waterman, 1993). Anxiety and depression are sometimes a result of how individuals perceive and react to stressors (Beck & Clark, 1997).

Therefore, it is probable that individuals with particular ego identity functioning, such as moratoriums who struggle to explore options, may develop greater levels of anxiety and depression than those who are open to exploration and have lower levels of overall wellness (Grotevant, 1987; Marcia, 1967).   Even though there has been a resurgence in understanding the relationship of identity development and other aspects of psychosocial functioning (Schwartz, Zamboanga, Weisskirch, & Rodriguez, 2009b), with particular interest in areas of subjective well-being (i.e., happiness) (Hofer, Kärtner, Chasiotis, Busch, & Kiessling, 2007; van Hoof & Raaijmakers, 2002; & Waterman, 2007), behavioral problems (Adams, Munro, Doherty-Poirer, Munro, Petersen, & Edwards, 2001; Schwartz, Pantin, Prado, Sullivan, & Szapocznik, 2005), and substance use (Bishop, Weisgram, Holleque, Lund, & Wheeler-Anderson, 2005), none specifically look at the relationships between ego identity development, negative affectivity, and wellness. This present study will take a step towards filling that gap in the literature.

Overview of Negative Affectivity

Problem solving is an individual attribute that differs among individuals, with respect to how they solve problems and how effective their problem solving is when faced with challenges and stressors. Moreover, problem solving has been conceptualized as a personality variable that involves, affective, cognitive, and behavioral coping skills aimed at changing the cause of stressors (Chang, et al., 2007; Heppner et al., 1995). Given that problem solving involves affective skills, it is likely that an individual's affect, be it positive or negative, to influence how he or she problem solves. For example, reactive styles of problem solving have been found to increase stress (D'Zurilla, & Sheedy, 1991; Heppner et al., 1995; Neville, Heppner, & Wang, 1997). Similarly, problem solving has also been associated with depression and anxiety, (Nezu, 1986; Nezu & Ronan, 1988),

A more recent study by Chang et al. (2007), examined the relationships between problem solving, stress, and psychological adjustment in young adults. The sample population consisted of 263 (102 men and 161 women) college students, with a mean age of 20.3, from a mid-sized Midwestern university. Participants were given a take home survey, consisting of assessments to measure problem solving styles, stress, life satisfaction, and psychological symptoms. Results of the study found that stress was significantly related to problem solving styles, accounting for up to 31% of the variance. Additionally, problem solving deficits were as significantly associated with psychological adjustment (Chang et al., 2007). There are limitations to the study, such as having little diversity within the sample. These findings further support a relation between problem solving and negative affectivity.

Returning to the quote above by Grotevant (1987), ego identity development is defined as a, "…problem solving behavior aimed at information about oneself or one's environment in order to make a decision about an important life choice" (p. 204). As previous research (Chang

et al. 2007; D'Zurilla, & Sheedy, 1991; Heppner et al., 1995; Nezu, 1986; Nezu & Ronan, 1988; Neville et al., 1997) suggest that negative affectivity can affect problem solving skills, and vice versa, it plausible that ego identity development and negative affectivity are related to one another. Among college students, this relationship would likely be demonstrated in when students are responsible for making important life decisions. For example, one might see that anxiety or stress affect a college student who is struggling to determine if she has chosen the major that is right for her interests and beliefs, resulting in failure to commit. Additionally, with an increase of overparenting among this generation (LeMoyne & Buchanan, 2011; Segrin, Woszidlo, Givertz, & Montgomery, 2013) college students may face negative affectivity when they are presented with opportunities to disagree with their parents, which in turn might affect their ability to trust their own identity and make decisions for themselves.

The following will deconstruct negative affectivity and describe how it will be operationalized in this present study. In this present study, negative affectivity will consist of three constructs: depression, anxiety, and stress. These three constructs were selected to define negative affectivity for two reasons. First, clinical practice and research have found significant associations between depression, anxiety, and stress (Billings & Moos, 1982; McGrath, 2006; Nezu, 1986). Second, given the rise of anxiety and depression in college students, it is vital to explore both as it is likely for college counselors to continue to work with students who present with symptoms of both psychological disorders (American College Health Association, 2013; Reetz et al., 2013). Finally, there is little research specifically looking at these constructs. A search conducted on the database PsycINFO following findings found no hits for "ego identity development" and "negative affectivity." Furthermore, only two hits were found for "ego identity development" and depression, six hits for "ego identity development" and anxiety, and

two for "ego identity development" and stress. This study seeks to fill the gap in the literature, by providing a more comprehensive analysis of the relationship between negative affectivity and ego identity development.

Negative and Positive Affectivity

Before looking specifically at the three constructs within negative affectivity (depression, anxiety, and stress), an overall understanding of negative affectivity and how it differs from positive affectivity is imperative. Negative affectivity has been theorized as "the general factor of subjective distress and dissatisfaction" (Watson & Kendall, 1989, p. 9) and has been correlated with depression and anxiety (Brown, 2007; Brown & Barlow, 2009; Jolly, Dyck, Kramer& Wherry, 1994; Nierenberg, Bentley, Farabaugh, Fava, & Deckersbach, 2012). Also, the words calm and relaxed have been used to describe low negative affectivity.

In contrast, positive affectivity is theorized as enthusiasm, joy, high energy, mental alertness. Positive affectivity is said to reflect pleasurable engagement with one's environment (Watson & Kendall, 1989). Individuals with high negative affectivity tend to have a negative view of self, whereas those with low negative affectivity tend to have a secure sense of self. However, it is possible to still experience positive emotions, such as joy, while also having negative affectivity (Watson & Clark, 1984). When considering ego identity status, it is plausible for individuals with low commitment (i.e., moratorium and diffusion) to not have a secure sense of self, given their anxiety and frustration about the future.

Depression and Anxiety

In a recent executive report, the American College Health Association (ACHA; 2013) disclosed that 11% of students reported having been diagnosed with or treated for depression, 12.9% for anxiety, and 7.6% for both depression and anxiety. Furthermore, anxiety and

depression are reported to be the predominant presenting problems in college counseling. In fact, these numbers have risen over the past year, with anxiety increasing from 41.6% to 46.2%, and depression increasing from 36.4 % to 39.3% (Reetz et al., 2013). As number continue to rise, it is critical for college counselors to find ways to best support students in managing and reducing these symptoms as they have been found to decrease an individual's quality of life (Mendlowicz & Stein, 2000). For some, the link between depression, anxiety, and stress may be constant, as stressful life events are associated with anxiety and depression (Deckro, et al. 2002).

While depression remains a predominant presenting problem in college counseling, research has suggested that as much as 80% of college students will experience some form of depression (Garlow et al., 2008; Westefeld & Furr, 1987). Such disquieting findings indicate the likelihood of students continuing to reach out for support from college counselors in the coming years. As a presenting problem, depression must not be overlooked by college counselors, as it can have substantial negative effects on students that impact academic performance (Hysenbegasi, Hass, & Rowland, 2005), health and wellness (Adams, Wharton, Quilter, & Hirsch, 2008), and even lead to suicide (Centers for Disease Control and Prevention, 2008).

Recent research by Lee, Yeh, and Surething (2013) looked at the relationships between depression, neuroticism, and floccinaucinihilipilification (i.e., flocci-regarding self, relationships, and future as having no value). The study included 209 students from a small southeastern university. The majority of the sample was White (85%) and there were 151 women and 57 men (one participant did not indicate gender). Participants completed several measures to assess neuroticism, depression, flocci, social desirability, self-esteem, and anxiety. The findings indicated that flocci was correlated with neuroticism and depression. Furthermore, through regression analyses, flocci was found to predict depression (Lee et al., 2013). The findings from

this research are relevant and support this study for several reasons. First, it is likely that some of the ego identity statuses (e.g., diffusion and moratorium) experience flocci. The apathy that diffusions experience might be analogous to believing that the self, relationships, and the future have little or no value. Furthermore, neuroticism is a personality trait that consists of several psychological symptoms, including anxiety. Again, anxiety presents in some of the identity statuses, such as moratorium. These individuals often struggle with future planning and therefore it is plausible that they might present with flocci. Of course, given the limited diversity in the sample (i.e., race, ethnicity, and location), it is possible that the findings from Lee et al. (2013) study might not be generalizable to all college populations. Nevertheless, the findings are significant and support the hypotheses of this present study. This present study seeks to sample a more diverse sample of college students.

Another relevant study assessed whether identity formation is related to non-suicidal self-injury (NSSI) above and beyond gender, age, and depression (Claes et al., 2014). Participants of this study included 532 high school students (137 female, 395 male), ranging in age from 12 to 21 (mean age = 15.11), from four high schools in the Flemish speaking part of Belgium. Participants were measured for levels of depression, NSSI, and identity formation. In this study, the identity formation measurement assessed identity synthesis and identity confusion. Identity synthesis refers an individual's ability to fit together different aspects of their identity. Identity confusion refers to being unable to maintain commitments and lacking purpose and meaning in life (Schwartz, Zamboagna, Wang, & Olthuis, 2009a).

Associations between identity formation (both confusion and synthesis) and depression were found in this study. Additionally, regression analyses revealed that identity confusion explained additional variance above and beyond gender, age, and depression for the presence or

absence of NSSI. Though much of this sample population was younger than the population in

this present study (see in Arnett, 2000), they do fall within the same psychosocial stage of

development (Erikson, 1950) making it still possible to generalize the findings to college

students in the United States. However, one considerable limitation of this study is that there is

an overrepresentation of male participants. This current study seeks to gather a more varied

sample population. Yet, the research findings are relevant to this current study, as it is

conceivable that if NSSI were to be replaced with wellness, the results would also present

relationships between the variables, except they would be a in a negative direction (i.e., a

positive correlation with identity synthesis and a negative correlation with identity confusion).

Along with depression, anxiety is a common presenting problem in college mental health,

either as an exclusive problem or together with depression. Though they are diagnosed

separately at a clinical level, depression and anxiety have been shown to have similarities, with

few counseling clients actually presenting with pure forms of the diagnoses. Likewise, anxiety

and depression measures are often correlated with one another (Lovibond & Lovibond, 1995),

making it difficult to discriminate between the two and thus illustrating another reason why both

are necessary to consider in this study as constructs within negative affectivity. Additionally,

anxiety has been found to be prevalent among some of the ego identity statuses (Grotevant,

1987; Josselson, 1973; Kidwell, Dunham, Bacho, Pastorino, & Portes, 1995; Marcia, 1967),

making it worth further consideration in this study.

Recent research continues to demonstrate a relationship between ego identity

development and depression and anxiety. An extensive study by Schwartz et al. (2009b)

examined the relationships of personal and ethnic identity exploration, maladaptive psychosocial

functioning, and questioned if identity confusion mediated these relationships. The participants

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included 905 students (186 men, 719 women) from psychology, sociology, and human development courses at five universities, primarily selected from Florida International University. The mean age of the participants was 19.84 (SD = 2.14). Half of the participants identified as Hispanic, while the other half consisted of participants who identified as White (34%) and Black (16%). Almost all of the participants were born in the United Stated.

Participants completed measurements to assess ego identity development, ethnic identity development, self-esteem, locus of control, purpose in life, ego strength, depression, anxiety, and impulsivity. Findings from this study revealed that both past and current exploration was found to be significantly correlated with depression and anxiety, while ethnic identity exploration was not correlated with depression and anxiety (Schwartz et al., 2009b). These findings support a relationship between ego identity development and negative affectivity, as well as a tendency for depression and anxiety to co-exist. Schwartz et al. (2009b) also found significant correlations between current personal identity exploration (i.e., active exploration) and well-being (i.e., self-esteem and purpose in life). In other words, those who were actively exploring were found to have lower levels of well-being.

Although wellness was not measured in this study, the adaptive psychological measures (i.e., well-being) were used which looked at similar factors found in the IS-Wel model of wellness (see below, Myers & Sweeney, 2004) and the 5F-Wel (see chapter 3 for Myers, Luecht, & Sweeney, 2004), such as self-esteem and purpose in life.   Given that these two constructs are factors in overall wellness (Myers & Sweeney, 2004), these results suggest a relationship between ego identity development and wellness and support the hypotheses of this present study. A limitation of this study was the overrepresentation of women; yet, overall the sample was large

and thereby likely not reducing the generalizable of this study.   This current study plans to seek greater gender diversity among the sample population to exclude this limitation.

Stress

As with depression and anxiety, it can be expected that many college students today will experience stress during their academic career. Over time, many definitions have been created to explain the meaning of stress, ranging from physical energetic experiences to the absence of peace (Seward, 2015). For this study, the following definition will be used to operationalize stress. Stress is, "the experience of a perceived threat (real or imagined) to one's mental, physical, or spiritual well-being, resulting from a series of physiological responses and adaptations" (Seward, 2015, p. 579). Even though stress does not directly cause anxiety and depression, for many stress can elicit a state of depression and/or anxiety because of their perception and reactions to their stressors (Beck & Clark, 1997; Lovibond & Lovibond, 1995; Mahmoud, Staten, Hall, Lennie, 2012). Therefore, in this present study, stress will be considered a factor within negative affectivity.

Mahmoud et al. (2012) conducted a study to explore if coping style, life satisfaction, and selective demographics (i.e., age, gender, GPA, class standing, residency, religion, ethnicity, and greek life) were predictive of depression, anxiety, and stress of college students. The sample consisted of 508 participants. Of these participants, 335 were female and 90% were Caucasian. Participants completed measurements that assessed of the variables. Of these participants, it was reported that 29% were found to have depression, 27% were found to have anxiety, and 24% were found to have been experiencing stress. Moreover, approximately 61% of the students who were anxious also were stress, and about 67% of the students who were anxious were also found to be depressed. Additionally, stress was positively associated with adaptive and maladaptive

coping styles. Finally, maladaptive coping was found to be a significant predictor for depression, anxiety, and stress (Mahmoud et al., 2012).

There were some limitations to the study. Primarily, the majority of the participants were Caucasian, making it difficult to extend the findings to students of diverse racial and ethnic groups. Even so, the findings are relevant to this present study. First, the results support the belief that stress, anxiety, and depression are related. A large number of participants who experienced anxiety also experience depression and/or stress in the study. It is conceivable that college counselors serve similar populations, given the high prevalence of anxiety and depression amongst the great college population (ACHA, 2013). Additionally, even though this present study does not directly address coping as a variable, it is certainly possible that the ego identity statuses vary among their coping styles. For example, it is logical that an individual with a moratorium status, who tends to have concerns about their future causing them difficulty in forming commitments, struggles with coping with life experiences that did not go as planned. This style of maladaptive coping might become habitual with time. Understanding the intersection between this individual's identity development, stress management, and anxiety, can help inform a college counselor to better understand the client and together formulate goals that address these issues and support the client in achieving overall wellness.

Overview of Wellness

Towards the end of the 20th century, there was movement in the field of healthcare towards a new paradigm that is a wellness-based approach (Larson, 1999; Myers & Sweeney, 2008), refuting traditional Cartesian dualism, in that the mind and body are separate entities to be understood and treated differently (McDaniel, 1995; McDaniel, Hepworth, & Doherty, 1992). A wellness approach to healthcare is believed to be developmental, strength-based (Smith, 2001),

holistic, and preventative. Wellness has been defined as, "…a way of life oriented toward optimal health and well-being in which body, mind, and spirit, are integrated by the individual to live more fully within the human and natural community" (Myers, Sweeney, & Witmer, 2000, p. 252). Considering this definition, wellness counseling would allow college counselors to help clients explore the demands college students face (e.g., academics, relationships, work, athletics, etc.) and how it is impacting their overall quality of life.

Although it has been observed that wellness research has been dominated by studies using undergraduate students as participants (Myers & Sweeney, 2008), the actual number of studies that have been published is relatively small. A search conducted through the PsycINFO database presented only 19 hits for the terms college student and wellness (used within the title) from the years 2009 to 2014. In reviewing literature published within the last 15 years, several topics emerge: alcohol use (Lewis, & Myers, 2012), first-year experience (Enochs, 2002), non-traditional students (Myers and Mobley, 2004), technology (Dobransky & Hargittai, 2012), therapies (Montello, 2010), well-being (Hermon & Hazler, 1999), measurement (Gradidge & de Jager, 2011; Shurts, 2004), exercise (Jacobs, et al., 2011; Sidman, Fiala, & D'Abundo, 2011), pathology/affectivity (Myers & Bechtel, 2004; Nierenberg, et al., 2012; Sinclair & Myers, 2004), wellness courses (Conley, Travers, & Bryant, 2013; Drolet & Rodgers, 2010; Hager, George, LeCheminant, Bailey, & Vincent, 2012; Higgins, Lauzon, Yew, Bratseth, & McLeod, 2010; Higgins, Lauzon, Yew, Bratseth, & Morley, 2009; Lockwood & Wohl, 2012), and race and cultural factors (Chow, 2010; Oguz-Duran & Tezer, 2009; Ratanasiripong & Rodriguez, 2011; Spurgeon, 2009; Spurgeon & Myers, 2003; Spurgeon & Myers, 2010). Furthermore, PsycINFO produced four hits for the search terms wellness and "ego identity", with three of the four hits being dissertations. The fourth hit was an article on Erik Erikson (Weisberg, 1996). These

results indicate a need for further research on the topic of college student wellness, particularly in the area of identity development.

Though there is limited empirical research on college student wellness, the construct of wellness has been included in literature across healthcare literature throughout a great period of time and a great number of wellness theories and models have been developed. Additionally, the concept of wellness is widely understood and utilized throughout the clinical community (Carney & Hazler, 2005; Myers & Sweeney, 2008). Within counseling, the Wheel of Wellness (WoW; Sweeney & Witmer, 1991; Witmer & Sweeney, 1992; and Myers, Sweeney, and Witmer, 2000) and the Indivisible Self (IS-Wel; Myers & Sweeney, 2004) models have been the frequently included in counselor education and in clinical practice. The latter model is an empirically-based model of wellness that grew out of the first model, WoW (Myers & Sweeney, 2004). Before reviewing these models in greater depth, as they will serve as a theoretical base for the outcome variable in this study, a review of other well-known models will be completed, as they are well known and often ground clinical practice. The models that will be reviewed are: Hettler's Six Dimensions Model of Wellness (SDMW) (Hettler, 1976, 1980, 1984), Travis and Ryan's (2004) Iceberg Model, including the Illness/Wellness Continuum, and a Systems Model of Wellness (SMW) (Crose et al., 1992), with WoW; Sweeney & Witmer, 1991; Witmer & Sweeney, 1992; and Myers, Sweeney, and Witmer, 2000) and the Indivisible Self (IS-Wel; Myers & Sweeney, 2004).

Six Dimensions of Wellness

Hettler's (1976, 1980, 1984) model, SDMW, was created with the intention of promoting greater wellness on college campuses and asserted that the following six are dimensions of wellness—intellectual, emotional, physical, social, occupational, and spiritual—are

interconnected. He defined wellness as, "an active process through which the individual becomes aware of and makes choices toward a more successful existence" (Hettler, 1980, p. 77). As in the model's name, Hettler (1976) purported that there are six dimension of wellness: occupational, physical, social, intellectual, spiritual, and emotional. Additionally, it was believed that illness and wellness fell on a continuum, ranging from premature death to total wellness. Hettler (1980) reported that this continuum was modified from the earlier work of Sorochan (1970), Diesendorf and Furnass (1976) and Travis (1977; see below).

Iceberg Model

According to the Travis and Ryan's (2004) Iceberg Model posits that different facets of wellness (e.g., lifestyle, culture, spirit, motivation, etc.) must be explored below the surface and that what we see is not all encompassing of one's wellness. Furthermore, a long Illness/Wellness Continuum, part of the Iceberg Model, there are varying degrees of wellness and illness in that wellness is not a static state. A high level of wellness is defined as involving, "giving good care to your physical self, using your mind constructively, expressing your emotions effectively, being creatively involved with those around you, and being concerned about your physical, psychological and spiritual environments" (Travis & Ryan, 2004, p. xix). Although this model has yet to be empirically support, as other wellness models are reviewed (e.g., Crose et al., 1992; Hettler, 1976, 1980, 1984; Myers & Sweeney, 2004; Myers, Sweeney, and Witmer, 2000; Sweeney & Witmer, 1991; Witmer & Sweeney, 1992), it bears similarities with the others and has been referenced in other models (Hettler, 1976, 1980, 1984; Myers and Sweenery, 2004).

Systems Model of Wellness

About 15 years after the wellness theories proposed by Travis (1977) and Hettler (1976), the *Journal of Counseling and Development* published an issue highlighting wellness models,

which included the SMW (Crose, Nicholas, Gobble, & Frank, 1992) and the WoW (Witmer & Sweeney, 1992). The SMW is a model that proposed four principles to wellness, stating that it is multidimensional, not static, self-regulating within and across life dimensions. Incorporated into the model is the constructs cybernetics and emergence. Like other wellness models, the SMW is multidimensional, stressing physical, emotional, social, vocational, spiritual, and intellectual wellness (Crose et al., 1992).

Wheel of Wellness

The WoW (Sweeney & Witmer, 1991; Witmer & Sweeney, 1992; and Myers, Sweeney, and Witmer, 2000) is a well-known wellness model across the counseling discipline and can be found not only in scholarly literature, but also in counseling text books in graduate studies, and is used as a basis for counselors to support clients in developing personal wellness plans in order to achieve greater wellness (Myers et al., 2000). Unlike the other models discussed above, the WoW was developed based on counseling theory and was considered by the authors to be a paradigm of wellness (Sweeney & Witmer, 1991). Based on Alfred Adler's belief belief that it is important to understand individuals holistically the WoW was developed to help counseling clients achieve greater wellness (Myers et al., 2000; Myers, Luucht, & Sweeney, 2004).

The original and revised versions of the WoW consists of five life tasks, based on Adlerian theory, that include spirituality, self-regulation (later referred to as self-direction in the revised model), work (later referred to as work and leisure in the revised model), friendship, and love (Myers et al., 2000; Sweeney & Witmer, 1991; Witmer & Sweeney, 1992). It is also believed that the life tasks interact dynamically with life forces (i.e., family, religion, education, community, government, business, and media), as well as global events (Myers et al., 2000; Sweeney & Witmer, 1991; Witmer & Sweeney, 1992).

Indivisible Self

In a series of seven studies conducted to improve the psychometric properties of the Wellness Evaluation of Lifestyle (WEL), an instrument that was developed to assess the components of the WoW, Myers and Sweeney (2004) concluded that despite support for the WEL, the findings did not support the WoW. As a result of these findings, Myers and Sweeney (2004) developed a new model of wellness, the IS-Wel. Adler's Individual Psychology remained as the organizing theory, as he was a proponent of holism (i.e., the indivisibility of self). Through a series of factor analytic studies, the following second-order factors were determined to be included in the model—(a) the essential self; (b) the creative self; (c) the coping self; (d) the social self; and (e) the physical self (Myers & Sweeney, 2004). For this study, the IS-Wel was selected as a model to represent the construct of wellness, given its evidence-base and use in counseling contexts. In order to better understand how IS-Wel constructs wellness, a brief overview of the second-order wellness factors follows.

Essential Self. Four components make up the Essential Self: spirituality, self-care, gender identity, and cultural identity. Here spirituality, which Adler believed was at the core of holism, reflects one's existential sense of meaning and purpose in life. Gender and cultural identities are understood to be filters through which an individual is influenced by and experiences life. Proactive efforts to live well and live long are effects by one's self-care. In contrast, a lack of self-care can result in despair and a lack of meaning and purpose in life (Myers & Sweeney, 2004).

Creative Self. Thinking, emotions, control, humor, and work are the five components that make up the Creative Self. Here the interplay between emotions and cognition are highlighted, as well as the influence they have on the body. Control regards the perception that

an individual perceives to have over his/her life. Humor can positively contribute to an individual's immune system, while decreasing stress, thereby enhancing wellness. Work is believed to be an essential element in one's life that permits them to live a fully (Myers & Sweeney, 2004).

Coping Self. The Coping Self is made of four components: realistic beliefs, stress management, self-worth, and leisure. Realistic beliefs are an individual's ability to not hold fictive notions (i.e., irrational beliefs). While everyone will experience stressors in their lives, the ability to successfully manage stress can lead to better wellness. Along with stress management, an individual's self-worth is enhanced through successfully navigate life's challenges. Lastly, by allowing leisure time in one's life opens doorways to creative and spiritual endeavors (Myers & Sweeney, 2004).

Social Self. Friendship and love are the components of the Social Self. Friendship and love are considered to exist on a continuum, with unclear distinctions and sometimes unclear in practice. However, it is believed that relationships enhance the length and quality of one's life, as well as predict positive mental health. Whereas, isolation, separation, and alienation have been known to decrease the quality of health and it has even been suggested to lead to premature death (Myers & Sweeney, 2004).

Physical Self. Finally, the Physical Self is comprised of exercise and nutrition. Both of these factors are widely promoted and understood as wellness factors. Though sometimes, they are over-emphasized, while other factors are neglected. That said, research has shown many benefits of exercise and nutrition, including that evidence that those who live the longest participate in both (Myers & Sweeney, 2004).

In addition to these five, second-order wellness factors, Myers and Sweeney (2004) stress the importance of considering contextual variables (Bronfenbrenner, 1999; Gladding, 2002; Nichols & Schwartz, 2001). Understandably, counselors must recognize an individual's environment, as it can impact wellness factors for better or worse. Therefore, four contexts that effect individuals and the surrounding world are presented for consideration: local, institutional, global, and chronometrical. Local context consist of central influences (i.e.., microsystem), such as family and communities. Institutional context is similar to Bronfenbrenner's (1999) macrosystem and include, but are not limited to, education, religion, and government. Global context, which often influence us through media, include politics, cultural and global events, and the environment. Finally, chronometrical reflects the changes that occur within people over time (Myers & Sweeney, 2004).

The review of these selected wellness models reveals that despite them growing out of different disciplines (i.e., medical and counseling), they resemble one another, sharing a general understanding of wellness (Palombi, 1992). This also conveys that there is an agreement of what wellness is among clinical professionals. For the purpose of this present student, the IS-Wel will will be the basis for operationalizing the construct of wellness. The IS-Wel has been selected, as it is the only empirically supported wellness model in the counseling literature (Myers & Sweeney, 2004). Additionally, it similarities to others wellness models will help to generalize the findings of this study to broader clinical populations.

Though several studies have looked at wellness profiles of undergraduate students, most have been focused on the importance of social wellness, with few exploring overall, holistic wellness and its relation to mental health and development (Myers & Mobley, 2004; Sinclair & Myers, 2004; Spurgeon & Myers, 2010). However, this should not imply that it is not an

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important area of research for college counseling or that wellness does not share a relationship to ego identity development. As mentioned above, there are some studies that look at factors (Josselson, 1973; Schwartz et al., 2009b) that are found within the IS-Wel model (Myers and Sweeney, 2004). Given the nature of college counseling to support students in achieving successful personal development (Dungy, 2003), it is necessary to work towards filling the gap in the literature that researches the relationship between ego identity development and wellness.

A dissertation by Louden (2005) is one of the only studies that has specifically looked at ego identity and wellness, and utilizes a wellness measure, the Wellness Evaluation of Lifestyle-Self Evaluation Questionnaire (WEL-S, Myers, Sweeney, & Witmer, 2001), found in counseling literature. Since her dissertation shares several common variables as this present study, a comprehensive review of this research follows. In order to better understand development across the lifespan, Louden (2005) applied identity development constructs to the developmental models from Erikson (1963) and Marcia (1966), along with selective optimization and compensation model (SOC; Baltes, 1987, 1997) and a holistic wellness model, based on theories by Myers, Sweeney, and Witmer (2000) and among others.

Participants of this study consisted of 184 traditionally aged freshman from a state university in the southwest, recruited from psychology classes. Of the freshman, 106 were reported to be 18 years old and 78 were 19 years old. These participants were primarily female (67.4%) and Caucasian (57.6%). It was also shared that 17.9% were African American, 5.4% were Asian American, 14.1% were Hispanic, and 4.3% identified as other. A large portion of the freshman reported that they were not employed (48.9%), with 38% working part-time and 8.2% working full-time. Thirty percent reported being in a relationship and the majority (92.4%) reported good health (Louden, 2005).

Additionally, 155 adults aged 60 and older were recruited form senior centers in Northern Texas. The ages of the participants ranged from 60 to 94 (M = 70.63). Ethnicity and gender of these participants were similar to the group of freshman. The majority were Caucasian (78.7%), with 9.7% African American, 1.9% Asian American, 5.8% Hispanic, 1.3% Native American, and 1.9% other. The majority of participants were female (67.7%). Sixty percent of the participants indicated that they were married and only 1.9% reported poor health (Louden, 2005).

Participants completed measurements to assess identity status, wellness, the SOC model, college adjustment, study habits and attitudes, psychological symptoms (i.e., somatization, obsessive compulsiveness, interpersonal sensitivity, depression, and anxiety), coping strategies, social desirability, and stressful life events. Eight hypotheses emerged in this study and the following will focus on those relevant for this present study (four of eight hypotheses). First, it was hypothesized that freshman would endorse equal emphasis on the wellness domains (i.e., they would have balanced holistic wellness) and that older adults would have higher wellness scores for self-regulation and spirituality. This hypothesis was not supported as neither group endorses specific wellness domains (Louden, 2005). Of course, these findings are not surprising. As discussed above, it would be expected that the freshman in Louden's (2005) show different degrees of wellness since other related variables, such as negative affectivity, and ego identity will promote different levels of wellness. In other words, it would be expected for someone with an achievement status who experiences low levels of anxiety to exhibit high levels of wellness; whereas, someone with a diffusion status and high negative affectivity, would presumably have low levels of wellness.

The second hypothesis was that college students who endorsed achievement status or moratorium status would have a better adjustment to college and better study habits. This hypothesis was not supported. Louden (2005) stated that the College-Adjustment Rating Scale (CARS, Zitzow, 1984) instructs students to report their level of stress in regard to negative events. These findings are somewhat surprising, as it would be expected that having formed solid commitments, achievement status would have a relatively positive adjustment and might suggest that their overall wellness could be negatively impacted as well. However, it has been suggested that total scores of the CARS might depict poor adjustment despite how participants rate their stress levels across the four domains (Louden, 2005). This discrepancy complicates gaining an accurate reflection of a participant's adjustment and the results might be more reflective of poor psychometric properties.

A third hypothesis was that regardless of age group membership, achievement status and moratorium status would have fewer psychological symptoms and great use of coping strategies. Identity diffusion status was found to have the greatest psychological symptoms, including depression and anxiety (Louden, 2005). These results support earlier findings (Azmitia et al., 2013; Claes et al., 2014; Grotevant, 1987; Josselson, 1973; Marcia, 1967) and hypotheses in this present study.

Lastly, it was hypothesized achievements and moratoriums would be associated with negative correlations across wellness domains and diffusions and foreclosures would be associated with positive correlations across wellness domains. This hypothesis was partially supported, as all wellness domains were associated with positive correlations across wellness domains (Louden, 2005). What is interesting is that it was hypothesized that achievements would be negatively correlated with wellness and diffusions positively correlated with wellness,

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as it contradicts findings from previous research (Grotevant, 1987; Josselson, 1973; Marcia, 1967). Based on the results from these early research findings, in addition to contemporary research (Azmitia et al., 2013; Claes, Luyckx, & Bijttebier, 2014; Grotevant, 1987; Josselson, 1973; Marcia, 1967), it would seem that a standard way of thinking about ego identity development and wellness would be that the statuses exhibiting more negative affectivity would experience lower levels of wellness. More specifically, moratorium and foreclosure statuses are most likely to experience lower levels of wellness. Additionally, a limitation that presumably affects the findings of this hypothesis is that the distribution of identity statuses among the participants who were college freshman was not equal. Louden (2005) reported that the majority of students endorsed moratorium (44%) and diffusion (34.2%) statuses, with only 3.8% endorsing foreclosure and 3.3% endorsing achievement. The uneven distribution possibly skewed the results. Another limitation and odd methodological decision was that older adult participants also completed ego identity measures, even though the model was clearly created to address the development of emerging adults. Including the scores of older adult participants, along with freshman scores may have further limited a true reflection of the relationship between ego identity development and wellness among emerging adults.

Despite the limitations in Louden's (2005) study, some of the findings inform the hypotheses within this present study. The absence of wellness research specifically within college populations and ego identity development, highlight the importance for continued research in these areas. It is likely for college counselors to work with students who present with problems related to negative affectivity, wellness, and identity development. This study seeks to explore the relationships between the constructs and begin to the fill the gap in wellness and college counseling literature.

Research Hypotheses

The research hypotheses for this study have been generated a body of literature covering theory and existing research findings on ego identity development, negative affectivity, and wellness. The following four hypotheses inform this study.

1. There is a significant negative relationship between negative affectivity and wellness.

   Null: There is no relationship between negative affectivity and wellness.

2. There is a significant relationship between negative affectivity and ego identity development.

   Null: There is no relationship between negative affectivity and ego identity development.

   2.1 There is a significant negative relationship between negative affectivity and the exploration domain of ego identity development.

   Null: There is no relationship between negative affectivity and the exploration domain of ego identity development.

   2.2 There is a significant negative relationship between negative affectivity and the commitment domain of ego identity development.

   Null: There is no relationship between negative affectivity and the commitment domain of ego identity development.

3. There is a significant relationship between ego identity development and wellness.

   Null: There is no relationship between ego identity development and wellness.

   3.1 There is a significant positive relationship between the exploration domain of ego identity development and wellness.

   Null: There is no relationship between the exploration domain of ego identity development and wellness.

   3.2 There is a significant positive relationship between the commitment domain of ego

identity development and wellness.

Null: There is no relationship between the commitment domain of ego identity development and wellness.

4. Ego identity development is significantly related to wellness after controlling for negative affectivity.

   Null: Negative affectivity is not related to wellness after controlling for ego identity development.

   4.1 The exploration domain of ego identity development is significantly related to wellness after controlling for negative affectivity.

   Null: The exploration domain of ego identity development is not significantly related to wellness after controlling for negative affectivity.

   4.2 The commitment domain of ego identity development is significantly related to wellness after controlling for negative affectivity.

   Null: The commitment domain of ego identity development is not significantly related to wellness after controlling for negative affectivity.

5. Ego identity development mediates the relationship between negative affectivity and wellness among undergraduate college students.

   Null: Ego identity development does not mediate the relationship between negative affectivity and wellness among undergraduate college students.

   5.1 The exploration domain of ego identity development mediates the relationship between negative affectivity and wellness among undergraduate college students.

   Null: The exploration domain of ego identity development does not mediate the relationship between negative affectivity and wellness among undergraduate college students.

5.2 The commitment domain of ego identity development mediates the relationship between negative affectivity and wellness among undergraduate college students.

Null: The commitment domain of ego identity development does not mediate the relationship between negative affectivity and wellness among undergraduate college students.

Though there have been significant contributions to ego identity development research over the past four or so decades, limited research is available on its relationship with negative affectivity and wellness, particularly among undergraduate students, let alone students across all four years of study. By exploring the relationships among these three variables, this study will add to the existing body of literature, as well as provide college counselors with a better understanding of how ego identity development relates to negative affectivity, a common mental health concern among college students (ACHA, 2013; Deckro, et al. 2002; Garlow et al., 2008; Reetz et al., 2013; Westefeld & Furr, 1987), and overall wellness among traditional college students.

Chapter 3

Methodology

The purpose of this study was to better understand the relationships between negative affectivity and wellness, negative affectivity and ego identity development, and the relationship between all three variables, among traditional, undergraduate college students. Specifically, this study examined the potential mediating role of ego identity development in the relationship between negative affectivity and wellness of traditionally-aged, undergraduate college students. In order to investigate this mediational model, statistical procedures outlined primarily by Frazier, Tix, and Baron (2004) and Baron and Kenny (1986) were utilized for testing mediation. What follows is a detailed description of the methodology of this study, specifically addressing participants, procedures, instruments, mediation and the statistical analyses that were conducted.

Participants

Research participants in this study were male and female undergraduate students whose ages fall within the bracket Arnett (2000) identifies as emerging adults, namely ages 18-25. The age span of this population was selected as it aligned with a traditional undergraduate population and is consistent with Marcia's (1966) theory of ego identity development. Non-traditional college students were excluded from this study. Participants' ages ranged from 18-23 years old, falling within the range of traditional-age (Eisner, 2011; Fry, 2011; Gibson & Slate, 2010; Justice & Dornan, 2001) and enrolled full-time. The study was open to residential and commuter students.

Sampling

Participants were drawn from a volunteer convenience sample of college students at one college, located within the Northeast region of the United States. The site was a small private,

religious-affiliated college. The college has approximately 3,500 students, with approximately 80% enrolled as undergraduates, with slightly over half of the students identifying as female. Many of the students at this college identify as Catholic, and come from middle-class families. The generalizability of the results will be limited to similar samples, as a consequence of the location of the study. This will be addressed in more detail in the discussion chapter. A benefit of having a homogenous sample is that it has helped to build this new model, as such a model does not exist in the extant literature. Future studies will seek a more heterogeneous samples.

<p align="center">**Power Analysis and Sample Size**</p>

An a priori power analysis was conducted to determine an adequate sample size to detect both main effects and mediator effects. Cohen (1988) asserted that sufficient power should be .80. Additionally, Cohen and Cohen (1983) suggested the magnitude of corresponding effect sizes to be .10 for a small effect, .30 for medium effect, and .50 for large effect. With the expectation of a moderate effect size correlation to .30, a sample size of 200 will result in approximately 80% power (Cohen & Cohen, 1983). Therefore, in order to achieve a medium effect for this present study, a minimum of 200 participants were recruited to ensure statistical power.

<p align="center">**Procedures**</p>

Data Collection

Prior to the collection of data, the researcher had been granted approval to collect from two Institutional Review Boards (IRB)—the researcher's home institution and the institution where participants were recruited. Email correspondence was sent to the registrar office of the sample site requesting permission for use of their sites and their students as human subjects for this research. The entire undergraduate student body (n = 2900) at the institution was invited to

participate in this study and were accessed by the researcher though the college registrar who provided e-mail access students.   A link to the survey was sent to participants by e-mail, via the registrar. In the e-mail, participants were invited to complete the survey through the online platform Qualtrics. Qualtrics is a secured cloud-based research tool that allows researchers to create and upload questionnaires, including multiple levels of randomization and access to different reporting tools. This software was used to create and distribute the survey to participants. Qualtrics has been reported to support regulatory requirements such as the IRB. Participants were informed in the beginning that they have the option of not participating and told that if they feel uncomfortable at any time during the survey, they can withdrawal at any time.

As an incentive to increase motivation in participating in this study, participants had the ability to win one of two $100 Visa gift cards by entering a random drawing. In order to protect the confidentiality of participants, e-mail addresses used for the prize drawing were kept separate from the survey responses. This level of confidentiality was accomplished through Qualtrics, by redirecting participants upon completion of the survey, to a separate questionnaire in which they could enter the drawing. A reminder e-mail was sent out to the entire sample approximately four weeks after the initial e-mail. Reminder e-mails have been found valuable in recruiting participants and increasing the response rate (Crawford, Couper, & Lamias, 2001).

The online survey (see Appendix) began with IRB approval and was followed by instructions for participants (see Appendix) to agree by selecting if they understood their rights as a research participant and choose to participate in the study. Participants were asked to click "Yes" confirming that they are of at least 18 years of age and understand the research procedures and rights as participants. Following the IRB approval and consent, participants were directed to

a section in which they were provided instructions to complete a demographic questionnaire (see Appendix C), followed by the study questionnaire consisting of the three selected measures (see Appendices D, E, and F). It was estimated that it would take participants no longer than 40 minutes to complete all the components of the research.

Over the last decade, counseling and psychological research has been increasingly collected through the use of online surveys (Granello & Wheaton, 2004; Weigold, Weigold, & Russel, 2013). There are several benefits to online collection that outweigh traditional paper-and-pencil methods of collecting data, including drawing from a more diverse sample, accessing a greater population, elimination of having to input data (Buchanan & Smith, 1999; Cantrell & Lupinacci, 2007; Gosling, Vazire, Srivastava, & John, 2004), the possibility of creating a more user friendly and convenient experience (Naus, Philipp, & Samsi, 2009), and reduced response time (Granello & Wheaton, 2004; Lazar & Preece, 1999). Yet, there have been potential problems and critiques associated with online data collection, including the no awareness of the settings in which participants complete surveys (Nosek, Banaji, & Greenwald, 2002), differences in the psychometric properties across the two methodologies (Buchanan, 2002), and the possibility of a participant completing a survey more than once (Epstein & Klinkenberg, 2002). Nevertheless, studies have found the two methods of collecting data to be generally equivalent (Gosling et al., 2004; Lewis, Watson, & White, 2009; Weigold et al., 2013).

Multiple Regression and Mediation

Multiple regression was the primary statistical procedure used to analyze the data and answer the study's research question, as well as specifically examine the relationship between negative affectivity, ego identity development, and wellness of college students. Multiple regression is a type of analysis that allows a researcher to determine the amount of variation in

dependent variable as a function of the independent variables. It does not establish causality; rather it is a correlational research design (Keith, 2006). However, the process of mediation (discussed below) implies a causal chain and is generally phrased in causal terms (Baron & Kenny, 1986; Frazier et al., 2004; Hoyle & Smith, 1994; James & Brett, 1984; Judd & Kenny, 1981; Kenny, Kashy, & Bolger,1998; Kraemer, Stice, Kazdin, Offord, & Kupfer, 2001).

In this present study, a large focus was on ego identity development as a mediator variable. This process allowed the researcher to measure the underlying change mechanism (i.e., ego identity development) and the outcome (i.e., wellness), in order to determine how critical the mediator is on influencing the outcome (Frazier et al., 2004; MacKinnon & Dwyer, 1993). A variable functions as a mediator when it accounts for the relation between the independent (predictor) variable and the dependent (outcome) variable (Baron & Kenny, 1986). For a variable to function as a mediator, three conditions must be met:

> (A) Variations in levels of the independent variable significantly account for variations in the presumed mediator (i.e., Path A), (b) variations in the mediator significantly account for variations in the dependent variable (i.e., Path B), and (C) when Paths A and B are controlled, a previously significant relation between the independent and dependent variables is no longer significant, with the strongest demonstration of mediation occurring when Path C is zero (Baron & Kenny, 1986, p. 1176).

In other words, a mediator explains the relationships between the predictor variable and the outcome variable (Baron & Kenny, 1986; Frazier et al, 2004; Baron, 2004; Holmbeck, 1997; James & Brett, 1984).

Ego Identity Development

(M)

Path A   Path B

Negative Affectivity ————————————————→ Wellness

(X)   (Y)
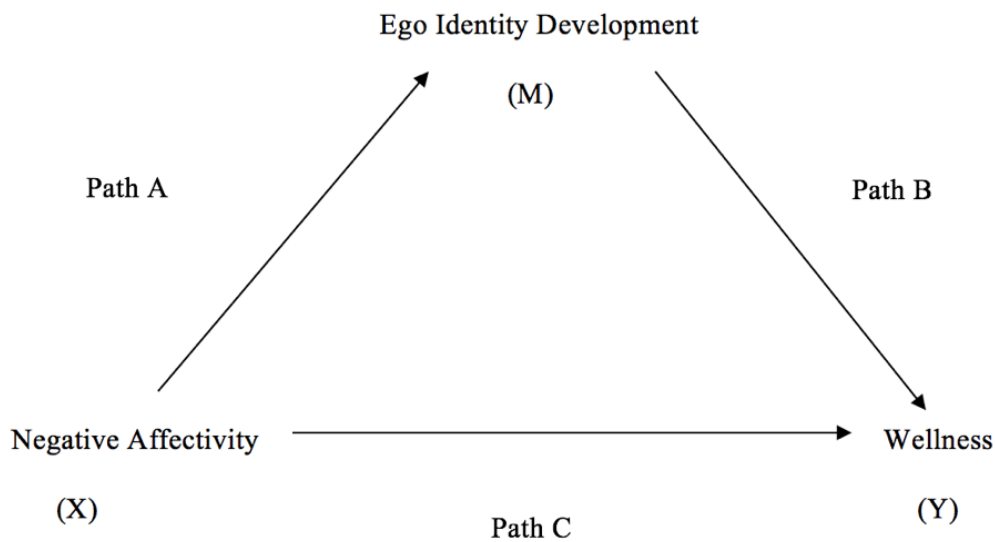
Path C

Figure 1. Representation of the mediation analysis. Total Effect = Direct Effect (Path C) +

Mediation Effect (A x B). There are three possible effects: no mediation (A x B = 0), partial

mediation, of full mediation (Path C = 0).

The most common method for testing the effects of mediation is through multiple

regression (Frazier et al., 2004; MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002). This

is completed through a series of regression models. First the outcome is regressed on the

predictor variable to establish Path C. Second, the mediator is regressed on the predictor

variable to establish Path A. Finally, the outcome variable is regressed on both the independent

variable and the mediator to establish Path B and estimate the relationship between the predictor

variable and the outcome when controlling for the mediator (Path C) (Baron & Kenny, 1986;

Frazier et al, 2004). For each equation, separate coefficients were be estimated (Baron & Kenny,

1986). For full or complete mediation to be met, the independent variable will have no effect on

the dependent variable when controlling for the mediator. If the relationship between the

predictor and the mediator is significantly smaller once the mediator is added to the equation, but is still greater than zero, it suggests that partial mediation is met (Baron & Kenny, 1986; Frazier et al., 2004). It is has been recommended these equations are followed by one of several methods for testing the significance (e.g., bootstrapping methods) (Frazier et al., 2004; MacKinnon et al., 2002).

If the relationship between the negative affectivity and ego identity development is significantly smaller once the mediator is added to the equation, but is still greater than zero (a reduction in Path C' from Path C), it suggests that partial mediation is met (Baron & Kenny, 1986; Frazier et al., 2004; Preacher & Hayes, 2004). Partial mediation will support the fourth hypothesis.

Variables and Measurement

Three measures were selected for this study, the Depression, Anxiety, and Stress Scale (DASS-21; Lovibond & Lovibond, 1995), the Ego Identity Process Questionnaire (EIPQ; Balistreri, Busch-Rossnagel, Geisinger, 1995), and the Five Factor Wellness Inventory (5F-Wel; Myers & Sweeney, 2004), and a demographic questionnaire was developed for the study. Both DASS-21 and EIPQ are publicly available through Psy TESTS, with stated permission for their usage for research purposes. Permission was obtained by the authors to use the 5F-Wel in this present study.

Independent Variables and Mediator Variable

DASS-21. Negative affectivity served as the independent variable in this study. It has been defined as "the general factor of subjective distress and dissatisfaction" (Watson & Kendall, 1989, p. 9). For this present study, negative affectivity will be represented by three constructs: depression, anxiety, and stress.

The DASS-21 was used to operationalize this construct. The DASS-21 is the short form of the original DASS. Over an 11-year period, 1979 to 1990, Lovibond and Lovibond (1995) sought to develop a self-report measure that covered a full-range of the core symptoms of anxiety and depression, met high psychometric properties, and had the ability to discriminate between anxiety and depression. Data was obtained through 30 samples. A bootstrapping technique was used in which anxiety and depressive factors were identified through clinical consensus, and then later refined through factor analysis. During the testing of scales, a new factor emerged that was called stress. Additionally, the development of the DASS was carried out on typical, non-clinical samples (Lovibond & Lovibond, 1995).

To evaluate the psychometric properties of the DASS after development, the measure was tested on an independent sample of 717 college students (486 female and 231 male) at the University of New South Wales. Students were also assessed for depression and anxiety through the Beck Depression Inventory (BDI; Beck & Steer, 1987) and the Beck Anxiety Inventory (BAI; Beck & Steer, 1990). The mean age of students was 21 years old. The DASS consisted of 42 negative emotion symptoms. The measure uses a four point Likert scale to assess the severity and frequency of symptoms over the past week. Scores for the specific depression, anxiety, and stress scales were calculated by summing the corresponding 14 items. Internal consistencies for each scale were found to be depression = 0.91, anxiety = 0.84, and stress = 0.90 (Lovibond & Lovibond, 1995). Similar internal consistencies have been reported for the BDI (Beck & Steer, 1987) and BAI (Beck & Steer, 1990).

As a result from the test development described above, the original measure was reduced from 42 items to 21, creating the DASS-21. The DASS-21 includes items such as "I was unable to become enthusiastic about anything" and "I felt that I was using a lot of nervous energy."

Items are scored using a four point Likert-type scale (0 = Did not apply to me at all – never, 1 = Applied to me to some degree, or some of the time –sometimes, 2 = Applied to me to a considerable degree, or a good part of time –often, 3 = Applied to me very much, or most of the time - almost always). Total scores from the DASS-21 were used, which range from zero to 63, with higher scores indicating greater levels of depression, anxiety, and/or stress.

Principle components analysis of the DASS-21 found the following correlations between depression, anxiety, and stress: depression-anxiety $r = 0.42$, anxiety-stress $r = 0.46$, depression-stress $r = 0.39$. When testing the factor structure of the DASS, the three factors accounted for 41.3% of the variance. For the BDI and BAI, the first two factors (depression and anxiety) accounted for 22.5% and 6.6% of the variance. A three-factor model of the DASS yielded better results [χ^2 (819) = 5413, P <0.05] than a two-factor model of just depression and anxiety [χ^2 (2) = 383, P < 0.05], suggesting that a three-factor model is a better fit. Moreover, the DASS was correlated with the BAI ($r =0.81$) and the BDI ($r = 0.74$) (Lovibond & Lovibond, 1995). Psychometric properties were not reported for the DASS-21 by Lovibond & Lovibond (Antony, Bieling, Cox, Enns, & Swinson, 1998).

Despite the psychometric properties of the DASS reported by Lovibond and Lovibond (1995), there has been critique as to whether the DASS-21 measures the three factors as stated, or if the depression scale actually measures low positive affect, physiological hyperarousal for the anxiety scale, and negative affectivity for the stress scale (Brown, Chorpita, Korotitsch, & Barlow, 1997). It has also been questioned if the stress scale represents overall negative affectivity or if it is a distinct, separate measure of stress (Henry & Crawford, 2005). Antony and colleagues (1998) conducted a study aimed at replicating and expanding upon previous DASS findings. The participants consisted of 258 outpatients and 49 non-clinical volunteers, all

between the ages of 18 and 65 years. Of the outpatients, 67 were diagnosed with panic disorder

with or without agoraphobia (M_{age} = 36.8 years; 64% female), 54 with obsessive-compulsive

disorder (M_{age} = 36.4 years; 43% female), 74 with social phobia (M_{age}= 35.0 years; 44% female),

17 with specific phobia (M age = 34.3 years; 78% female), and 46 with major depressive

disorder (M_{age}= 44.9 years; 46% female). All participants completed the DASS, with appropriate

items for the DASS-21 having been extracted (Antony et al., 1998).

Exploratory factor analysis was conducted on the clinical sample (N = 258) to examine

the structure of the DASS. A three-factor model was found to account for 60% of the variance

eigenvalues 18.92, 4.24, and 2.06). Correlations between the three factors, yielded similar

results to those reported by Lovibond & Lovibond (1995): depression-anxiety r = 0.40, anxiety-

stress r = 0.55, depression-stress r = 0.60. All of the items for the depression scale loaded on the

same factor. All of the anxiety items loaded on another factor, with the exception of one anxiety

item. Two of the stress items also loaded on the same factor as anxiety. All of the stress items

loaded on the same factor, as well as two anxiety items (Antony et al., 1998).

As with the DASS, Antony and colleagues (1998) performed a similar exploratory factor

analysis to test the items of the DASS-21 in the clinical sample (N = 258). Again, both the scree

plot and eigenvalues (eigenvalues for the DASS-21 subscales were .94 for Depression, .87 for

9.07, 2.89, and 1.23) suggested a three-factor model, accounting for 67% of the variance.

Correlations for the three factors were depression-anxiety r = 0.28, anxiety-stress r = 0.53,

depression-stress r = 0.48. The factor loadings for the DASS-21 were similar to that of the

DASS with all items loading on separate factors. Additionally, the DASS-21 was found to have

good internal consistency, with reported Chronbach's alphas as .94 for depression, .87 for

anxiety, and .91 for stress (Antony et al., 1998). Likewise, Clara, Cox, and Enns (2001) too

found strong psychometric properties for the DASS-21 for use in clinical populations, specifically among clients with depressive disorders.

Henry and Crawford (2005) further tested the psychometric properties of the DASS-21 among a large general population. Data was collected from 1,794 participants (979 female, 815 male, mean age = 41) drawn from an adult UK population across public and commercial service organizations. Each participant received a DASS form, in which items from the DASS-21 were extracted, in addition to a demographic questionnaire. A subset of the participants also completed a questionnaire on positive and negative affect (Henry & Crawford, 2005).

Similar to the other studies, good internal consistency was found for the DASS-21 with Henry and Crawford (2005) reporting a Cronbach's alpha to be .88 for the depression scale, .82 for the anxiety scale, .90 for the stress scale, and .93 for the total measure. Through confirmatory factor analysis and model testing, it was determined that depression, anxiety, and stress do represent legitimate constructs, yet they do share the common factor of psychological distress. The authors also reported that combining the three factors into one general measure is valid (Henry & Crawford, 2005). Finally, the DASS-21 has been supported and used among several studies on college student mental health (Antúnez & Vinet, 2012; Beiter et al., 2015; Bhullar, Hine, & Phillips, 2013; Gan, Nasir, Zalilah, & Hazizi, 2011; Gong, Xie, Xu, & Luo, 2010; Mahmoud et al., 2012; Osman et al., 2012; Shamsuddin et al., 2013).

For this study, information was gathered to explore the overall negative affectivity of participants. That is, negative affectivity was represented as one construct, with the sub-factors of depression, anxiety, and stress. Therefore, the total score of the DASS-21 (scores range from 0 – 63) was used in the analysis, with higher scores representing greater negative affectivity. Rather than using sub-score, the total score was chosen as many participants will experience

symptoms of all three subcomponents (Beck & Clark, 1997; Lee et al., 2013; Lovibond &

Lovibond, 1995; Mahmoud et al., 2012; Schwartz et al., 2009).

Ego Identity Process Questionnaire. Ego identity development served as the mediator

variable in this present study. Ego identity has been defined as, "comprehensive gains which the

individual, at the end of adolescence, must have derived from all of his [sic] pre-adult experience

in order to be ready for the tasks of adulthood" (Erikson, 1956, p. 56).

The Ego Identity Process Questionnaire (EIPQ; Balistreri et al., 1995) was used to

measure ego identity development. The EIPQ is a contemporary measure that was developed to

avoid some of the short-comings of previous ego-identity measures (see Adams, Shea, & Fitch,

1979; Bennion & Adams, 1986; Grotevant & Adams, 1984; Grotevant & Cooper, 1981; Marcia,

1966), including length of time, questionable construct validity, within correlations among the

ego identity statuses, and the inability to distinguish between dimensions of exploration and

commitment. A pilot study of the EIPQ consisted of 73 college students (35 men and 38 women,

mean age = 20), from a moderate sized private, urban, college. Participants were recruited from

a psychology course and ranged in class standing from freshman to seniors (Balistreri et al.,

1995).

The EIPQ was created based on the domains from previous measures, resulting in a total

of eight domains. Four of the domains fell within an ideological realm (occupation, religion,

politics, and values) and the other four fell within an interpersonal realm (family, friendships,

dating, and sex roles). The first version of the test consisted of 67 items, with half of the items

stated positively and half of the items stated negatively, with items scored using in a Likert-type

format. The initial participants also completed a social desirability measure. Following the first

administration, 57 participants completed a revised measure after a 10 to 12-day interval (Balistreri et al., 1995).

Item analyses were conducted to evaluate internal consistency, association with social desirability, and diversity of the response. It was reported that items were then eliminated if based on high correlations with social desirability scores, low correlations with item-scale correlations within each domain and dimension, and low standard deviations of less than the full range of responses. After the initial item analysis, 53 items remained and 29 new items were added, totaling 82 items were then administered to 57 of the original respondents. Expert agreement on the dimensions of exploration and commitment was the first criterion for items selected in the final version. The final version consists of 32 items (20 positively worded and 12 negatively worded). Internal consistency was reported to be good for commitment (.80) and exploration (.86) scores. Additionally, moderately high test-retest reliability estimates were reported with coefficients equaling .90 for commitment and .76 for exploration (Balistreri et al., 1995).

As stated above, the current version of the EIPQ consists of 32 items, including statements such as "I have definitely decided on the occupation I want to pursue," I have definite views regarding the ways in which men and women should behave," and "I have firmly held views concerning my role in my family." Items were scored using a six-point Likert-type scale (1 = strongly disagree, 2 = disagree, 3 = slightly disagree, 4 = slightly agree, 5 = agree, 6 = strongly agree). Scoring was reversed for 12 negatively stated items. A sum of the item scores was calculated to determine total scores for exploration and commitment separately. These scores range from 16 to 96. Statuses were determined through a median split technique for exploration and commitment, in which scores falling above the median are considered high and

scores below are consider low. For this study, scores were recoded in order to have an absolute zero. Each score was transformed to a new scale having an absolute zero; that is done by subtracting 16 from each score, after which new scores ranged from zero to 80. This decision was made so that total scores for all measures will begin with zero.

A additional study of the EIPQ was conducted on 260 college students. Of these participants, 211 were administered the EIPQ and a set of personality measures, 30 participants were administered the EIPQ and Marcia's interview, and 19 were administered on the EIPQ. After minor adjustments, a confirmatory factor analysis was conducted confirming a two-factor model, with a goodness-of-fit index to be .94 and an adjusted goodness-of-fit index to be .76. It was also noted that there were no sex differences in identity status classification (Balistreri et al., 1995).

Phillips (2009) further researched if social desirability bias distorted the results of the EIPQ, as it had not yet been explored by researchers (Balistreri et al., 1995). Social desirability is the tendency for an individual to want to present himself/herself in the best light, therefore it could be a concern that participants might self-report on the EIPQ what they believe is the most socially acceptable, but not necessarily true to oneself. In order to do this, Phillips (2009) sampled 80 undergraduate students, primarily female, from a medium-sized university in the southeastern United States. Of the sample, 49% identified as White and 48% identified as African American. Participants completed the EIPQ, in addition to an inventory that measures identity style and a measure of social desirability. Correlational analyses did not reveal any significant associations between social desirability and the exploration and commitment scales of the EIPQ. Additionally, there were no significant differences in the social desirability scores for

the four statues [$F(3, 76) = .439$; $p < .01.$], therefore not posing a threat to the validity of the EIPQ (Phillips, 2009).

Demographic Questionnaire

A demographic questionnaire was created to gather participant background information. The questionnaire gathered information on (a) age, (b) gender, (c) race, (d) ethnicity, (e) sexual orientation, (f) self-reported socioeconomic status, (g) religious affiliation, (h) class standing, and (i) international student status.

Dependent Variable

Wellness served as the outcome/dependent variable in this study. Wellness is defined as "a way of life oriented toward optimal health and well-being in which body, mind, and spirit, are integrated by the individual to live more fully within the human and natural community" (Myers, Sweeney, & Witmer, 2000, p. 252).

5F-Wel. Along with the Wheel of Wellness (Sweeney & Witmer, 1991; Witmer & Sweeney, 1992; and Myers, Sweeney, and Witmer, 2000) and Indivisible Self (Myers & Sweeney, 2004) wellness models, several measures were created to assess an individual's level of wellness. The original measure was the Wellness Evaluation of Lifestyle (WEL; Myers, Luccht, & Sweeney, 2004). It has been reported that the WEL has been empirically tested through a series of seven studies over a 10 year period to improve its psychometric properties, resulting in several variations (Myers, Luccht, & Sweeney, 2004). Despite that the WEL is still available for purchase and used for research, it has been reported to no longer be found useful for clinical purposes (Myers, Witmer, & Sweeney, 1996). The final variation is what was used in this study, the Five Factor Wellness Evaluation of Lifestyle (5F-Wel; Myers et al., 2004).

The 5F-Wel measures the factors represented in the Indivisible Self model of wellness. It contains 73 items (21 items = creative self, 19 items = coping self, 8 items = social self, 15 items = essential self, and 10 items = physical self; not including context and validity index items), in which responses are made using a 4-point Likert-type scale (1 = strongly disagree, 2 = disagree, 3 = agree, 4 = strongly agree). A higher order wellness score (total score) can be produced, as well as scores for the individual factors. In this study, the total score was used. All of the items are positively worded except one of the items on the safety scale and items on the realistic beliefs scale; these items are reverse scored. In order to place items along a common metric, scale scores were converted to a score that ranges from 25 to 100 by the mean score for each scale by the number of items and then multiplying by 25. For this study, items were recoded in order to have an absolute zero. All items scores were subtracted from 25, in which new scores will range from zero to 75. This decision was made so that total scores for all measures will begin with zero. Item statements include, "I am satisfied with how I cope with stress," "My cultural background enhances the quality of my life," and "I am physically active most of the time." It has been reported that the 5F-Wel takes approximately 10 to 20 minutes to complete (Myers & Sweeney, 2004).

A 3,993-person database that had been developed by Myers from earlier versions of the WEL was used to create the IS-Wel model, along with the 5F-Wel. Exploratory and confirmatory factor analyses have supported each of the scales, initially specifying 17 factors (cultural identity, gender identity, self-care, essence, love, friends, intelligence, control, emotions, humor, work, exercise, nutrition, leisure, stress, worth, and beliefs). A confirmatory factor analysis specified a restricted factor pattern, allowing items to only load on its expected scale. Following this, scales were restricted to load only on appropriate second-order factors

(creative self, coping self, social self, essential self, and physical self), followed by those five factors loading on single third-order factor (wellness).

The creative self is said to be, "The combination of attributes that each of us forms to make a unique place among others in our social interactions and to positively interpret our world" (Myers & Sweeney, 2004, p. 7). The coping self regards, "The combination of elements that regulate our responses to life events and provide a means for transcending their negative affects" (Myers & Sweeney, 2004, p. 10). The social is described as, "Social support through connections with others in our friendships and intimate relationships, including family ties" (Myers & Sweeney, 2004, p. 10). The essential self is believed to be, "Our essential meaning-making processes in relation to life, self, and others" (Myers & Sweeney, 2004, p. 11). And finally, the physical self is, "The biological and physiological processes that comprise the physical aspects of our development and functioning" (Myers & Sweeney, 2004, p. 11). An acceptable fit of the data was found for the model (χ^2 (2533) = 8,261, RMSEA = .042). Myers and Sweeney (2005) reported alpha coefficients for the five second order factors to be: .93 (Creative Self), .92 (Coping Self), .94 (Social Self), .91 (Essential Self), and .90 (Physical Self), and .94 (Total Wellness). Only the total score was used for this study. Using data developed over a five year period, Myers and Sweeney (2005) reported alpha coefficients for the factors to be: .96 (Creative Self), .89 (Coping Self), .96 (Social Self), .95 (Essential Self), .90 (Physical Self), and .98 (Total Self). This later sample consisted of 2,093 persons, with 52% male and 48% female and ages ranging from 18 to 101. Just over half of the participants were Caucasian (52%), with 29% having identified as African American, 4.3% having identified as Asian Pacific Islander, and 3.2% having identified as Hispanic. Thirty-nine percent had completed high school, 12% had obtained a bachelor's degree, and 13.4% had graduate degrees

(Myers & Sweeney, 2004). Many other research studies have found the 5F-Wel useful among diverse populations varying in ethnicity, race, age, and sexual orientation (see Chang, 2003; Degges-White, Myers, Adelman, & Pastoor, 2003; Dew, Myers, & Wightman, 2003; Spurgeon & Myers, 2003).

In a recent study, McDonald (2011) examined the wellness between a transcultural sample using the 5F-Wel. Participants consisted of 289 transcultural individuals, also synonymous with third-culture kids, ages 18 to 67. The majority of the participants, 80.3%, identified as Caucasian. The remaining participants consisted of Asian or Pacific Islander (9%), Hispanic or Latino (6.6%), African American (3.5%), and Native American (.7%). Of these participants, 14.2% identified as biracial. Furthermore, the majority of the sample was female (77.5%) and heterosexual (93.8%). Just less than half, 42.6% reported having advanced educational degrees (bachelors and graduate) (McDonald, 2011).

All participants were administered the 5F-Wel as it has been said to address culturally sensitive concepts of wellness. McDonald (2011) found overall wellness to be significantly higher than the normative population, indicating a large effect size ($t_{1, 288} = 24.55$, p < .001, d = .85). Additionally, the transcultural participants were found to score significantly higher than the normative sample for all of the subscales. These results convey the importance in asking demographic questions in research and when conducting clinical assessments of wellness, as well as the applicability of this measure with college students of diverse backgrounds. In this study, demographic variables were collected to look at the diversity of the sample, but were not used in the analysis.

Data Analyses

A descriptive survey design was used to examine the relationships between negative affectivity, ego identity development, and wellness. Data from the survey was collected through the online software platform Qualtrics. Several weeks after the reminder e-mail was sent to potential participants, all data was downloaded and inserted into an Excel spreadsheet. Within Excel, variables that are downloaded in word form (e.g., Extremely Satisfied) will be recoded into numerical form. Dummy variables were assigned for demographic items. Afterward, the Excel spreadsheet was copied into SPSS for data analysis. Data entry into SPSS followed guidelines outlined by Leech, Barrett, and Morgan (2008) and Laerd Statistics (2013). Participants who were under the age of 18 or over the age of 23 were excluded from the study.

Multiple ways of how to handle missing data have been suggested over the years, including a range from 5% (Schafer, 1999) to 10% of missing data Bennett (2001) to serve as cutoffs.   In contrast to these recommendations based on missing data cutoffs, Schlomer, Bauman, and Card (2010) recommend first determining if the resultant data has adequate statistical power, in addition to the use Stochastic Imputation Methods—multiple imputations (MI) and full information maximum likelihood (FIML)—to retain a maximum amount of statistical power. For this study, missing values were replaced by imputed values, as SPSS includes this as an option for missing data (Schlomer et al., 2010).

Descriptive Statistics

Following the input of data into SPSS, descriptive statistics were computed to determine if the data meets statistical assumptions necessary for multiple regression. Descriptive statistics for each variable were computed, providing minimum and maximum scores, mean scores, standard deviations, correlations between the variables, providing answers to RQ_1, RQ_2, and RQ_3. Descriptive statistics were determined, as well as producing a correlation matrix to assess

whether the predictors were related and established if there was multicollinearity. Also, zero-order correlations (i.e., bivariate correlations) between the predictor, mediator, and outcome variable were conducted (Field, 2005). A descriptive analysis was collected for the subgroups and included information about the participants' age, gender, racial/ethnic background, sexual orientation, economic status, religious affiliation, class standing, and international student status.

Mediation Analysis

As stated above, descriptive statistics provided Pearson Product coefficients (Leech et al., 2008) to determine correlations between the three variables. First, correlational analysis determined if there was a relationship between negative affectivity and wellness (hypothesis one). Next, correlational analyses determined if there was a statistically significant relationship between ego identity development and negative affectivity, as well as a relationship between ego identity development and wellness, as hypothesized in this study (hypotheses two and three). A review of the hypotheses follows.

H1: There is a significant negative relationship between negative affectivity and wellness.

H2: There is a significant relationship between negative affectivity and ego identity development.

H2.1 There is a significant negative relationship between negative affectivity and the exploration domain of ego identity development.

H2.2 There is a significant negative relationship between negative affectivity and the commitment domain of ego identity development.

H3: There is a significant relationship between ego identity development and wellness.

H3.1 There is a significant positive relationship between the exploration domain of ego identity development and wellness.

H3.2 There is a significant positive relationship between the commitment domain of ego identity development and wellness.

H4: Ego identity development is significantly related to wellness after controlling for negative affectivity.

H4.1 The exploration domain of ego identity development is significantly related to wellness after controlling for negative affectivity.

H4.2 The commitment domain of ego identity development is significantly related to wellness after controlling for negative affectivity.

H5: Ego identity development mediates the relationship between negative affectivity and wellness among undergraduate college students.

H5.1 The exploration domain of ego identity development mediates the relationship between negative affectivity and wellness among undergraduate college students.

H5.2 The commitment domain of ego identity development mediates the relationship between negative affectivity and wellness among undergraduate college students.

After confirming that the data met assumptions necessary for analysis and there were statistically significant relationships among all three variables, hierarchical regression was conducted twice as outlined by Field (2005) and Baron and Kenny (1986) to test the model. A forced entry, three-block approach was taken in which wellness will serve as the outcome variable. The first hierarchical regression analysis determined if the ego identity development domain, exploration, served as a mediating variable. First, to determine there was an effect to be mediated, there must be evidence that there is a relationship between negative affectivity and wellness (Path C). To test the equation, wellness was regressed on negative affectivity in the first block. Once statistical significance was found, the second block tested the effect of negative

affectivity on exploration (Path A). To test the equation, exploration was regressed on negative

affectivity. Once statistical significance was found for the second block, the third block

determined if exploration mediates wellness, while controlling for negative affectivity (Path B).

For the equation, wellness was regressed on both negative affectivity and exploration.

Table 1

Mediation Analysis of Exploration Domain

Block and Equation	Hypotheses	Variables
1 Path C: $Y = i_1 + cX + e_Y$,	1	Regress Y (wellness total score) on X (negative affectivity total score)
2 Path A: $M = i_2 + aX + e_M$,	2	Regress M (exploration) on X (negative affectivity total score)
3 Path B: $Y = i_3 + cX + bM + e_y$,	3, 4, 5	Regress Y (wellness total score) on both X (negative affectivity total score) and M (exploration)

Note: Error terms are normally distributed with a mean of zero and corresponding variance.

The second hierarchical regression analysis determined if the ego identity development

domain, commitment, was a mediating variable. As with the first hierarchical regression, to

determine there was an effect to be mediated, there must be evidence that there is a relationship between negative affectivity and wellness (Path C). To test the equation, wellness was regressed on negative affectivity in the first block. Once statistical significance was found, the second block tested the effect of negative affectivity on commitment (Path A). To test the equation, exploration was regressed on negative affectivity. Once statistical significance was found for the second block, the third block determined if commitment mediates wellness, while controlling for negative affectivity (Path B). For the equation, wellness was regressed on both negative affectivity and exploration.

Table 2

Mediation Analysis of Commitment Domain

Block	Hypotheses	Variables
1 Path C: $Y = i_1 + cX + e_Y$,	1	Regress Y (wellness total score) on X (negative affectivity total score)
2 Path A: $M = i_2 + aX + e_M$,	2	Regress M (commitment) on X (negative affectivity total score)
3 Path B: $Y = i_3 + cX + bM + e_y$,	3, 4, 5	Regress Y (wellness total score) on both X (negative affectivity total score) and M (commitment)

Note: Error terms are normally distributed with a mean of zero and corresponding variance

Conclusion of Methodology

Little research has been conducted looking at the variables of negative affectivity, ego

identity development, and wellness together. This chapter presented readers will an overview of

the defined measures (i.e., EIPQ, DASS-21, and 5F-Wel) and provided further details about the

sample. A power analysis revealed a minimum sample size of 200 will be needed the mediation

analysis, as described above at length. Overall, this study seeks to fill a gap in the literature,

while informing college counselors ways to better understand the identity development of

college student and to recognize how it functions as a change mechanism that affects overall

wellness.

Chapter 4

Results

This research examined the relationship between negative affectivity (e.g., depression, anxiety, and stress), ego identity development, and overall wellness in traditional aged undergraduate students at one northeastern religiously affiliated college. To test the relationships between negative affectivity (hypothesis one), negative affectivity and ego identity development (hypothesis two), and ego identity wellness and wellness (hypothesis three), simple bivariate correlations were conducted. To determine if negative affectivity was significantly related to wellness after controlling for ego identity development (hypothesis 4) and if ego identity development mediated the relationship between negative affectivity and wellness of undergraduate college students (hypothesis five) a hierarchical multiple regression was conducted. The data collection for this study resulted in a final sample (n = 241) of undergraduate college students from one site, that represented a range in class standing from first year students to senior year students. After the data was cleaned and assumptions were met, analyses were conducted using SPSS 23 for Macintosh (IBM Corp., 2015).

Preliminary analyses and other statistical procedures were conducted to gather information on the demographic variables of the participants and to check for statistical assumptions. To determine if the variables collectively were in a linear relationship, a lack of fit test was conducted. To test the assumption of homoscedasticity, two tests were conducted, the Breush-Pagan test and the Koenker test. Finally, to evaluate if there was multicollinarity, correlational analyses of the variables were considered. Additionally, reliability estimates of the measures were calculated for each scale instrument: DASS-21 (Lovibond & Lovibond, 1995),

The Ego Identity Process Questionnaire (EIPQ; Balistreri et al., 1995), and Five Factor Wellness Evaluation of Lifestyle (5F-Wel; Myers & Sweeney, 2004).

The following will detail the steps taken in the statistical analyses to answer the research questions and hypotheses, presenting the calculations of the results.

Participants

Data

Survey requests were sent out to 2,900 students and yielded 238 usable responses. Three hundred and forty-nine individuals clicked on the survey link and began the survey, yet only 255 participants completed the survey by clicking done. Of the resulting 255, an additional 14 more participants were removed, because they identified that their age did not fall within the 18-23 range. Lastly, three more participants were removed during the data cleaning process because they were still missing more than 5% of the values after completing the expectation-maximization (E-M) approach (see below; Schafer, 1999; Schlomer et al., 2010). This resulted in a final total of 238 participants, 102 unusable cases, resulting in an 8.2% response rate.

Before assessing missing values, reverse coding was completed for the EIPQ and 5F-Wel. Twelve questions on the EIPQ and six questions on the 5F-Wel were reversed coded. A missing values analysis was conducted, including Little's MCAR test to determine if the remaining missing values were missing completely at random. The results of this test indicated marginal significance, Chi-Square = 4716.131, p = .057. Though this indicated that the missing variables might not be at random, one-way ANOVAs were conducted to compare total scores with demographic variables and nothing stood out as abnormal. Additionally, of the missing values, no cases were missing more than 3 values. More specifically, two cases had three missing values, eight cases had two missing values, and 25 cases had only one missing value.

When looking at the survey questions, one question on the DASS-21 and one question on the 5F-Wel were missing 1.3% (three values). One 5F-Wel question, two DASS-21 questions, and two EIPQ questions were missing .8% (two values). Seventeen 5F-Wel questions, six DASS-21 questions, and eight EIPQ questions were missing .4% (one question).

To input missing values the expectation-maximization (E-M) approach was utilized. E-M is one of several maximum likelihood approaches and is considered to be "unbiased and efficient" (Graham et al., 2003, p. 94) and superior to deletion (Schlomer et al., 2010). This approach data contains relevant information to be used in the analysis. E-M consists of two steps. In the first step, expectation, the algorithm uses its best guess to input values based on the model and existing data. In the second step, maximization, the algorithm maximizes the likelihood function as if no data was missing to create values. This procedure is reiterated until there is convergence of values. This method of inputting data was selected, since Little's MCAR was marginally significant, therefore not suggesting a small possibility that the data was not missing completely at random (Bennett, 2001).

Demographics

The following demographic information was reported by the 238 participants (also see Table 3 below). As discussed on in Chapter 3, only participants ranging in age from 18-23 were selected. The majority of participants were between the ages of 18-21 years old. Fifty-six participants (23.5%) reported to be 18 years old, 57 participants (23.9%) 19 were years old, 68 (28.6%) were 20 years old, and 47 (19.7%) were 21 years old. Only seven (2.9%) reported to be 22 years old and only three (1.3%) reported to be 23 years old. The majority of the participants were female (81.9%), with 195 reporting female and 43 reporting male. For race/ethnicity, the majority of the participants reported to be Caucasian (82.4%). One hundred ninety-six reported

to be Caucasian/White, five (2.1%) African American/Black, 11 (4.6%) Hispanic/Latino, nine (3.8%) Asian/Pacific Islander, 3 (1.3%) American Indian/Alaskan Native, 10 (4.2%) Multi-ethnic/Multi-racial, and 4 (1.7%) identified as Other.   The demographics of these participants are representative of the overall population at this site, based gathered through anecdotal evidence from counseling center reports.

The majority of participants identified at heterosexual (91.6%), with 2 (0.8%) reporting gay, 1 (0.4%) lesbian, 10 (4.2%) bisexual, and 7 (2.9%) other. For socio-economic status, the majority of participants, 120 (50.4%), reported to be middle class. Nine (3.8%) reported lower class, 50 (21.0%) working class, 58 (24.4%) upper-middle class, and 1 (0.4%) upper class. Regarding religious beliefs, the majority of participants, 112 (47.1%), identified as Catholic. Sixty-six (27.7%) identified as Christian, 2 (0.8%) Muslim, 2 (0.8%) Hindu, 2 (0.8%) Buddhist, 8 (3.4%) atheist, 20 (8.4%) agnostic, 1 (0.4%) other, and 25 (10.5%) no religion. No participants identified as Jewish.

Regarding class status, the majority of participants, 77 (32.4%), identified to be in their junior year. Forty-nine (20.6%) identified as freshman, 57 (23.9%) as sophomore, and 55 (23.1%) as seniors. No participants identified as international students. Even though this sample was homogenous, it is representative of the population of students who generally seek counseling, as well as participants in larger national studies, such as those conducted by the ACHA (see ACHA, 2013). Nevertheless, these findings are mostly representative of a Caucasian, female, Christian college student population.

Table 3

Participant Demographics

Demographic Variables	Percent of Participants
Age	
18	23.5
19	23.9
20	28.6
21	19.7
22	2.9
23	1.3
Gender	
Female	81.9
Male	18.1
Race/Ethnicity	
Caucasian/White	82.4
African-American/Black	2.1
Hispanic/Latino	4.6
Asian/Pacific Islander	3.8
American Indian/Alaskan Native	1.3
Multi-ethnic/Multi-racial	4.2
Other	1.7
Sexual Orientation	
Heterosexual	91.6
Gay	0.8
Lesbian	0.4
Bisexual	4.2
Other	2.9
Socio-economic Status	
Lower class	3.8
Working class	21.0
Middle class	50.4
Upper-middle class	24.4
Upper class	0.4
Religious Beliefs	
Catholic	47.1
Christian	27.7
Muslim	0.8
Hindu	0.8
Buddhist	3.4
Atheist	8.4
Agnostic	0.4
Other	10.5
Jewish	0
Class Standing	

Freshman	20.6
Sophomore	23.9
Junior	32.4
Senior	23.1

Note: N = 238

Reliability of Measures

Cronbach's alpha was calculated for all three measures to determine the levels of internal consistency. The following alpha coefficients were found for the three measures: .913 for the DASS-21, .517 for the EIPQ, and .953 for the 5F-Wel. Several sources report alphas of .7 or higher to indicate high levels of internal consistency (DeVellis, 2003; Kline, 2005; Leech et al., 2008). Of the three measures, the DASS-21 and 5F-Wel were found to have excellent reliability; however, only a moderate level was found for the EIPQ.

The alpha level for the DASS-21 total score (.913) for this study is comparable to what was reported by Lovibond and Lovibond (1995) in the original test development, which ranged from .84 to .91 when looking at the individual subscales of depression, anxiety, and stress. Similar alpha levels were reported in other studies, with Anthony et al. (1998) reporting levels ranging from .87 to .94.

Previous research had reported the EIPQ, a contemporary measure of 32 questions assessing ego identity development, to demonstrate good internal consistency when used with college student populations. Balistreri et al. (1995) reported alphas ranging from .80 to .86 for the subscales. However, the alpha coefficient that was generated for this sample was .517. Though as a general rule of thumb, this would likely be considered a low, possibly unacceptable alpha, it has been reported that measure of psychological constructs can sometimes present with

values below .7 (Field, 2005; Kline, 1999). Interestingly, the alpha coefficients were not as low for the subscales. The commitment subscale of the EIPQ was found to have an alpha of .790, which is reflective of good internal consistency. The exploration subscale of the EIPQ was found to have an alpha of .666, suggesting moderate internal consistency.

The 5F-Wel was found to have the best internal consistency, with an alpha coefficient of .953 for the total scale, consisting of 91 questions measuring the creative, coping, social, essential, and physical factors of overall wellness. This seems to be consistent with alpha coefficients reported in previous studies. Myers and Sweeney (2005) reported alphas ranging from .90 to .94 across the subscales in the test development.

Descriptive Statistics of Instruments

In regard to research question one, "What are the levels of negative affectivity, wellness, and ego identity development among undergraduate college students?" the following scores were found (see Table 3 for means and standard deviations). Total scores for the DASS-21 ranged from 0.00 (minimum score) to 55.00 (maximum score), with a mean score of 17.40 and standard deviation of 10.61. Total scores for the 5F-Wel ranged from 30.49 (minimum score) to 47.61 (maximum score), with a mean score of 47.61 and a standard deviation of 8.72. The scores were normality distributed as the Kolmogorove-Smirnov found a significance level of $p = .035$, and the Shapiro-Wilk found a significance level of $p = .023$. Two total scores were calculated for the EIPQ, Exploration and Commitment. Total scores for the EIPQ Exploration ranged from 14.00 (minimum) to 76.00 (maximum), with a mean score of 46.71 and standard deviation of 8.77. Total scores for the EIPQ Commitment ranged from 22.00 (minimum) to 75.00 (maximum), with a mean score of 47.82 and a standard deviation of 10.28.

Table 4

Pearson's Correlations for Variables with Means and Standard Deviations (N = 238)

Measures	*M*	*SD*	1	2	3	4
1.DASS-21	17.40	10.61	1			
2.EIPQ Exploration	46.71	8.77	.168**	1		
3.EIPQ Commitment	47.82	10.28	-.183**	-.386**	1	
4.5F-Wel	47.61	8.72	.546**	.017	-.378**	1

Note: DASS-21 = Depression, Anxiety, and Stress Scale (Lovibond & Lovibond, 1995), EIPQ = Ego Idenity Process Questionnaire (Balistreri, Busch-Rossage, & Geisinger, 1995), 5F-Wel = Five Factor Wellness Evaluation of Lifestyle (Myers & Sweeney, 2005)
***Correlation is significant at the level of 0.01 (2-tailed)*
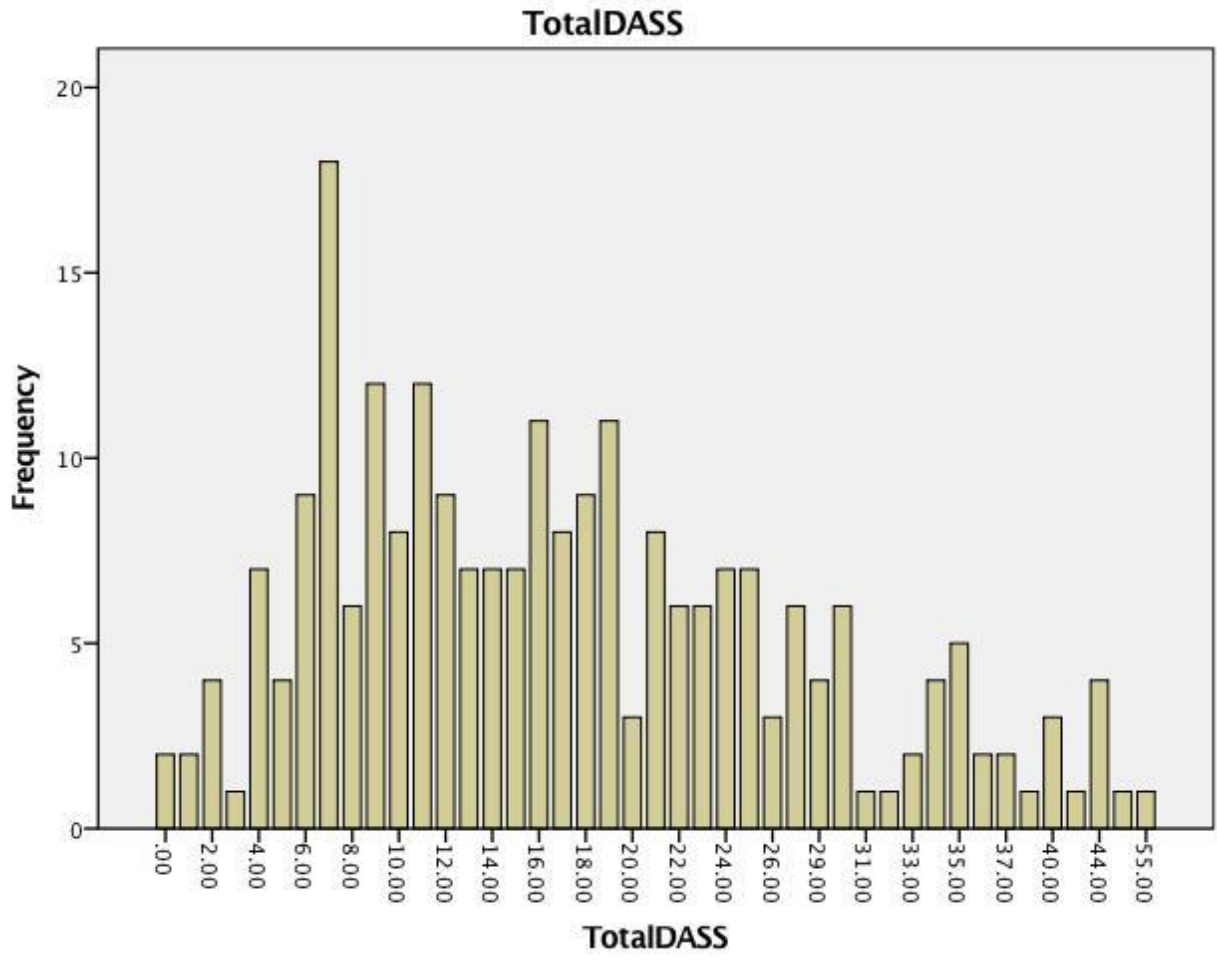
Figure 2. Bar graph showing the range of total scores for the DASS-21.
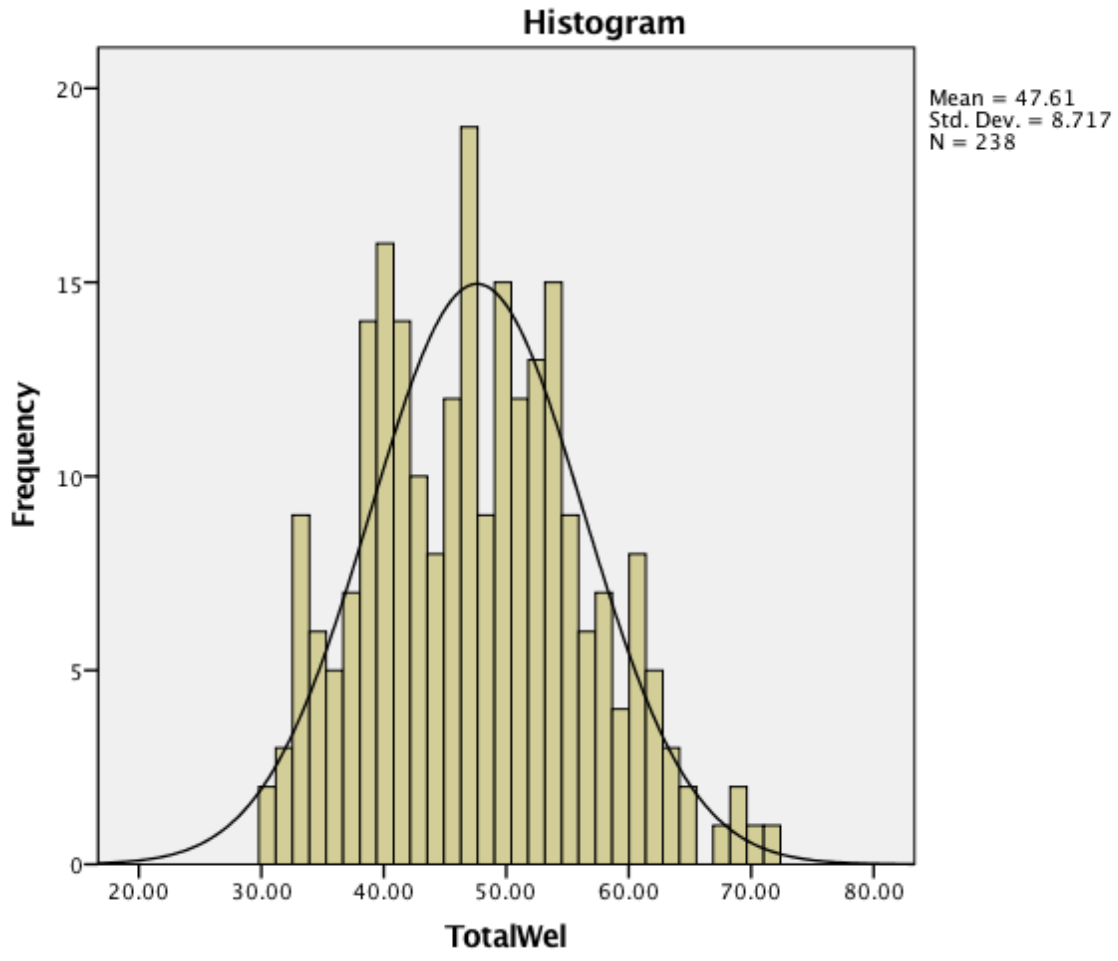
Figure 3. Bar graph showing the range of scores for the 5F-Wel, in addition to the normality of the distribution.

Figure 4. Total Explore
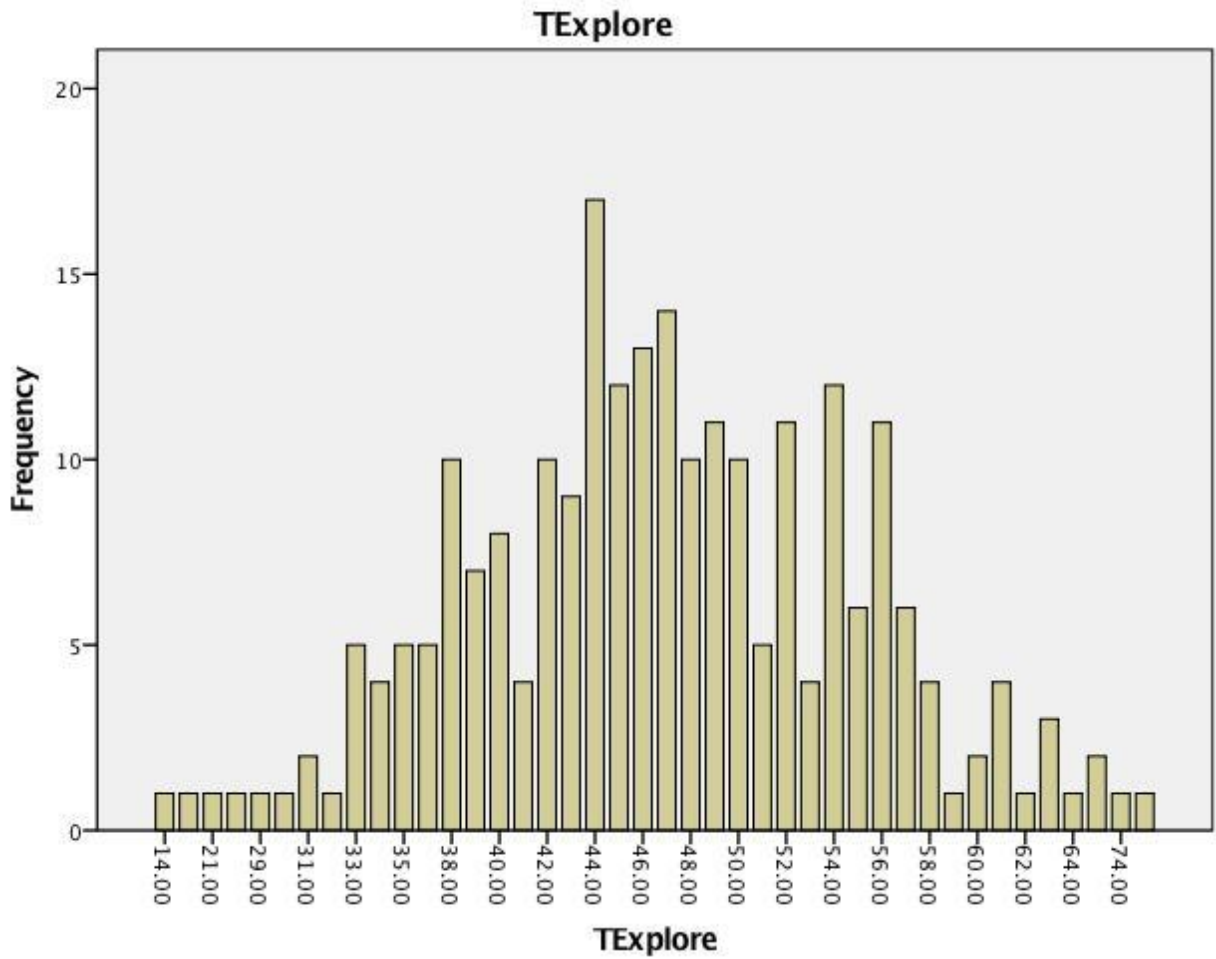
Figure 4. Bar graph showing the range of the scores for the EIPQ exploration domain.
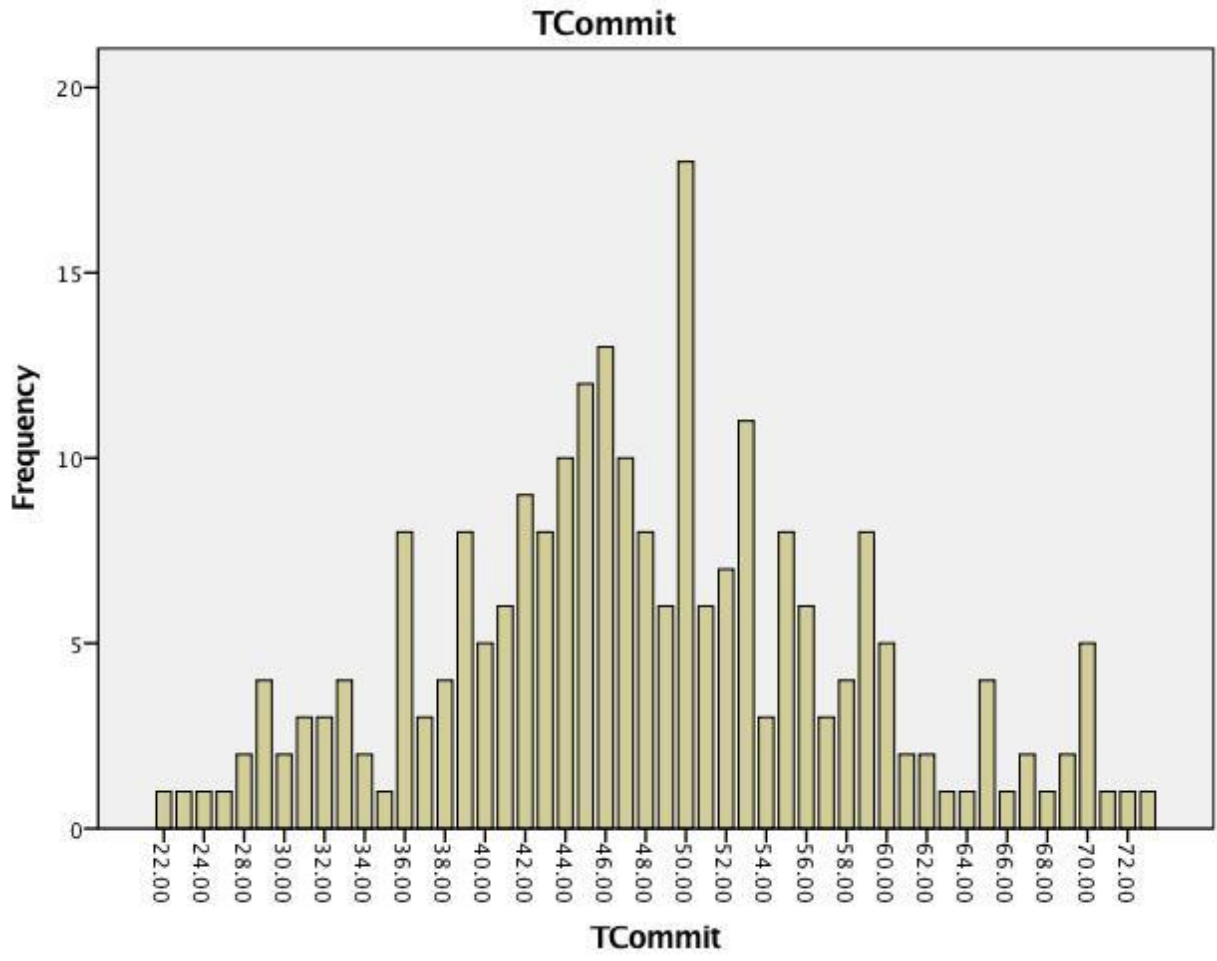
Figure 5. Bar graph showing the range of scores for the EIPQ commitment domain.

Statistical Assumptions

To test for linearity, a lack of fit test was conducted. In the lack of fit test, the probability of the F test statistic [TotalDASS (F = 1.236, p = .173), TotalEIPQExplore (F = 1.275, p = .143), TotalEIPQCommit (F = .904, p = .652)], greater than the alpha level of significance .05. The null hypothesis is not rejected and the assumption of linearity was satisfied. Additionally, scatter-plots with regression lines were also created (see Figures 6-8).
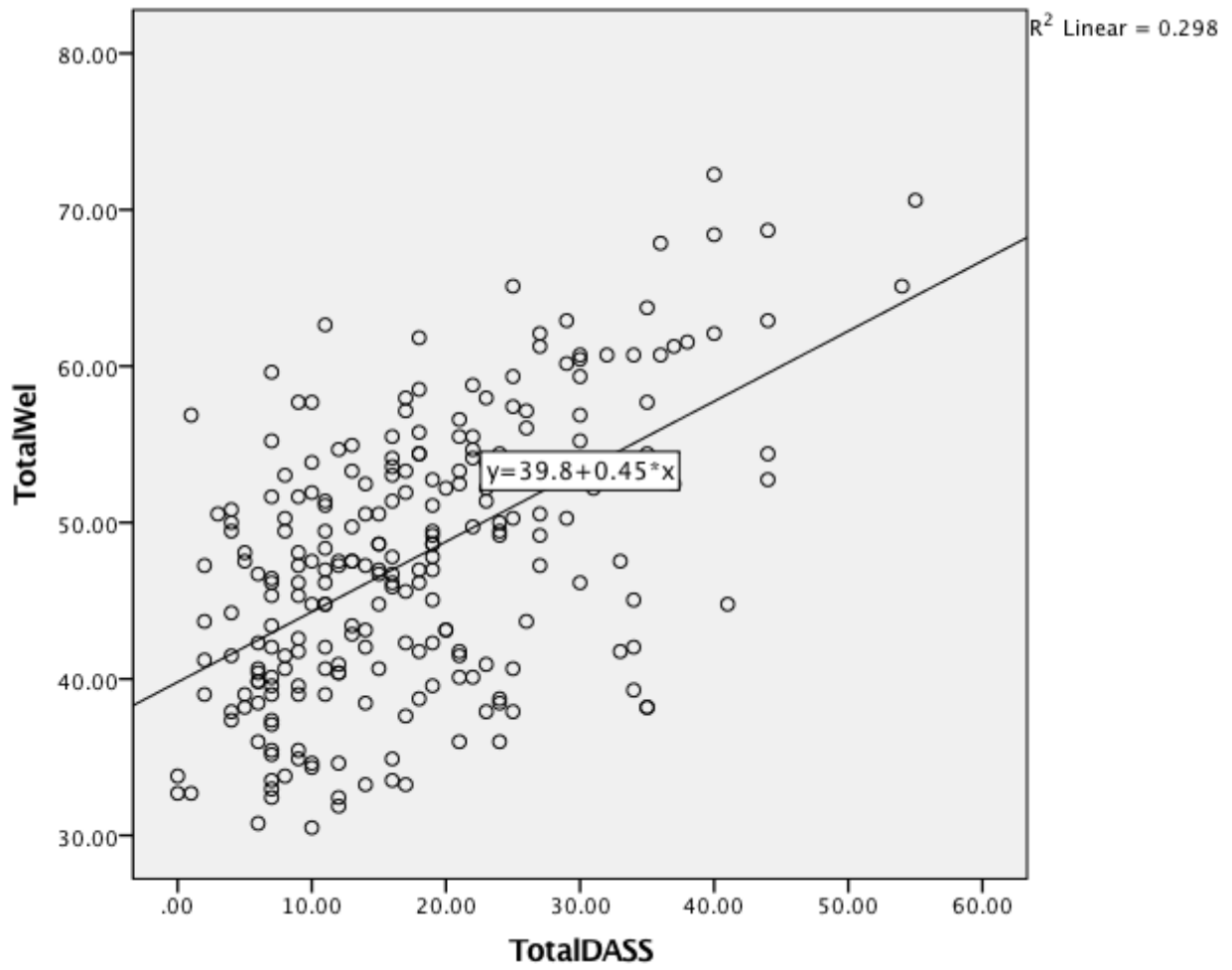
Figure 6. Scatterplot of scores for the 5F-Wel and DASS-21 with the regression line.
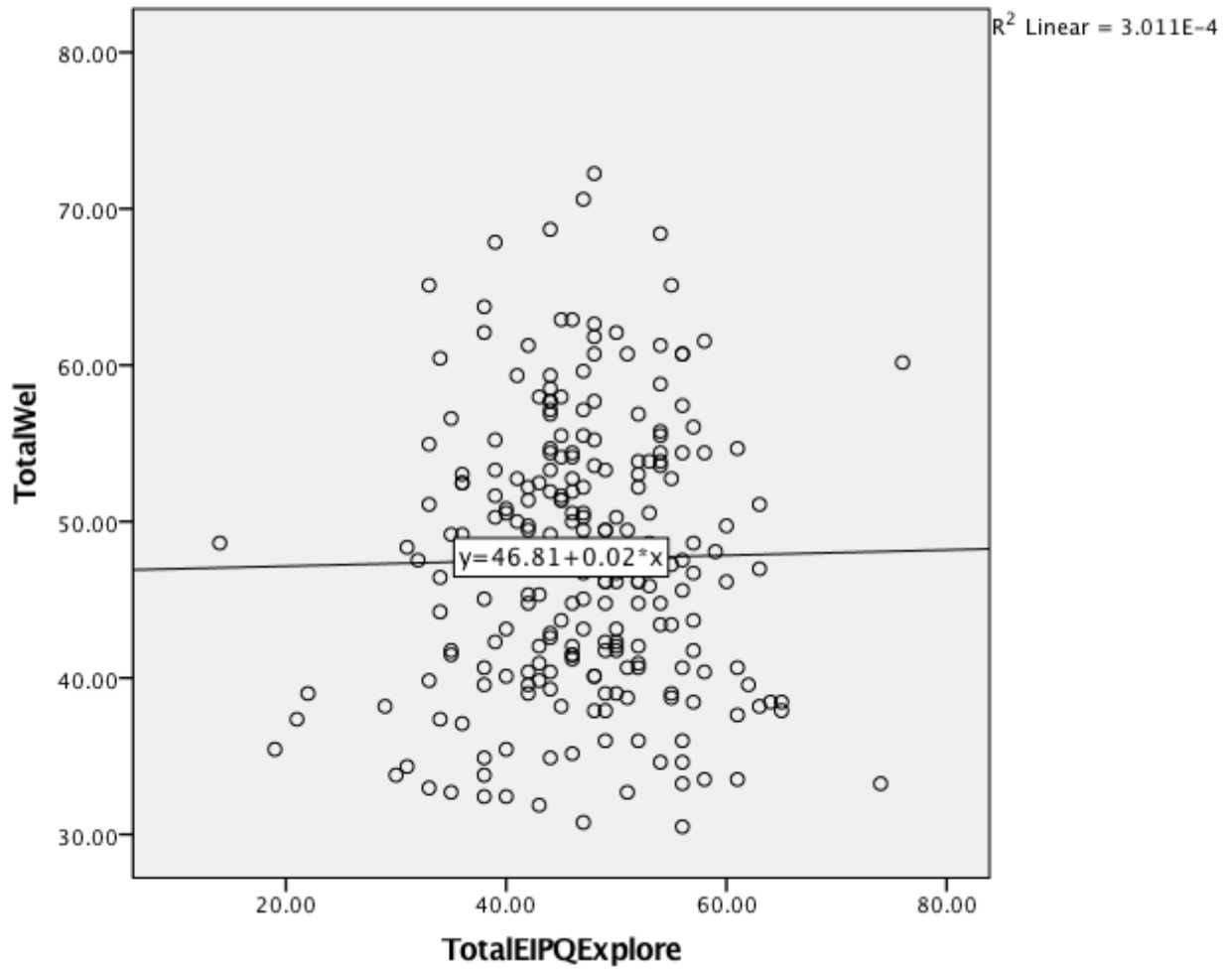
Figure 7. Scatterplot of scores for the 5F-Wel and EIPQ exploration domain with regression line.
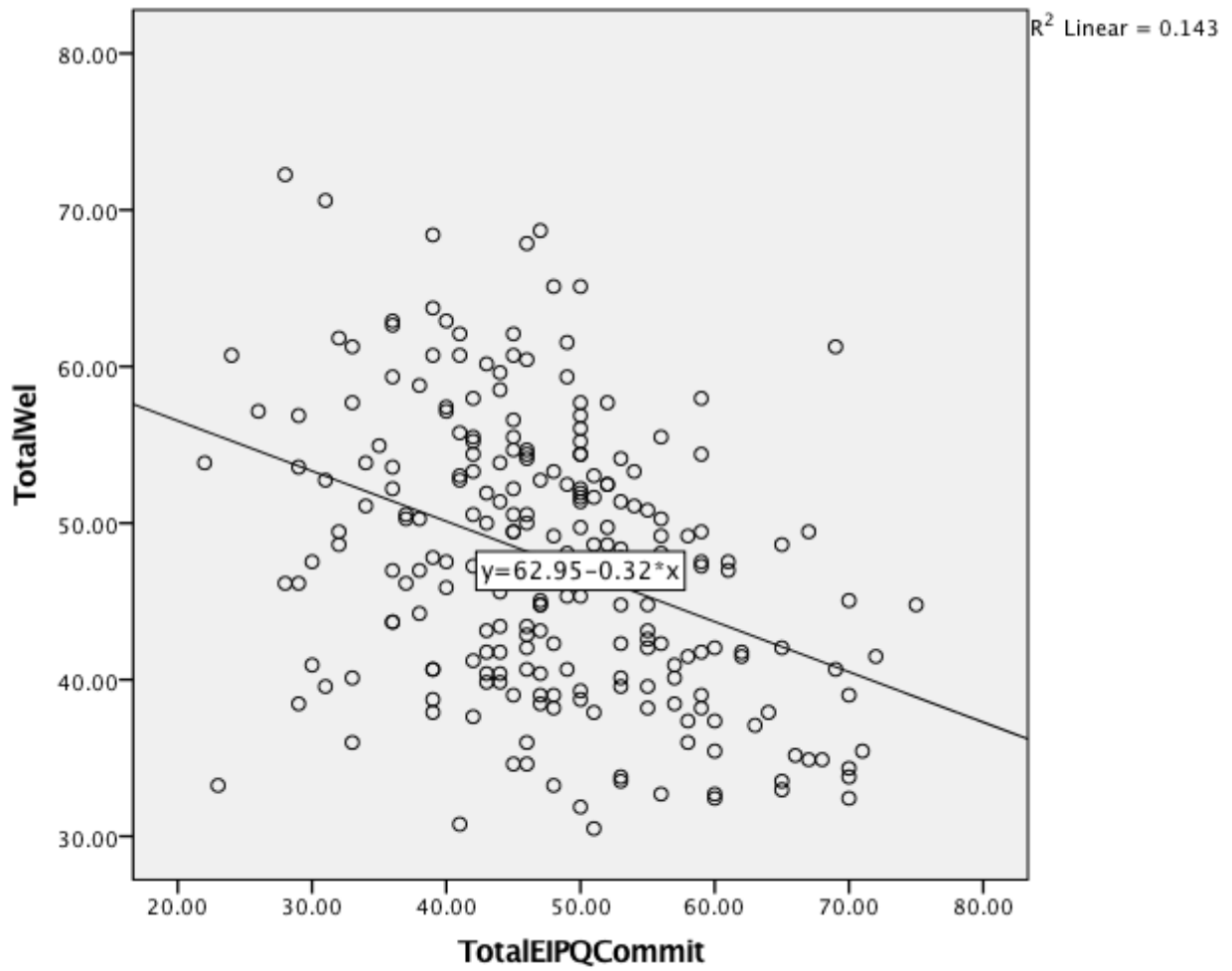
Figure 8. Scatterplot of scores for the 5F-Wel and EIPQ commitment domain with regression line.

To determine if the data met the assumption for homoscedasticity, two statistical analyses were run, the Breusch-Pagan test for homoscedasticity and the Koenker test. The Breusch-Pagan resulted in a chi square = 5.314 with p = .1502. The Koenker test had a chi square = 6.254 with p = .0999. Both tests were not significant, therefore the null must be accepted, indicating that the assumption that homoscedasticity is met. In other words, this means that the residuals are evenly distributed (Laerd Statistics, 2013).

A third assumption to check for is multicollinearity. This presents when the predictor variables are highly correlated with one another, which could lead to difficulty in understanding which variable leads to variance explained or could create technical issues in the regressions (Laerd Statistics , 2013). The following correlations were found for the three predictors: TotalDASS and TotalEIPQExplore (r = .168), TotalDASS and TotalEIPQCommit (r = -.183), and TotalEIPQExplore and TotalEIPQCommit (r = -.386). All correlations were significant and since they were less than .7, there was not presumed to be multicollinearity (Laerd Statistics , 2013).

Results

Correlations

Bivariate correlations were conducted to determine the relationships between the variables and to answer hypotheses one through three. All significant correlations, reported below are at significance level of .01.

Hypothesis 1: There is a significant negative relationship between negative affectivity and wellness. To test hypothesis, Pearson's correlation was performed using negative affectivity (TotalDASS) as the independent variable with a mean of 17.40 and a standard deviation of

10.61. Wellness (TotalWel) served as the dependent variable, with a mean of 47.61 and standard deviation of 8.72. As shown on table 4, this hypothesis was partially supported. There was a strong (Cohen, 1988), positive correlation between negative affectivity and wellness, $r(238) = .546$, $p = .01$.

Hypothesis 2.1: There is a significant negative relationship between negative affectivity (TotalDASS) and the exploration domain of ego identity development (TotalExplore). To test hypothesis 2.1, Pearson's correlation was performed using negative affectivity again as a predictor variable. Exploration served as a mediator variable, with a mean of 46.71 and standard deviation of 8.77. This hypothesis was partially supported. There was a small (Cohen, 1988), positive correlation between negative affectivity and exploration, $r(239) = .168$, $p = .01$.

Hypothesis 2.2: There is a significant negative relationship between negative affectivity (TotalDASS) and the commitment domain of ego identity development (TotalCommit). Again, a Pearson correlation was conducted to test this hypothesis, with negative affectivity as the independent variable. Commitment is serving as a mediator variable, with a mean of 47.82 and standard deviation of 10.28. This hypothesis was supported. There was a small (Cohen, 1988), negative correlation between negative affectivity and commitment, $r(239) = -.183$, $p = .01$.

Hypothesis 3.1: There is a significant positive relationship between the exploration domain of ego identity development (TotalExplore) and wellness (TotalWel). To test this hypothesis, a Pearson correlation was performed. Exploration served as a mediator variable and wellness as the dependent variable, with a mean of 47.61 and standard deviation of 8.72. This hypothesis was not supported. There was a small effect (Cohen, 1988) and exploration was not significantly related to wellness.

Hypothesis 3.2: There is a significant positive relationship between the commitment domain of ego identity development (TotalCommit) and wellness (TotalWel). This hypothesis was tested with a Pearson correlation, with commitment as the mediator and wellness as the dependent variable. This hypothesis was partially supported. Commitment was negatively related to wellness, $r(239) = -.378$, $p = .01$, presenting with a medium effect size (Cohen, 1988).

Mediation Analysis

Hypothesis 4.1: The exploration domain of ego identity development is significantly related to wellness after controlling for negative affectivity. To investigate how the exploration domain of ego identity is predicts wellness after controlling for negative affectivity, a hierarchical linear regression was computed. As stated above, assumptions were checked and have been met. Means and standard deviations are presented above in Table 1. When negative affectivity was entered alone, it significantly predicted wellness, $F(1, 236) = 100.38$, $p < .001$, adjusted $R^2 = .295$. As indicated by the R^2, about 30% of the variance in wellness could be predicted by knowing a student's level of negative affectivity. However, when the exploration domain of ego identity development was added to the model, there was no significant improvement in the prediction, R^2 change $= .006$, $F(1, 235) = 1.94$, $p = .165$. This suggests that even though there was a large effect (Cohen, 1988), when entered with negative affectivity, the exploration domain of ego identity development does not significantly contribute to the model.

Hypothesis 4.2: The commitment domain of ego identity development is significantly related to wellness after controlling for negative affectivity. To investigate how the commitment domain of ego identity is predicts wellness after controlling for negative affectivity, a hierarchical linear regression was computed. Again, assumptions were checked and have been met. Means and standard deviations are presented above in Table 1. When negative affectivity

was entered alone, it significantly predicted wellness, $F(1, 236) = 100.38$, $p < .001$, adjusted $R^2 =$ .295. As indicated by the R^2, about 30% of the variance in wellness could be predicted by knowing a student's level of negative affectivity. When the commitment domain of ego identity development were added, it significantly improved the prediction, R^2 change = .08, $F(1, 235) =$ 30.29, $p = .000$. The entire group of variables significantly predicted wellness, $F(2, 235) =$ 71.57, $p = .000$, adjusted $R^2 = .37$. According to Cohen (1988), this is a large effect. However, the beta weights indicate that negative affectivity ($\beta = .494$) contributes most to predicting wellness than does commitment ($\beta = -.288$).

Hypothesis 5.1: The exploration domain of ego identity development mediates the relationship between negative affectivity and wellness among undergraduate college students. To determine if exploration served as a mediator between negative affectivity and wellness, the statistical approach using multiple regression, as outlined by Barron and Kenny (1986) was used. Here four steps are used to establish mediation. First, the predictor variable must be correlated with the outcome. This step was met, as negative affectivity was significantly correlated with wellness, $r = .546$. Second, the predictor must be correlated with the mediator. This step was met, as negative affectivity was significantly correlated with the exploration domain of ego identity development, $r = .168$. Third, the mediator effects the outcome variable. Again, even though the effect size was large (Cohen, 1988), this step was not met as exploration did not significantly add to the model, R^2 change = .006, $F(1, 235) = 1.94$, $p = .165$. Therefore, the forth step, full or partial mediation, cannot be considered.

Hypothesis 5.2: The commitment domain of ego identity development mediated the relationship between negative affectivity and wellness among undergraduate college students. To determine if commitment served as a mediator between negative affectivity and wellness, the

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statistical approach using multiple regression, as outlined by Barron and Kenny (1986) was used. Again, four steps are used to establish mediation. The first step was met, as negative affectivity was significantly correlated with wellness, $r = .546$. The second step, was met as negative affectivity was significantly correlated with the commitment domain of ego identity development, $r = -.183$. The third step, in which the mediator effects the outcome variable was met, R^2 change $= .08$, $F(1, 235) = 30.29$, $p < .001$. According to Cohen (1988), the effect size was large. However, the effect of negative affectivity on wellness, when controlling for commitment was not zero. This indicated that commitment partially mediated the relationship between negative affectivity and wellness of undergraduate college students.

Conclusion of Results

This study examined the potential mediating role of ego identity development in the relationship between negative affectivity and wellness in traditionally-aged, undergraduate college students. In order to test this mediational model, statistical procedures outlined primarily by Frazier and colleagues (2004) and Barron and Kenny (1986) were utilized for testing mediation. The findings of the study found a positive correlation between negative affectivity and wellness, a positive correlation between negative affectivity and the exploration domain of ego identity development, a negative correlation between negative affectivity and the commitment domain of ego identity development, and a negative correlation between commitment and wellness. There was no statistically significant correlation between the exploration domain of ego identity development and wellness. Furthermore, it was found that exploration did not mediate the relationship between negative affectivity and wellness. Yet, commitment partially mediated the relationship between negative affectivity and wellness in this sample of undergraduate college students. Chapter Five will discuss the results of the analyses in

the context of the extant literature, while reviewing implications for college counselors, strengths

and limitations of the study, and recommendations for future research.

Table 5

Review of Hypotheses

Hypotheses	Results
There is a significant negative relationship between negative affectivity and wellness.	Partial support – Positive correlation
There is a significant negative relationship between negative affectivity and the exploration domain of ego identity development.	Partial support – Positive correlation
There is a significant negative relationship between negative affectivity and the commitment domain of ego identity development.	Supported – Negative correlation
There is a significant positive relationship between the exploration domain of ego identity development and wellness.	Not supported
There is a significant positive relationship between the commitment domain of ego identity development and wellness.	Partial support – negative correlation
The exploration domain of ego identity development is significantly related to wellness after controlling for negative affectivity.	Not supported
The commitment domain of ego identity development is significantly related to wellness after controlling for negative affectivity.	Supported
The exploration domain of ego identity development mediates the relationship between negative affectivity and wellness among undergraduate college students.	Not supported
The commitment domain of ego identity development mediates the relationship between negative affectivity and wellness among undergraduate college students.	Supported – partial mediation

Note: Review of hypotheses and results.

Chapter 5

Discussion

College counselors have a history of supporting academic success and student development around issues of college adjustment, relationships, and substance abuse (Choate & Smith, 2003; Schwitzer, 2009a). In more recent years, college counselors have been faced with an increasing number of students presenting with other mental health concerns, including depression and anxiety (ACHA, 2013; Reetz et al., 2013; Schwitzer, 2009a). This presents counselors with not only the need to be equipped to address serious mental illness in individual sessions, but also to find creative ways to provide preventative measures and outreach for students who may hesitate to participate in counseling (Schwitzer, 2009b) and to reduce waitlists. Empowering students to achieve overall wellness can help them to better manage the presenting issues, as well as improve other areas of their well-being and make better lifestyle choices (Ivey et al., 2005; Myers & Sweeney, 2004).

The extant literature discussed in Chapter Two reviewed the relationships between negative affectivity (i.e., depression, anxiety, and stress) and wellness, and posited a potential mediating effect with ego identity development. Despite the proposed relationship between the three constructs, the literature review identified a gap in which ego identity development and its relationship to wellness has largely been overlooked in the research on undergraduate college student population. This study sought to provide college counselors with expanded understanding related to identity development and to support new ways to use this insight in helping students develop healthy coping skills to manage negative affective states, thereby improving their overall wellness.

Discussion of Findings

Research Question One

  The first research question in this study assessed the levels of negative affectivity, wellness, and ego identity development within a sample population of college students. The range of scores found for negative affectivity within this sample (zero to 55), does not differ greatly from the range of minimum and maximum scores possible for the DASS-21 (zero to 63). When used clinically, the DASS-21 does not generally tally a total score, instead subscores are used to determine the levels of depression, anxiety, and stress. In this study, the total score was used as only overall negative affectivity was considered. When using the DASS-21 in clinical settings, higher subscores indicate higher levels of depression, anxiety, and stress. The same would be true for this study, that is increases in the total score indicate increases in overall negative affectivity. However, what is noteworthy is that the mean score for this population, comprised of primarily Caucasian, female students, was relatively low at 17.40, with a standard deviation of 10.61. This suggests that overall, this population report relatively low levels of negative affectivity.

  Previous research has found that just above 10% of college students report to be diagnosed or treated for depression or anxiety (ACHA, 2013), while other literature suggests that an even greater number of college students (Mahmoud et al., 2012), upwards of 80% will experience some form of depression (Garlow et al., 2008; Westefeld & Furr, 1987). The level of negative affectivity in the study contradicts earlier research, but it is still important to keep in mind that these numbers are on the rise (Reetz et al., 2013) as participants in this study were only sampled from one college, and were primarily Caucasian and female. However, when comparing the demographics of the population in this study with the demographics represented

in national statistics (see ACHA, 2013), we see similar groups. Still, it is possible that if participants from other colleges and universities were included the level of negative affectivity might have presented different.

These finding suggest that taken together, this sample represents relatively lower levels of negative affectivity, yet we can expect the rates to rise in coming years across new students. Therefore, it is worthwhile for college counselors to continue to monitor and assess the levels of negative affectivity among the students they serve. In this study, it is possible that lower level of negative affectivity presented for several reasons. First, all acquired data was through self-report. It is possible that students underreported what they deemed as bad or not well, selecting what they believe is in favor of others. It is also possible that given the nature of the study, which participants were informed about at the beginning, students who had an interest in health and wellness may have chosen to participate. Such students might also have lower levels of negative affectivity and a greater investment in self-care and developing healthy coping skills. Also, participants in this study were only sampled from one institution. It is possible the results would vary if populations from other institutions were added. Lastly, it is possible that the instrument did not measure what it was intended to measure.

Scores for the 5F-Wel tended to range from moderate to high, indicating that students reported strong levels of wellness. The mean score for the 5F-Wel (47.61, $SD = 8.72$), suggest that students on average might present with moderately high levels of wellness. One of the most closely related studies by Louden (2005) found similar results, reporting the mean score for total wellness among college students to be 47.40. When taken into considering the low levels of negative affectivity that were presented, these findings were to be expected. It is imperative for college counselors to monitor levels of student wellness, as students are consistently faced with

challenges (Chang et al., 2007; Dusselier et al., 2005) that could potentially affect overall wellness, similar to the presentation of levels of negative affectivity. Further exploration of the data collected for this study and creation of wellness subscores will expand exactly how wellness is demonstrated in this sample.

Scores on the EIPQ that are above the median are considered to be high (Balistreri et al., 1995). In measuring the level of ego identity development for this sample, the average scores tended to fall around the median for both exploration and commitment, suggesting higher levels of both domains. High exploration is common in the achievement and moratorium statuses. High commitment is common in achievement and foreclosure statuses. It is possible that a large number of participants would fall within the achievement status (i.e., high exploration and high commitment), given high levels of both domains. However, the four statuses were not configured, but can be explored with further research.

Given the shortage of extant research on ego identity development, as far as representations of the current college population, in addition to its relationship with wellness, it is difficult to determine if the levels of exploration and commitment are truly representative of a national college population. That said, previous research has suggested that ego identity status is not static and falls along a spectrum (Bosma & Kunnen, 2001; Berzonsky & Adams, 1999; Meeus, 1996; Meeus et al., 1999; Waterman, 1993, 1999a, 1999b). Therefore, it is likely that for many college students, their identity status may change as they progress through college, which could also affect their level of negative affectivity and wellness.

Research Question Two

The second research question asked if there was a significant relationship between negative affectivity and wellness of undergraduate college students. More specifically, it was

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hypothesized that there would be a negative relationship between negative affectivity and wellness. The hypothesis was partially supported, as there was a strong correlation, but the relationship was positive. This is unexpected, as negative affectivity would be a component of the Individisble Self model of wellness (Myers & Sweeney, 2005). This model proposes that within the second-order factor, the Coping Self, exists one's ability to hold (or not) fictive notions (i.e., irrational beliefs) and that the ability to manage these stressors and beliefs will lead to better wellness. In contrast, for this population as levels of negative affectivity increased, so did the levels of overall wellness. However, it should be echoed that the level of negative affectivity for this population was generally low overall. It is possible that this finding could be attributed to an error in the measurements themselves. More discussion on this finding can be found in the next chapter.

There are several ideas as to why a negative relationship could be found in this population. First, even though stress, one of the variables within the negative affectivity construct, is often associated with poor (mental) health and academic performance (ACHA, 2013; Beck & Clark, 1997; Lovibond & Lovibond, 1995; Mahmoud et al., 2012), some have suggested that stress can help motivate individuals to reach immediate outcomes and achieve short-term goals (McGonigal, 2011; Seward, 2015; Sapolsky, 2003; Selye, 1974). Without looking at individual subscores on the DASS-21, it is not possible to know if one of the three variables—depression, anxiety, and stress—were found to have higher levels than others. Yet, it is possible that students experienced stress at greater levels than depression and anxiety, and in this sample, it could act as a motivating factor that therefore increases overall wellness. For example, stress might motivate a student to study and prepare for an exam, which could lead to

favorable grades. Consequently, would likely improve academic achievement and impact several facets of overall wellness.

Another possibility is that even though students were reporting levels of negative affectivity, it is possible that for those whose levels are high, they are able to manage the symptoms that present. More so, research is now suggesting that how one perceives stress may have a greater impact on the individual than stress itself. A ground-breaking study by Keller et al. (2012) found that while stress can lead to serious and even fatal health outcomes, the perception that stress negatively affects health had a 43% increased risk of death. Another study found that participants who reappraised their stress level (i.e., told to believe that it was not harmful) exhibited better cardiovascular stress responses, than those who were not told that their stress was harmless (Jamieson, Nock, & Mendes, 2012). Taken together, these studies suggest that perceptions of stress impact the effects of stress. It is possible that the college students in this sample were not concerned about negative outcomes of their stress and therefore greater levels did not contribute to negatively impacting their overall wellness. Future research could explore perception of stress and wellness in college students.

Lastly, it was found that only 30% of the variance in wellness was predicted by students' level of negative affectivity. Though 30% is not minimal, from this study, we cannot predict what else is contributing to 70% of the variance. The Indivisble Self wellness model (Myers & Sweeney, 2004) posits that wellness is not one dimensional and that it is multi-facted. The model highlights five second order factors—Essential Self, Creative Self, Coping Self, Social Self, and Physical Self—that are each comprised of many variables. However, this study only considered total wellness scores (i.e., all five factors together), yet future research could explore the subscores. It is plausible that participants of this study are doing well in multiple areas of

their wellness, which effect their overall level of wellness. As suggested above, performing well

academically, might improve other various factors within wellness. Once again, signifying that

participants in this study might have great levels of wellness for the 70% of the variance that is

not accounted for and therefore, the impact of negative affectivity is not robust enough to lessen

wellness.

Consideration as to whether the DASS-21 was not sensitive enough to discriminate

between depression, anxiety, and stress was taken, as well as thoughts on if the results were

skewed in general, which could both affect the results. While these are certainly possible, as in

the case with much research, the DASS-21 is a measure found to have good psychometric

properties (Antúnez & Vinet, 2012; Beiter et al., 2015; Gan et al., 2011; Gong et al., 2010; Henry

& Crawford, 2005; Lovibond & Lovibond, 1995; Mahmoud et al., 2012; Navjot, Hine, &

Phillips, 2013; Osman et al., 2012; Shamsuddin et al., 2013) and was created specifically to

discriminate between depression, anxiety, and stress, something earlier measures struggled to do

(Beck & Steer, 1987; Beck & Steer, 1990). For these reasons, it is less likely that the measure

itself presented as an issue and the unexpected results are more likely attributed to factors related

to the participants themselves.

Research Question Three

The third research question asked if there is a relationship between negative affectivity

and ego identity development. More specifically, it was hypothesized that there would be a

negative relationship between negative affectivity and the exploration domain of ego identity

development, as well as for negative affectivity and the commitment domain of ego identity

development. The first hypothesis looking at negative affectivity and exploration was partially

supported, in that there were small significant, but negative correlations. In other words,

exploration was related to negative affectivity; however, the direction of the relationship was not as expected. It was believed that as exploration increased, negative affectivity decreased. Although, the findings of this study show that as exploration increased, so did negative affectivity, yet overall they remained fairly low.

One possible explanation as to why the direction of the relationship was not as expected could be because of the status. The analyses within this study did not determine how the four statuses—achievement, foreclosure, moratorium, and diffusion—were represented among the sample. Though these scores were not measured, differences could exist. Higher scores on exploration would be representative of two of the statuses, achievement and moratorium. Achievement status is considered to be the healthiest of the statuses, in that they have formed solid commitments after a period of exploration. Whereas, the moratorium status actively explores new interests and possibilities, they struggle to establish commitments (Bosma & Kunnen, 2001). Because of their struggle to commit and develop ideas about their futures, it is possible that this status might experience anxiety and stress about such decisions as they cycle through different options and possibilities. It is possible that moratorium had a greater representation in this sample, which could be why there were positive correlations between negative affectivity and exploration. Although, this contradicts the overall findings for the levels reported for ego identity development. If the levels were high for both exploration and commitment, it would be expected that achievement status was more likely represented than moratorium.

As hypothesized, there was a negative correlation between negative affectivity and commitment. That is to say, as negative affectivity decreased, commitment increased or as negative affectivity increased, commitment decreased. This is to be expected. For example,

among the achievement status, these individuals form strong commitments after a period of exploration (Bosma & Kunnen, 2001). When considering college students with this status, it would be likely they envision promise and see excitement in their futures, which could help lower their levels of depression and anxiety, even when presented with stressors. On the other hand, those who struggle to commit, might experience higher levels of negative affectivity, as they ponder what is ahead of them in life, as suggested above with the moratorium status. The diffusion status is believed to be the least healthy, as this group of individuals struggle to explore interests, while also struggling to commit (Bosma & Kunnen, 2001). Previous research has found the greatest level of negative affectivity to be within the diffusion status (Azmitia et al., 2013; Claes et al., 2014; Louden, 2005). It is likely that this status might come off in counseling as apathetic or floundering to move forward in their lives, relying on counselors or other supportive figures to provide them direction and guidance.

Research Question Four

The fourth research question asks if after controlling for negative affectivity if ego identity development significantly related to wellness among a sample population of college students. More specifically, it was hypothesized that ego identity development, both the exploration and commitment domains, would be significantly related to wellness after controlling for negative affectivity. In this study, the exploration domain was found to not significantly add to the prediction of wellness. Simply put, negative affectivity was found to have a significant relationship with wellness, as discussed above, but when exploration was added to the model it did not significantly relate to wellness. As suspected by the earlier correlation analysis, ego identity was not related to wellness.

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These results were unexpected; as previous research has suggested otherwise. Schwartz et al. (2009b) found an inverse relationship between active exploration and well-being, when considering esteem and life purpose. Here, individuals who were actively exploring had lower levels of wellness. However, Louden (2005) found that achievement status and moratorium status, statuses whom have higher levels of exploration, did not correlate with better college adjustment and better study habits. It is feasible to believe that college adjustment and study habits are constituents of wellness, and this later study shows that actively exploring does not correlate with these factors within wellness. The results of this current study found no relation either, suggesting that overall active exploration is not related to overall wellness. Therefore, findings for the participants in this sample might be reflective of characteristics found in Louden's (2005) research. Further analysis could be utilized to break down the second-order wellness factors and determine if exploration has a relationship with any particular area of wellness, rather than overall wellness.

Unlike exploration, the commitment of domain of ego identity development was found to have a significant relationship with wellness. However, commitment had a negative relationship with wellness, meaning that as levels of commitment increased overall wellness decreased or that as commitment decreased, wellness increased. When controlling negative affectivity in the mediation model, commitment continued of related wellness. What was unexpected is the negative relationship between the two variables. For many, it would be presumed that once someone has formed commitments they are satisfied with their lifestyle choices. Yet, we see that the individuals with foreclosure status often form commitments based on beliefs held by parental figures. It is possible in such cases that such individuals are unhappy or feel unfulfilled in certain areas of their lives which affect their overall wellness. Previous research has suggested

evidence for two types of foreclosure statuses, firm and developmental. Firm foreclosures are unable to see other possibilities to change, whereas developmental foreclosures are likely to change (Kroger, 1995). Without exploring further into what statuses are represented in this sample, it is not possible to know for certain is foreclosures are possible cause behind the direction of the relationship. Additional analyses can be pursued through future research.

Research Question Five

The fifth research questions asked if negative affectivity was related to wellness when controlling for ego identity development. This question was not necessary to run the rest of the analyses, to determine if ego identity development mediates the relationship between negative affectivity and wellness among undergraduate college students, and was therefore it was conducted as a post hoc analysis. Statistical analyses were run, following the same methods as previous regressions, to test this question and rule out that negative affectivity did not serve as the mediator, with ego identity development as a predictor. As discussed previously, the exploration domain was not significantly related to overall wellness. Therefore, as expected it is not possible in this study for negative affectivity to be serve as a mediator for this model.

When the predictor and mediator variables were swapped, so that negative affectivity mediated the relationship between the commitment domain of negative affectivity and wellness there were unexpected results. As discussed before, commitment was significantly related to wellness. When negative affectivity was added as the mediator the model remained significant. This post hoc finding suggests that it is possible that negative affectivity mediates the relationship between the commitment domain of ego identity development and overall wellness. It could be questioned if this is why there were surprising findings for commitment affectivity and wellness, in that the direction of their relationship was negative. When looking at this model

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and taking into consideration the correlations, we see that as commitment levels increase, the levels of both negative affectivity and wellness decreased. Again, this suggests a possibility that negative affectivity might serve as a mediator between the commitment domain of ego identity development and wellness. Subsequent studies can be conducted to research this possibility.

Research Question Six

The final research question asked if ego identity development mediated the relationship between negative affectivity and wellness among undergraduate college student. More specifically, it was hypothesized that both exploration and commitment domains of ego identity development would mediate the relationship between negative affectivity and wellness. As discussed in chapter 4, the exploration domain of ego identity development did not serve as a mediating variable. After initial determination of the correlations, this was to be expected, since exploration was significantly correlated with wellness.

Unlike the exploration domain, commitment did serve as a partial mediating variable in the relationship between negative affectivity and wellness among undergraduate students. In other words, this suggests that the level of commitment that college students formed towards their identity indirectly affects their level of negativity affectivity (i.e., depression, anxiety, and stress) is related to and possibly effecting their overall wellness. This finding extends the current literature, as no studies have considered commitment to identity to be a mediator, in addition to research that seeks to determine its relationship with wellness is few and far between. Given this finding, as explored in the post-hoc analysis for the forth research question, it is also plausible that negative affectivity could serve as a mediating variable when considering the relationship between commitment and wellness. Albeit, these findings are still important in further understanding how college counselors can better understand how negative affectivity is related to

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wellness and how to better work with clients who present with low levels of negative affectivity and/or wellness.

Strengths and Limitations

As with most research, this study presented both strengths and limitations. This study explored an important area of college student development that has been often overlooked in the college counseling literature—ego identity development. Much of the existing literature, discusses the foundation of the theory and the fluidity (Berzonsky & Adams, 1999; Bosma & Kunnen, 2001; Josselson, 1973; Marcia & Archer, 1993; Meeus, 1996; Meeus et al., 1999; Waterman, 1993, 1999a, 1999b), with a limited amount exploring its relation to negative affectivity (Azmitia, Syed, & Radmacher, 2013; Claes et al., 2014; Grotevant, 1987; Josselson, 1973; Louden, 2005; Schwartz et al., 2009b), and even less with wellness (Louden, 2005; Schwartz et al., 2009).

Despite that the findings were not as hypothesized, they contribute to fields of college counseling and counselor education, not only by presenting current levels of these constructs among a college population similar in makeup to this sample, but provide insight toward strengthening the counseling practice. The findings also indicate that how ego identity effects the relationship between negative affectivity and wellness has not been fully explained by the literature and the proposed model, and that more research is needed to better understand the relationships. This might open the door for expanding the existing knowledge base and further contributing to the understanding of college student wellness and its application in college counseling.

One of the main limitations of this study was the sample size and demographics of the sample. First, the sample population of this study was only acquired from one college, with a

total of 238 usable participants. Even though it was determined that a sample size of 200 will result in approximately 80% power (Cohen & Cohen, 1983), the small sample size could be a factor in the unexpected findings. If the sample was larger, it is possible that the findings may have presented differently. Moreover, although the sample was evenly distributed among the class standings, it was predominantly made up of Caucasian, heterosexual, Catholic or Christian population. The homogeneity of the sample might have threatened the external validity of the study, which threatens the generalizability of the findings and therefore these findings should be understood as representative of a similar college student population as to the participants in this study. Furthermore, participation in the study was voluntary and based on self-report. It can be questions what brought these students to choose to engage in the study, perhaps social desirability, and that if the general overall health of this sample (i.e., low negative affectivity and high wellness) is not representative of a greater college student population. Also, it is necessary to consider if participant responses were representative of accurate knowledge of themselves (Heppner, Kivlighan, & Wampold, 1999).

Other limitations that may have presented in this study concern the measurements. Of the three measure—DASS-21, EIPQ, and the 5F-Wel—two were found to have good reliability, while it was questions in another. The level of internal consistency for both the DASS-21 and 5F-Wel were found to be similar to that reported in other research. However, the EIPQ was found to only have moderate internal consistency in this study, despite previous research reporting high alpha coefficients. This brings to question if the EIPQ accurately measured the constructs. In other words, does the EIPQ adequately measure what is considered to be representative of the exploration and commitment domains of ego identity development. The

unexpected findings, especially for the exploration domain could possibly be the result of the poor reliability of this measure, perhaps brining to question the construct validity.

A way to further assess this issue could be in further research, by exploring the subscores and individual test items. This current study did not calculate subscores, as it was best determined to begin with analysis of the overall scores. Had subscores been calculated, there possibly could have been upwards of 60 different student profiles. Future analysis of the subscores and student profiles might shed light on the unexpected findings and help guide the current models in other directions. For example, were all sub-domains of wellness negatively related to all domains negative affectivity, or is this only reflective for some of the factors of wellness and negative affectivity? This is possible, given that negative affectivity only accounted for 30% of overall wellness. Additionally, analyses of the individual items within the EIPQ, might help determine if there were specific items that caused moderate levels of internal consistency. If specific items did present with lower scores for internal consistency, removal of those items might present different results. These steps taken together, might continue to build upon the findings of this current study.

Implications for Practice and Research

The findings from this study were not as to be expected, as evidenced in only having partial or no support for several of the research hypotheses. Yet, the findings still present meaningful information that will extend the minimal extant research on ego identity development and wellness of college students, as well as present implications for college counseling practice, counselor education, and future research. Overall, the finding that might seem the most atypical, was the positive relationship between negative affectivity and wellness. Yet, it is important to note that overall this sample had low levels of negative affectivity in comparison with the

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reported national findings that suggest rates of mental health issues have been increasing

(ACHA, 2013; Reetz et al., 2013). Still, this raises the question, is the mental health of college

students as a grim as the leading bodies of college healthcare are presenting? More strikingly, it

may also shed light on how college counselors conceptualize wellness and the counseling field

has attributed too much strength on mental health playing a significant role in overall wellness.

College Counseling Practice

Counseling literature over the last few decades has described college counseling to once

be a place where students could work on traditional developmental and adjustment issues, but

has become increasingly more mental health driven through the demands of the academy and

rising numbers of serious mental illness (ACHA, 2013; Chang et al., 2007; Dunkel-Schetter &

Lobel, 1990; Reetz et al., 2013; Schwiter, 2009). But as we peel back the layers of what brings

students into counseling, we must think about our role in helping clients articulate their struggles

and find solutions to help not just address immediate concerns, but develop resiliency in order

for them to thrive (Arnett, 2000, 2006; Settersten et al., 2005). Typically, college counseling

services are established as a place for students to seek support for issues that usually have

coinciding mental health factors. Without a doubt, these services are needed and necessary, but

as a way to better serve students, college counselors can begin to think about how to expand

counseling beyond addressing only mental health factors and finding ways to explore the

intersections of wellness.

One way to start exploring wellness more with clients would be to include wellness

measures, such as the 5F-Wel, in counseling. Such assessments could be included within intake

assessment packets given to clients at the start of counseling process or they can be introduced

later on. The later option, might present with opportunities to spend sessions exploring not only

the factors of wellness, but also client identity and how that contributes to lifestyle choices that affect wellness. A wellness-based approach will also strengthen a counselor's awareness of the psychosocial and environmental factors, such as poverty and disability, that might present challenges for clients. Thus, such an approach can be completed over multiple sessions, helping clients take time in identifying ways to strengthen and build upon their overall wellness. When including the Indivisible Self wellness model in clinical work, it is suggested that one area of wellness is addressed at a time and that improvements in one area or wellness could create positive effects on other areas of wellness (Myers & Sweeney, 2004). By addressing one factor of wellness at a time, counselors can help students to identify what factor of wellness needs the most attention and work, in addition to creating a treatment plan to establish actions and goals to achieve greater levels of wellness.

As college counselors help students to understand their own wellness and how to improve upon it, it would be beneficial for counselors to not only think of ways to do this within counseling, but also begin to look outside and consider other services. The integrated care movement continues to grow across college and university counseling and health centers (ACHA, 2010; Aitkens & Curtis, 2004; Kates et al., 2002), and is believed to create a more comprehensive approach towards student wellness (Spiegelhoff & Luke, 2015). The findings of this study suggest that a large portion of overall wellness is due to variables beyond mental health, and perhaps general health. An integrated approach can serve as a foundation for counselors to collaborate care with other providers, but also help to think of creative ways to direct students to other services and activities to address wellness. Such services might include campus ministry, athletics, the arts, and multicultural affairs. An integrated approach will not only create a more comprehensive approach to student care, might also help decrease the overall

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demands on counselors when face with pressures that create time-limited treatment (e.g., increasing number of students, waitlists, crisis, administrative responsibilities, etc.), by providing other resources.

For students who present with moderate to high levels of negative affectivity and may warrant counseling focused more on psychopathology and less on wellness (at least in the short-term), assessing their level of commitment towards their identity can be something to consider as a way to help decrease negative affectivity. The findings of this study found that as exploration increased, so did negative affectivity. However, as commitment increased, negative affectivity decreased. It is likely for many college counselors to find themselves working with students who have explored various interests, such as majors, but struggle to find something they are comfortable committing, either because their explorations do not align with their beliefs or concerns about family pressure, etc. Here counselors can students discover what is holding them back from forming commitments, determine goals, and the steps to be taken towards goals. As students work through this treatment approach, counselors can monitor their level of negative affectivity.

Additionally, this study also encourages counselors to consider supporting clients through understanding their own identity development and how it continually effects their college experience. If counselors determine that while working on reducing levels of negative affectivity also reduces students' overall wellness, which is possible based on this study's findings, counselors can help students determine if their commitments are inhibiting other areas of their wellness. An example of where you might see this happen would be, a student who falls within the foreclosure status might inform a college counselor that she chose to be a biology major, because her parents always encouraged her to pursue medical school and become a

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doctor. It was her parents' vision for her to be successful and in order to appease her parents, she follows through with this major, which helps her feel supported by her parents, with the believe that she will make them proud. This choice might decrease her level of negative affectivity because she is happily fulfilling her parents' dreams of her vocational success. That said, it is possible that she will also choose to focus strictly on their wishes of her parents, foreclosing on other possible interests or factors that would contribute to her well-being. For example, she might report that she even though she enjoys fitness and sports, she does not exercise or join an athletic team, because it will take away time from her studies as biology major. This in turn, might affect other aspects of her wellness (e.g., physical wellness), which would not necessarily be accounted for though negative affectivity.

Education and Training of College Counselors

College counselors usually have backgrounds in mental health counseling or clinical psychology, therefore they complete training in diagnosis and assessment. As discussed above, wellness-based counseling might be an area that is sometimes overlooked in college counseling, given the number of students presenting with complex mental health concerns (Schwitzer, 2009a). Similarly, the increasing needs for mental health services in the US might also sway counselor education and licensing bodies to shift the education and training of counselors more in the direction of treatment approached aimed at psychopathology and away from the field's original foundation in wellness and developmental theories (Barrio Minton, Myers, & Paredes, 2016; Ivey 1986, 1991; Rigazio-DiGilio, 1994).

The first chapter of this began with the quote, "It seems ludicrous to prepare a student for a lifetime career in their area of interest and not prepare them for the responsibilities of maintaining their life" (Hettler, 1984, p. 17). These research findings not only highlight that

commitment could contribute indirectly to the relationships between negative affectivity and wellness, but it also highlights that the need to continues to understand the developmental nature of holistic wellness of college students. Again, this is not to say that college counselors and counselors educators should overlook the psychopathology. Rather this is a challenge for educators to develop strategies to reintroduce wellness and developmental theories into the curriculum, not just in courses that address theory, but also in the experiential practice of counselor. For example, helping counseling students to integrate wellness based goals into treatment plans and understand techniques and modalities that can work along side other theoretical orientations.

Additionally, counselor educators can include experiential activities into the curriculum to help deepen students' understanding of wellness-based counseling practices. For example, within a practicum class, students can take part in completing their own wellness-based assessments to determine their own level of wellness. Activities from wellness workbooks (e.g., see Travis & Ryan, 2004), can be completed as in-class assignments, with time for students to process their experience and discuss ways they could use the activities in their work with clients. Experiential examples such as these can provide counselors-in-training, creative ways to think beyond a Western, medical model approach to training college students, and ways to help them increase wellness and "maintain their lives." After all, for students, the college experience is a pivotal time for them to engage in experiences that will expand upon their existing intellectual, cultural, and spiritual foundation, creating a space for their identity development to thrive. Preparing counselors to understand and work with students from a wellness-based approach will ultimately help them to not only support the immediate mental health concerns of their students, but to promote a quality of life that will help them flourish.

College Counseling Research

Continuing to study the relationship between and effects of ego identity development on wellness is critical. This study provides a starting place for a better understanding, yet given the unexpected results, there is still much more to discover. A place to start would be to take a closer look at the data collected from this study, breaking down the larger constructs into their sub-factors, as discussed above. In order words, comparisons could be made across separately for depression, anxiety, and stress. Also, the subscales for the 5F-Wel could be calculated to see if the relationships differ across the five separate factors. Moreover, participants' ego identity statuses could be determined and then compared with negative affectivity and wellness. Determining the relationships between the breakdown of all three constructs could provide with a more robust perspective of what is happening between the variables.

Additionally, another considerable area for future research would be to explore and determine what factors contribute to college student wellness. This study has shown that only 30% of wellness is accounted for by negative affectivity. That means that 70% of wellness, is likey attributed to factors outside of mental health. Determining what these factors might be will not only strength the counseling profession's understanding of college student wellness, but also help counselors and counselor educators develop treatment approaches and modalities to better work with college students to address the whole self. The findings might also help college counselors determine what other resources and providers would be beneficial to refer services to or to work together with in order to create a collaborative treatment approach. More so, because of the homogenous nature of the sample, it is possible that students with diverse background might present with different complex factors that affect overall wellness, in addition to other constructs. For example, many of the participants identified as middle-class. This study cannot

attest to the challenges poverty may contribute to overall wellness. Having a more diverse

sample in future studies will allow researchers to have a more intricate understanding of college

student wellness.

Along with further exploration of college student wellness, continuation of college

student mental health is recommendation. The results of this study found that participants had

relatively low level of negative affectivity. Given the increasing levels of mental illness among

colleges students across the United States (ACHA, 2013; Reetz et al., 2013), it is critical that

data continues to be collected, as this will continue to help inform best practices. Additionally,

outcome measures at individual institutions can supplement national findings, in that they will

provide location specific information, help determine what the overall needs of students at a

specific college or university, and help college counselors evaluation the effectiveness of their

treatment.

Equally important for future research would be to take a deeper look into ego identity

development and determine perhaps what parts of the construct are the most reflective in these

findings. Grotevant (1987) understood identity exploration as a problem solving behavior. It is

possible that when presented with new problems and challenges, it is not the level of exploration

and formed commitments that affect wellness, but perhaps the subtle, sometimes unobserved

individual characteristics of the psyche that precede problem solving. As discussed in Chapter 2,

Bosma (2001) suggested ego resiliency, that is the degree of flexibility that one exhibits when

confronting challenges, to be an influencer of identity exploration. It is possible that ego

resiliency and other individual psychological characteristics related to ego identity development

might be more influential in mediating the relationship between negative affectivity and

wellness. This also raises the question if problem solving itself, rather than negative affectivity

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(as a potential cause and effect of problem solving), is a more meaningful predictor. Future analyses of these constructs, could generate a new model for understanding college student wellness.

A next step in analysis of the data collected for this study would be to not only look at the subscores of the measures, in addition to creating student profiles, but to also consider a new model. Path analysis can extend upon the multiple regression used in this study and aim to strengthen causal connections between the constructs. Such an analysis would can strengthen what has been learned from this sample to the college counseling practice, through creating a new model of college student mental health and wellness.

Conclusion of Discussion

In summary, this study sought to fill the gap in the literature on college student wellness, specifically by identifying how ego identity development, when taken together with negative affectivity plays a role in college student wellness. It was hypothesized the ego identity development would mediate the relationship between negative affectivity and wellness, but this was only supported for the commitment domain of wellness. Furthermore, the relationships between negative affectivity and wellness, as well between ego identity development and negative affectivity, and ego identity development and wellness were for the most part unexpected. The findings suggest that while negative affectivity is certainly a contributing factor towards wellness, there is much more to wellness than mental health. How college students commit to their identity, might shed light on other aspects of their overall wellness.

The resulting findings provide new ways for college counselors to engage students in supporting their overall wellness and helping them developing resiliency and the skills they need to thrive. It also shows that this is just a preliminary understanding of ego identity

development's role in wellness, and that previous literature and this proposed model cannot fully explain the relationships between negative affectivity, ego identity development, and wellness. Therefore, more research is needed to better understand such relationships, in order to broaden the training of future counselors who plan to work with population and enhance how current college counselors' work with college students.

At this time, college counselors can draw on the findings of this study to enhance their work with college students. Again, it is important to recognize that the findings are most applicable to Caucasian, female students and those attending small colleges and universities. Nevertheless, this study will hopefully shed light on the importance of ego identity development and how it relates to college students; therefore, increasing exploration of identity development in counseling sessions. College counselors might also better recognize the complexity of wellness and challenged themselves in new ways to practice from a wellness-based approach, while creating a more collaborative and comprehensive practice. After all, college counselors aim to support students as they experience this exhilarating time in their development, while prepare them for a for journey of many more milestones ahead, and by working with whole person, counselors can achieve best practice.

Appendix A

Informed Consent

Investigators: Sarah F. Spiegelhoff, doctoral candidate, and Dr. Melissa Luke, faculty advisor. This informed consent is to provide you with information about confidentiality and privacy, describe research procedures, and explain your rights as a participant in this study. You may direct questions, concerns, or complaints regarding this research to the investigators, Sarah F. Spiegelhoff (315-445-4196) and Dr. Melissa Luke (315-443-2266). If you have questions or concerns regarding your rights as a participant, you may also contact the Syracuse University Institutional Review Board (315-443-3013). Additionally, if you have questions that you wish to direct to someone other than the investigators (Sarah F. Spiegelhoff and Dr. Melissa Luke), you may contact the Syracuse University Institutional Review Board (315-443-3013).
My name is Sarah F. Spiegelhoff, and I am a doctoral candidate at Syracuse University in the Counseling and Human Services Department in the School of Education. I am conducting a research student entitled *Ego Identity Development as a Mediator Between Negative Affectivity and Wellness of College Students*, in partial fulfillment of the requirements for the completion of my Ph.D. degree in Counseling and Counselor Education. Your participation in this research is voluntary and you may choose whether or not to take part. You may also withdraw at any time.

My interest in conducting this research is to investigate the various factors that affect negative affectivity and wellness of traditional undergraduate students. You will be asked to complete a series of demographic questions, followed by brief survey instruments. The total time to complete the survey is estimated to take 20-40 minutes. If you do not have the time to complete the surveys when you receive this email, please save the email and return to the site when you do have time.

As an incentive to participate in this research study, a random drawing for two $100 VISA© gift cards will be held after the date collection phase has ended, which is expected to occur on or near November 30, 2015. Recipients who are randomly selected will be notified via email. There is no cost to enter and you do not have to complete the survey in order to enter the drawing, although you are encouraged to do so. If you wish to enter the drawing, you will be redirect to another link at the end of the survey where you will enter your email address. If you are one of the two winners of the VISA© gift cards, you will notified to provide your mailing address to which the gift card can be sent.

All of the information that you provide on the research survey will be kept confidential. The following steps have been taken to ensure your privacy: (1) the information that you enter into the website will be TLS (HTTPS) encrypted so that it cannot be viewed by unauthorized individuals; (2) no participant names or identifying information will be requested or noted on the Informed Consent or the survey instrument itself; (3) the email address you provide for the drawing will be stored separately from the survey and will not be linked to the Informed Consent; (4) the consent forms, surveys, and data generated from the surveys will be kept in secure, password protected locations and only the investigators will have access to the documents; and (5) individual participants will not be identified in publications and/or report, only group scores and group demographics will be reported.

Potential risks of participating in this research study could include emotional discomfort attached to questions included in the survey. Though these risks are estimated to be low, if any discomfort does arise and you wish to speak to counseling professional, you may contact the Wellness Center for Health and Counseling at Le Moyne College (315-445-4195). There are no direct benefits to participating in this study; however, you may feel gratified that you are assisting researchers to gain a better understanding of college student development. Future developmental and counseling services may be enhanced through the findings of this research study.

Please print a copy of this informed consent for your records.

****

By clicking the "Yes" response below, I assert that I have read the information provided, my questions have been answered, and I choose to take part in this research. I also affirm that I am 18 years old or older.

☐ Yes
☐ No

Sarah F. Spiegelhoff, Ed.S., LMHC, NCC
Doctoral Candidate, Syracuse University
Counseling and Human Services

Appendix B

Email to Participants

Hello, my name is Sarah F. Spiegelhoff, and I am a doctoral candidate at Syracuse University. In partial fulfillment of my doctoral degree at Syracuse University, I am conducting a study to explore developmental and wellness issues relevant to college students.

I am requesting that you take 20-40 minutes of your time to complete a confidential survey on a secure online site.

If you participate in the survey, you can select to be entered in a drawing to win one of two $100 VISA© gift cards. Two undergraduate students who participate in this survey will be randomly chosen to receive these gift cards.

To enter the drawing and complete the survey, please click on the link below.

[Insert Qualtrics website link]

By completing this survey you may be able to improve our understanding of the development and wellness of college students. Thank you very much for your participation!

If you have any questions, please contact me at sfspiege@syr.edu. My faculty advisor, Dr. Melissa Luke, can also answer questions or concerns via email at mmluke@syr.edu or phone at 315-443-2266.

Sincerely,
Sarah F. Spiegelhoff, Ed.S., LMHC, NCC
Doctoral Candidate, Syracuse University
Counseling and Human Services

Appendix C

Demographics Questionnaire

Instructions: Check only one answer for each item. Do not spend too much time on any one item. Your responses will be used to describe participants in general and will not be reported individually at any time. Please answer all of the questions.

Age: _____ Years (write in)

Gender: ○ Male ○ Female ○ Transgendered ○ Other

Racial/ethnic background with which you most closely identify (select one):

○ Caucasian/White ○ African-American/Black ○ Hispanic/Latino
○ Asian/Pacific Islander ○ American Indian/Alaskan Native ○ Multi-ethnic/Multi-racial
○ Other

Sexual Identity: ○ Heterosexual ○ Gay ○ Lesbian ○ Bisexual
○ Queer ○ Other

What economic background do you consider yourself to come from?

○ Lower Class ○ Working Class ○ Middle Class ○ Upper Middle Class
○ Upper Class

What religious affiliation with which you most closely identify (select one):

○ Catholic ○ Christian ○ Jewish ○ Muslim ○ Hindu ○ Buddhist
○ Atheist ○ Agnostic ○ Other religious tradition ○ No religious affiliation

Current class standing: ○ Freshman ○ Sophomore ○ Junior
○ Senior

Are you an international student? ○ Yes ○ No

Depression Anxiety Stress Scale-21 (DASS-21)

Please read each statement and select number 0, 1, 2 or 3 which indicates how much the statement applied to you over the past week. There are no right or wrong answers. Do not spend too much time on any statement.

The rating scale is as follows:
0 – Did not apply to me at all – Never
1 – Applied to me to some degree, or some of the time – Sometimes
2 – Applied to me to a considerable degree, or a good part of time – Often
3 – Applied to me very much, or most of the time – Almost Always

1. I found it hard to wind down.
2. I was aware of dryness of mouth.
3. I couldn't seem to experience any positive feeling at all.
4. I experienced breathing difficulty (e.g., excessively rapid breathing, breathlessness in absence of physical exertion).
5. I found it difficult to work up the initiative to do things.
6. I tended to over-react to situations.
7. I experienced trembling (e.g., in the hands).
8. I felt that I was using a lot of nervous energy.
9. I was worried about situations in which I might panic and make a fool of myself.
10. I felt that I had nothing to look forward to.
11. I found myself getting agitated.
12. I found it difficult to relax.
13. I felt down-hearted and blue.
14. I was intolerant of anything that kept me from getting on with what I was doing.
15. I felt I was close to panic.
16. I was unable to become enthusiastic about anything.
17. I felt I wasn't worth much as a person.
18. I felt that I was rather touchy.
19. I was aware of the action of my heart in the absence of physical exertion (e.g., sense of heart rate increase, heart missing a beat).
20. I felt scared without any good reason.
21. I felt that life was meaningless.

Depression items: 3, 5, 10, 13, 16, 17, 21
Anxiety items: 2, 4, 7, 9, 15, 19, 20
Stress items: 1, 6, 8, 11, 12, 14, 18

There is no fee for this test and it is permitted to use for research purposes.

Appendix E

Ego Identity Process Questionnaire (EIPQ)

Please read each statement and select number 1, 2, 3, 4, 5, or 6 which indicates how much the statement applies to you.
The rating scale is as follows:
1 – Strongly disagree
2 – Disagree
3 – Slightly disagree
4 – Slightly agree
5 – Agree
6 – Strongly agree

1. I have definitely decided on the occupation I want to pursue.
2. I don't expect to change my political principles and ideals.
3. I have considered adopting different kinds of religious beliefs.
4. There has never been a need to question my values.
5. I am very confident about what kinds of friends are best for me.
6. My ideas about men's and women's roles have never changed as I became older.
7. I will always vote for the same political party.
8. I have firmly held views concerning my role in my family.
9. I have engaged in several discussions concerning behaviors involved in dating relationships.
10. I have considered different political views thoughtfully.
11. I have never questioned my views concerning what kind of friend is best for me.
12. My values are likely to change in the future.
13. When I talk to people about religion, I make sure to voice my opinion.
14. I am not sure about what type of dating relationship is best for me.
15. I have not felt the need to reflect upon the importance I place on my family.
16. Regarding religion, my beliefs are likely to change in the near future.
17. I have definite views regarding the ways in which men and women should behave.
18. I have tried to learn about different occupational fields to find the best one for me.
19. I have undergone several experiences that made me change my views on men's and women's roles.
20. I have consistently re-examined many different values in order to find the ones which are best for me.
21. I think what I look for in a friend could change in the future.
22. I have questioned what kind of date is right for me.
23. I am unlikely to alter my vocational goals.
24. I have evaluated many ways in which I fit into my family structure.
25. My ideas about men's and women's roles will never change.
26. I have never questioned my political beliefs.
27. I have had many experiences that led me to review the qualities that I would like my friends to have.
28. I have discussed religious matters with a number of people who believe differently than I do.
29. I am not sure that the values I hold are right for me.

30. I have never questioned my occupational aspirations.
31. The extent to which I value my family is likely to change in the future.
32. My beliefs about dating are firmly held.

Positively-worded, commitment: 1, 2, 5, 7, 8, 13, 17, 23, 25, 32
Negatively-worded, commitment: 12, 14, 16, 21, 29, 31
Positively-worded, exploration: 3, 9, 10, 18, 19, 20, 22, 24, 27, 28
Negatively-worded, exploration: 4, 6, 11, 15, 26, 30

Scoring is reversed for negative-stated items.

There is no fee for this test and it is permitted to use for research purposes.

Appendix F

Five Factor Wellness Inventory (5F-Wel)

The items are statements that describe you. Answer each item in a way that is true for you most of the time. Think about how you most often see yourself, feel or behave. Answer all the items. Do not spend too much time on any one item.

The rating scale is as follows:
A – If it is true for you most or all of the time – Strongly Agree
B – If it is true for you some of the time – Agree
C – If it is usually not true for you – Disagree
D – If it is almost or never true for you – Strongly Disagree

2. I am satisfied with how I cope with stress.
3. I eat a healthy amount of viQuidins, minerals, and fiber each day.
6. Being a male/female is a source of satisfaction and pride to me.
16. My cultural background enhances the quality of my life.
65. I believe in God or a spiritual being greater than myself.

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MN: Personal Development Consultants.

SARAH F. SPIEGELHOFF, Ed.S., LMHC, NCC

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EDUCATION

Syracuse University
Ph.D. in Counseling and Counselor Education   Expected 2016
Ph.D. Candidate (ABD)   2013
Certificate of Advanced Study (C.A.S) in Women and Gender Studies   2013

Rider University
Ed.S. in Community Counseling   2008
M.A. in Community Counseling   2006

The Pennsylvania State University (University Park)
B.A. in Psychology   2003

TEACHING EXPERIENCE

SUNY Oswego, Counseling and Psychological Services Department
Adjunct Instructor   2012 – Present

Courses Include: Foundations of Mental Health Counseling, Psychological Foundations: Psychopathology

Syracuse University, Counseling and Human Services Department
Instructor   2012
Clinical Placement Coordinator   2010 – 2012
Teaching Associate   2011
Group Facilitator   2010 – 2011
Group Counseling Supervisor   2010 – 2011

Courses Included: General Counseling Methods, Counseling Pre-Practicum, Group Work in Counseling

Supervision responsibilities included: Individual counseling supervision for practicum and internship master's level students in clinical mental health counseling, school counseling, and student affairs counseling; assistance in midterm and final evaluations for practicum and internship

Placement responsibilities included: Clinical placement of school and student affairs counseling student; identification of sites; coordination with site supervisors and school districts; collaboration with university professionals; maintenance of placement records; collaboration with students

Rider University, Counseling Services Department
Graduate Assistant   2007

Assistance included: Research in counselor legal and ethical issues; assisted faculty with on-going professional projects

CLINICAL MENTAL HEALTH EXPERIENCE

New York Chiropractic College, Counseling Services
Associate Director for Counseling Services   2015—Present

Responsibilities include: Providing leadership and oversight of the clinical and administrative services of the counseling office; playing a key role in strengthening the linkages between Counseling Services, the Academy for Academic Excellence and Student Success, and the larger campus community; serving as Chair of the Student Care Team; considering how to implement new innovative ways of serve delivery and evaluation; clinical supervision of counseling staff; individual, couples, and group counseling for students, faculty (EAP), and staff (EAP); Assessment and evaluation; diagnosis; testing; referrals to community resources; counseling outreach and graduate course presentations

Le Moyne College, Wellness Center for Health and Counseling
Clinical Supervisor   2013 – Present
Counselor   2012 – Present
Counseling Intern (Ph.D. Level)   2009 – Present

Responsibilities include: Individual and group mental health counseling; wellness outreach (Art of Wellness and De-Stress Yourself); clinical supervision of practicum and internship graduate students; oversight of the Wellness Coaching program; social media and website engagement (Facebook, Twitter, Pinterest, CampusGroups, Le Moyne Portal); faculty and staff consultation and training; Women's Leadership Forum chair

Penndel Mental Health Center
Family Community Resource Specialist (FCRS)   2004 –2009
Mental Health Professional—Family-Based Services   2003 – 2004, 2007
Responsibilities included: Individual and family psychotherapy for children, adolescents, and adults; specialty clinical services for parents with mental illness

New Leaf Psychotherapy
Counselor/Psychotherapist   2008

Responsibilities included: Individual and family, short-term and long-term counseling within a private practice

RESEARCH INTERESTS

Wellness, Integrated Care, Identity Development, Negative Affectivity, Counselor Ethics

PROFESSIONAL PUBLICATION

Spiegelhoff, S. F., & Luke, M. (2015). Integration of Counseling and Health Services: Impact on Student Wellness. *Wisconsin Counseling Journal, 28*, 22-36.

Spiegelhoff, S. F., & Ahia, C. E. (2011). Impact of parental mental illness on parenting: Ethical issues for counseling professionals. *The Family Journal, 19(4)*, 389-395.

PROFESSIONAL PRESENTATIONS

Spiegelhoff, S. F., Phillips Sheesley, A., Cole, J., Brown-Smythe, C., & Hooper, L. (2015, October). *Incorporating integrated care into counselor education curriculum*. Association for Counselor Education and Supervision (ACES). Philadelphia, PA.

Brown-Smythe, C., & **Spiegelhoff, S. F.** (2015, October). *Exploring grief as a fundamental issue for counselors: Implication for counselor educators*. Association for Counselor Education and Supervision (ACES). Philadelphia, PA.

Kearney, A. & **Spiegelhoff, S. F.** (2015, June). *Impact and implications of implementing the DASS-21 in an integrated health and counseling center.* Counseling Centers of New York (CCNY). Syracuse, New York.

Brown-Smythe, C. A. & **Spiegelhoff, S. F.** (2014, September). Strategies for Addressing Spirituality in Counselor Education Programs. North Atlantic Region Association for Counselor Education and Supervision (NARACES). Providence, RI.

Brown-Smythe, C. A., **Spiegelhoff, S. F.**, & Castillo, J. H. (2014, September). Supervising International Counseling Students. North Atlantic Region Association for Counselor Education and Supervision (NARACES). Providence, RI.

Brown-Smythe, C. A. & **Spiegelhoff, S. F.** (2013, September). *Spirituality: A transitional issue for college students.* American College Counseling Association (ACCA). New Orleans, LA.

Spiegelhoff, S. F. (2013, June) *Integration of Counseling and Health Services: Impact on Student Wellness*. Counseling Centers of New York (CCNY). Hamilton, New York.

Brown-Smythe, C. A. & **Spiegelhoff, S. F.** (2013, June). *Spirituality: A transitional issue for college students.* Counseling Centers of New York (CCNY). Hamilton, New York.

Spiegelhoff, S. F., Hrovat, A., & Thompson, L. (2012, October). *Creating Communities of Wellness through the Expressive Therapies.* New York State College Health Association (NYSCHA). Syracuse, NY.

Spiegelhoff, S. F., Hrovat, A., & Thompson, L. (2012, September). *Creating Communities of Wellness through the Expressive Therapies.* North Atlantic Region Association for Counselor Education and Supervision (NARACES). Niagara Falls, NY.

Spiegelhoff, S. F. (2012, July). *Integration of Counseling and Health Services: The Impact on Student Wellness*. National Wellness Conference. Stevens Point, WI.

Spiegelhoff, S. F. (2011, June). *Wellness and wellbeing: A critical understanding.* Counseling Centers of New York (CCNY). Ithaca, NY.

Gilbride, D.G., Rogers, J.L**.**, Stanciu, E.A., **Spiegelhoff, S.F**., & Brown-Smythe, C. (2010, October). *The brief wondrous life of Oscar Wao: Could an ecological approach have saved him?* North Atlantic Association of Counselor Education & Supervision Regional Conference (NARACES). New Brunswick, NJ.

Shields, S. A., & **Spiegelhoff, S. F.** (2004, July). Magda B. Arnold: Her life and work in context. *Magda B. Arnold, 1903-2002: Centenary symposium.* International Society for Research on Emotions. St. John's University, NY.

GRANT AWARDS

Chi Sigma Iota (CSI)   2013 – Present
Excellence in Counseling Research Grant

Received $400 to fund dissertation research.

PROFESSIONAL RECOGNITION

Chi Sigma Iota (CSI) Outstanding Individual Program   2012
Winter Wellness Event

American Counseling Association (ACA) Ethics Competition   2011
2nd Place

PROFESSIONAL AFFILIATIONS

American Counseling Association (ACA)

American College Counseling Association (ACCA)

American Mental Health Counselors Association (AMHCA)

Association for University and College Counseling Center Directors (AUCCCD)

Chi Sigma Iota (CSI; Sigma Upsilon, Syracuse University)

LICENSURE & CERTIFICATION

Licensed Mental Health Counselor (LMHC), New York: 005544

National Certified Counselor (NCE): 221524

PROFESSIONAL SERVICE

American Counseling Association (ACA) Integrated Care Interest Network   2014 – Present
Leadership Committee Member

Loyola Companions Leadership Program (Le Moyne College)   2014 – 2015
Mentor

Chi Sigma Iota (CSI; Sigma Upsilon, Syracuse University)   2011 – 2012
Professional Development Chair