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**EXPLORING THE RELATIONSHIP BETWEEN EGO DEVELOPMENT
AND MENTAL HEALTH**

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Submitted in Partial Fulfillment
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Doctor of Philosophy
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HEATHER R. BONNETT

ABSTRACT

The goal of this study was to examine the relationship between ego identity in adults (ego development), symptoms of psychological distress, and self-esteem. Ego identity was operationalized using Loevinger's (1976) stage theory of ego development, further modified by Cook-Greuter (1994; 2010). The test used to measure ego development was the Sentence Completion Test Integral (SCTi). Symptoms of mental disorders or psychological distress were measured using Derogatis' (1994) Symptom Checklist 90 Revised (SCL-90-Revised). Self-esteem was measured using the Rosenberg Self Esteem Scale (RSES). It has been thought there would be noticeable differences in the relationship between ego development and the types of psychological symptoms or between ego development and self-esteem but no studies have been done to explore this (Cook-Greuter, personal communication, 2016). In summary, my hypotheses were that graduate students would have later ego development than the norms for the general population, that participants at conventional stages of ego development would report different psychological symptoms than participants at later stages of ego development,

that participants in this sample who score at post-conventional levels of ego development would report more depression while those at conventional levels of ego development would endorse more anxiety, and that participants at post-conventional stage of ego development would report higher self-esteem than those at conventional levels of ego development.

In this study, ego development functioned as a non-metric (ordinal) variable studied in comparison to two ratio variables (psychological symptoms endorsed and self-esteem). The SCTi tests were scored by professional raters certified by Cook-Greuter and Associates. The SCL-90-R and Rosenberg self-esteem scale were scored by the researcher and the dissertation director. Analysis of variance of all study variables was run by ego development level. Also, a process called data imputation was conducted to see if the trend-level results of the analysis would have been stronger with a larger sample. Though it was not one of my hypotheses, subjects at so-called “transitional” ego stages reported a broader array of psychological symptoms than subjects at so-called “stable” stages of ego development.

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CHAPTER 1

INTRODUCTION

Human development has been of interest to researchers such as James Mark Baldwin, Jean Piaget, Lev Vygotsky, Erik Erikson, Robert Kegan and Jane Loevinger since the late-19th century, through the 20th century and into the 21st century.

Understanding growth and change interpersonally and intra-personally as well as how we conceptualize ourselves in our environment is the focus of many developmental theories in psychology. In several pioneering publications, Baldwin (1902, 1906) developed a step-wise theory of cognitive development that inspired Piaget, Vygotsky and Lawrence Kohlberg (1984). Baldwin was known for his contributions to philosophy as well as psychology. He is less known in the 21st century due to his idiosyncratic use of language and his theories live on more in those he inspired such as Vygotsky and Piaget. Vygotsky (1998) focused on examining the influence of cultural mediation and interpersonal communication on development while Piaget was more focused on cognition. Erikson (1963) used a stage theory to address how healthy identity is formed. In his model growth occurs by "...regulating the internal behavior and the external environment" (Karkouti,

2014) and resolving psychosocial conflicts inherent for each stage. By this regulation, individuals adapt to emerging situations and events. Both Loevinger (1967, 1976) and Kegan (1979) pioneered the theory and measurement of human development focusing on the ego and how our sense of self shifts through the lifespan. These shifts help to guide our interactions and meaning making as we grow in our lives. More recently, Cook-Greuter, (2010) building on Loevinger's theory, described ego development as the story we tell ourselves about our life, our place in the world and how that story changes.

Loevinger (1966) wrote that ego development is a theory to explain individual differences in adult personality organization. Her theory of ego development includes a sequence of levels or stages of psychological maturation that begin during childhood, and develop through adolescence and adulthood (Loevinger & Wessler, 1970). These stages describe the ways individuals function interpersonally and intra-personally regarding impulse control, cognitive complexity and conscious preoccupations (Loevinger, 1976). It is important to note that there are variations on Loevinger's theory in psychology, business and personal coaching. In many cases, each "user" of the theory has created their own labels to represent particular stages. Unfortunately, this has led to multiple names being used for the same stage. Table 1.1 summarizes the published labels for each stage. Note that some users do not identify each stage.

Table 1.1

Labels used for Ego States and Corresponding Four-Tier Model Development Levels

Researcher	Loevinger (1976)	Cook-Greuter (1999)	Torbert et al., (2004)	Joiner & Joseph (2007)	Cook-Greuter & Sharma (2016)
Level/Stage					
Pre- conventional	Presocial	*	*	*	*
	Symbiotic	*	*	*	*
	Impulsive	Impulsive	*	*	Impulsive Self
	Self-Protective	Opportunist	Opportunist	*	Self-centric
Conventional	Conformist	Diplomat	Diplomat	*	Group-centric
	Self-Aware	Expert	Expert	Expert	Skill-centric
	Conscientious	Achiever	Achiever	Achiever	Self- determining
Post- Conventional	Individualist	Pluralist	Individualist	Catalyst	Self- questioning
	Autonomous	Strategist	Strategist	Co-Creator	Self- actualizing
	Integrated	Magician	Alchemist	Synergist	Construct Aware
	*	Unitive	Ironist	*	Unitive Self

*means that the authors did not acknowledge the level. This occurs for various reasons so one should consult the citations for those reasons.

In this study the labels from Cook-Greuter (1999) were used except in those cases where an earlier stage is referenced that was in Loevinger's theory but not developed in subsequent research. These earlier stages were usually not developed because they represented individuals who were so impaired they would not be functioning in society (e.g. Loevinger's "Pre-Social" stage).

Loevinger's stage theory of ego development is one of the most comprehensive constructs in the field of developmental psychology (Westenberg and Block, 1993). Loevinger (1976) describes stages of psychological development that begin when a

human differentiates his or herself from the world (Pre-Social, Symbiotic and Impulsive) and then begins to develop a conventional sense of self (e.g. Diplomat, Expert, Achiever). The conventional identities are increasingly complex variations of understanding and living by the conventions of society. Beyond conventional identities, Loevinger and Cook-Greuter noted that one can grow to post-conventional identities. In these identities, people develop the ability to be aware of broad realms of thought and experience that allow one to engage in meta-cognition and even question the concept of “identity” itself (these stages were labeled Pluralist, Strategist, Magician and Unitive). Others researchers built on Loevinger’s theory of development as a foundation to explore the ego and have identified later stages not originally identified by Loevinger. Miller and Cook-Greuter (1994) developed a hierarchical four-tier model of development that corresponded with Loevinger’s ego state model. Their tiers illustrated larger categories, each of which held some of Loevinger’s stages. The model identified these tiers and how individuals become progressively more complex through rational awareness and representational thought as well as percentages of the population thought to identify in each tier (Miller & Cook-Greuter, 1994). Table 1.2 illustrates these tiers and their corresponding percentages of the population.

Table 1.2

Four Tiers of Ego Identity and % of Population Testing at Each

Tier	Label	% of Population Estimated to Identify at Tier
1	Pre-Conventional Ego Stages	Approximately 10%
2	Conventional Ego Stages	Approximately 80%
3	Early Post-Conventional Ego Stages	Approximately 9%
4	Ego Transcendent Stages	Less than 1%

The tiers begin with pre-conventional levels where one is not aware or does not care about the conventions of society. Next are the Conventional tiers where one identifies with the conventions of society. Most people identify in this tier. Finally, the tiers go to Post-conventional levels (also known as Post-formal) where one is aware of society's conventions and realizes that sometimes one must think beyond those conventions. Cook-Greuter (1999) postulated that it was possible to reach Post-post-conventional or Ego-Transcendent levels where one is more likely to identify with the field of awareness than things that arise in the field of awareness.

Pre-conventional identity begins during infancy as we “start our life journey as undifferentiated newborns, unconsciously fused with our surround” (p. 229). Cook-Greuter (2000) explained that if all goes well we grow through maturation and

socialization into conventional identities. Of course, some people never quite make it to a conventional identity and exhibit what in psychology are considered antisocial tendencies or they are able to channel their self-centeredness into socially tolerated or encouraged things (examples include reckless financial investing/trading, working as a mercenary). Most individuals (approximately 80% of the population) remain identifying in the second Conventional tier.

As individuals move through later stages they can experience a loss of self-agency and experience guilt about the responsibility to fulfil “their unique human promise” creating the basis for depression (Cook-Greuter, 1999; Cook-Greuter & Gafni, 2011, p. 168). In addition, they can feel as though all things are possible yet feel a sense of emptiness that can lead to anxiety. Cook-Greuter and Gafni (2011) discussed this occurring in the post-conventional ego stages where people have a desire to find truth through experience and question beliefs all the while trying to authenticate identity. It is a complex undertaking compounded by the fact that there are few people around them who can identify with what they are experiencing.

Before summarizing the purpose of this study, it is important to understand one final element of Loevinger’s theory. As she was building the theory, she discovered in many cases new stages, between stages she had already confirmed. A pattern emerged and she described these newly discovered stages as transitional stages. In her numbered scheme these are denoted by placing a slash between the number representing the previous stage and the number representing the next stage (for example 2/3 comes after 2, but before 3. 3/4 comes after 3 but before 4). She later confirmed that these were stages

of differentiation. Transitional stages are marked by the individual emerging from a shared worldview (like Diplomat or Achiever) and focusing on their differences from that stage while looking forward to re-enter the world with this new awareness.

Transitional stages are marked by a newly exercised independence as well as distress because of the loss of connections left behind. Regarding the labels used in this study the transitional stages are Opportunist, Expert, Pluralist, and Magician. People at single-numbered stages, called stable stages, (Impulsive, Diplomat, Achiever, Strategist) are generally more balanced because they are in harmony with a community and worldview to which they connect in ways that fits their cognitive, emotional and transactional needs (Cook-Greuter, 2005). This is important to note due to trend-level findings in this study that suggested people at transitional stages may experience different psychological symptoms than those at stable stages (even though it was not a hypothesis of this study).

Purpose of the Study

As the literature described has indicated, the majority of adults tend to operate in the Conventional tiers of development. While Loevinger's and Cook-Greuter's stages have been supported in research, little research exists as to whether people at different levels of ego identity experience different psychological symptoms or show different levels of self-esteem (Loevinger, 1987). This study examined what psychological symptoms people at different levels of ego identity endorsed and how they reported self-esteem. The researcher's expectation was that results would confirm different types of symptoms and different levels of self-esteem were endorsed at different levels of

development. It was hoped that these differences would help us more effectively serve the clients we work with in therapy.

CHAPTER II

LITERATURE REVIEW

Loevinger's Theory of Ego Development

Loevinger (1987) identified her theory of ego development under a broader type of theory called cognitive developmentalism. She included in this broader category the cognitive theory of Piaget (1937/1952), the developmental theories of Kohlberg (1984) and Gilligan (1982), the Defining Issues test of Rest (1979), and the developmental theory of Perry (1968). She later added Kegan's (1982b, 1994) Orders of Consciousness theory to the list of cognitive developmentalist theories (Loevinger, 1989). All these theories study how individuals grow and change across the lifespan and how their growth changes how they perceive themselves and others as well as how they understand and interact in relationships. Ideally, such development increases self and interpersonal awareness, psychological flexibility, increases psychological mindedness, and increases skills to interact with the environment. Additionally, it is ideal if responsibility, personal autonomy and cognitive complexity are enhanced, while defensiveness and intolerance for difference are decreased (Cook-Greuter, 2004). Loevinger (1976) developed a

framework for how meaning is constructed by individuals throughout the lifespan. The theory is a stage theory, and includes eight stages organized into three tiers. The tiers, stages and how others have translated or built on them are all represented in Table 1.1

Tier I in Loevinger's Theory: The Pre-Conventional Stages

In the first tier, Pre-conventional, Loevinger originally identified four stages: Prosocial, Symbiotic, Impulsive and Self-protective (hereafter referred to as Opportunist - the label Cook-Greuter used and the label used in this study). The first two stages are more about the infant differentiating physically from the caregivers and the environment. Psychological awareness begins in rudimentary form in the third stage, the Impulsive stage. For these reasons, most other theorists do not include Prosocial or Symbiotic in their theories or inventories. The Impulsive stage includes manifestations that are (as one might expect) Impulsive in nature like aggression. Opportunist, the final pre-conventional stage and the first significant transitional stage, includes beginning to learn self-control but still tending to externalize blame. This identity is developmentally normal in young children but usually a liability as one ages.

Tier II in Loevinger's Theory: The Conventional Stages

In the second Conventional tier, there are three stages identified: Diplomat, Expert and Achiever (again these and other labels throughout the study are the ones used by Cook-Greuter, 1999). Individuals in the Diplomat stage (a single-numbered "stable" stage) have a tendency for conceptual simplicity and continue to externalize, resulting often in very black and white thought processes. It is important to recall though, each "stable" stage provides a shared worldview and these can range from concrete as in the

Diplomat stage, to quite complex as in the Strategist stage. As opposed to the Opportunist who sees things in terms of “me against the world,” the Diplomat expands her identity to a group, which causes the significant shift in thinking from “*me* against the world” to “*us* against the world.” In identifying with a group, the Diplomat also learns morals and how to treat others based on how the group defines these things. The Diplomat identity is far more invested in group approval than forging ahead alone to refine their sense of individuality. At the Expert level of identity (the second transitional level) people have an emergent self-awareness about how they differ from the groups they previously identified with. So at this transitional stage, they leave behind the comfort of the shared Diplomat worldview but relish their developing uniqueness expressed in insight into others’ perceptions and refining particular skill sets. Experts can develop formal operational thinking, but their approach to things tends to be tactical (short-term). In differentiating an individual identity, they can be self-critical but more often are overly harsh in their criticism of others. At the Expert stage the individual is excited enough about her developing identity to risk losing the comfort of the shared worldview of her previous group.

The fifth stage (third conventional stage and third “stable” stage), is the Achiever. This stage brings with it conceptual complexity, greater empathy and the ability for strategic planning. The Achiever is also far more likely to value thinking for herself than relying on the norms of the group. It is at the Achiever stage where the individual focuses identity more exclusively in the individual self than any group the individual identifies with. At the Achiever stage, rational thinking is valued more than group approval or

social norms. The Achiever shared worldview is one valuing rational approaches, “winning” whatever the game is, and rather than taking anything on faith, thinking for one’s self. Although cultural differences exist, the SCTi database contains thousands of protocols from multiple cultures including cultures that value collectivism. These stage characteristics hold up across individualist and collectivist cultures represented in the database (although in many cultures the stems of the sentence completion test must be altered so they evoke the culturally appropriate image). While the Achiever understands the role of context, she sees it as a cognitive understanding but does not yet know that it can be foundational to her experience of the world. As an example, she can look at a gestalt visual illusion (e.g. a picture that appears as either a young woman or a skull – see figure 2.1) and she cognitively understands “yes, I get it – you can look at it two ways and see two different images.” What she does not yet understand are the implications this has for thinking and perspective taking – that different people with different perspectives actually are experiencing different things. This understanding comes at the next stage.

Tier III in Loevinger’s Theory: The Early Post-Conventional Stages

The third tier, Post-Conventional includes the four final stages Pluralist, Strategist, Magician and Unitive. The Pluralist stage brings with it the aforementioned perspective-taking ability where multiple perspectives are not just valued but also actively sought out and understood as context. The Pluralist stage is a transitional stage leaving behind the comfort of the Achiever’s rational thinking worldview and risking the relativism that comes with the ability to take and equally value multiple perspectives. The Pluralist places a high value on relationships, as they are the source of so many different

perspectives. Ironically, though, she also has an increased sense of individuality. Whereas the Achiever completing a sentence completion test will usually write succinct one sentence responses to the stems (“Raising a family...*is challenging but rewarding when done right*”) the Pluralist revels in her inner experience often using multiple sentences to complete it (“Raising a family ...*is an important choice for couples and single people. My own experience was growing up with two loving mothers and it was years before I realized this was not the norm. I am so grateful for the family experience I have*”). Where the Achiever has a cognitive understanding of context the Pluralist experiences it more richly and can more readily *take* other perspectives and allow those to change her own perspective. At the Pluralist stage, the person realizes that context can change everything so there is more flexibility in taking other peoples’ perspectives as well as determining meaning of events. One of the pitfalls of the Pluralist stage though, is interpreting multiple perspectives to nihilistic conclusions (e.g. “if every perspective is as important as every other, how can one choose?”). This is resolved at the next stage where the nihilistic conclusion is seen for what it is – a contradiction (if you believe any stance is just as good as any other, that in and of itself, is a stance).

The next post-conventional stage, the Strategist, builds upon individuality and perspective taking by learning to cope with internal conflict, overcome the relativism that can overwhelm people in the Pluralist stage, and seeing relationships as systemic in nature. The Strategist is the next “stable” stage where the worldview is, as the name implies, strategic or long term in its view. At this stage one is more likely to think in broader, deeper terms than the Pluralist. For example, whereas a Pluralist planning a

psychology conference may focus on representing previously under-represented people to empower them, a Strategist will do that *plus* think about “big picture,” universal concerns (for example how profits can be used to decrease the “carbon footprint” of everyone travelling to the conference).

The Strategist is less paralyzed by context than the Pluralist is. As noted, the Pluralist can fall into a cynical, nihilistic state of mind about life. The Strategist understands the reality of multiple perspectives and contexts *and* at the same time, can make decisions with the information at hand, rather than feeling it is imperative to honor all perspectives over executing a course of action. Strategists are also said to be problem *finders* not just problem *solvers*. They show a greater tolerance for difference and more deeply understand the social construction of “reality.” The Strategist has a solid sense of identity that they only begin to question at the Magician stage.

Tier IV in Loevinger’s Theory: The Ego Transcendent Stages

At the Magician stage (the last transitional stage), people begin to make their own sense of identity an object of awareness. This takes some effort to think through or describe in written language. From a conventional and early post-conventional perspective, our sense of self is a given dwelling in the field of awareness. We awake and experience ourselves *in* a field of awareness. We awake relatively the same person who went to sleep. At the Magician stage, this identity arising in the field of awareness undulates with identifying *with* the field of awareness that all things arise in. It has been said to be akin to identifying with the light rather than the bulb which is a vehicle for

light (Campbell, 1988). This experience is one of feeling rooted in an identity at one moment and in the next moment feeling rootless, spacious and some say infinite.

This shifting between a specific, isolated ego identity and an identity with universal awareness was described by a Sioux Indian named Black Elk. In a shamanic initiation he reported a vision where he saw the sacred manner of the world. He stated “I saw myself on the central mountain of the world, the highest place, and I had a vision because I was seeing in the sacred manner of the world...and the central, sacred mountain was Harney Peak in South Dakota...But the central mountain is everywhere” (Neihardt, 1988, p. 89). Here Black Elk is standing locally on Harney Peak having a sacred experience so Harney Peak becomes the central, sacred mountain of his tradition but he is quick to add that the central mountain is wherever a person seeing in the sacred manner is standing. The universal becomes and even transforms the local. Similarly, the Magician has a sense of self that is a local marker, but the self is also a universal awareness – the very field of awareness of all selves.

As can be imagined, this identity transition can be distressing for some – especially those whose local culture has no constructs for supporting such experiences. Having left the stable worldview of the Strategist, Magicians can struggle to understand if the field of awareness is an ontological reality or some “trick” their brains learn to play to give a sense of spaciousness [what Sterba (1934) called the Observing Ego]. Magicians have a strong conscious awareness of their meaning-making process and often are often attracted to spiritual systems of study to learn about large, existential questions. They can

blend opposites and see that you cannot have “light” without “dark” and that both are necessary (like in many M.C. Escher engravings such as figure 2.2).

Most important, Magicians can revel in ambiguity and so they often seek work where there may be no fast or easy answers to problems. They are aware that we are continually telling ourselves stories and struggle with the question of ultimately, who he storyteller is. This and other questions may be resolved at the last identified stage, Unitive.

If using language is difficult in describing the plight of the Magician, it is even more inadequate to describe the resolution to that plight experienced in the Unitive stage. This is Cook-Greuter’s latest and last stage. It is hard to say it is a “stable” stage because the rare few who experience it would seem to have transcended making meaning through stability and transitions. In the Unitive stage, the tension between a separate self that seems to arise in the field of awareness and the field of awareness within which all things arise is resolved and approaches to some extent what Maslow (1962) referred to as self-actualization. The Unitive experience is an entirely new way of perceiving human existence and consciousness. It is, for lack of better words, a universal or cosmic perspective. Unitive people “... experience themselves and others as part of ongoing humanity, embedded in the creative ground, fulfilling the destiny of evolution” (Cook-Greuter, 2005, p. 48). This level of development is rare (less than 1% of the population (Cook-Greuter, 2011)).

At the Unitive stage, the ego is no longer the driver for what people do. They have little to defend and much to observe, absorb, and appreciate. In general, they are not interested in highly complex explanations and approaches, do not seek titles or honors though can graciously accept them if bestowed (Cook-Greuter, 2006). Most people at the Unitive stage practice some spiritual discipline like meditation or contemplation and aim to develop wisdom, mercy and right action. Cook-Greuter (2006) has stated there may be more levels beyond Unitive but they are so subtle, and so unlike anything we would call “ego,” that a sentence completion test will not be able to distinguish them.

Kegan’s Orders of Consciousness

Robert Kegan (1979) proposed a cognitive developmentalist framework to describe the process of personality or ego development. He suggested that what lies at the heart of development is an evolution of meaning making that involves three key processes. They are:

- 1) The first process is the process of development itself. This theory insists that development is an active process one engages in rather than a passive thing that “happens” to one.
- 2) Second is the process of subject-object differentiation which becomes increasingly complex. “Subject” is what we cannot perceive because we are embedded in it. We have little control over it and cannot reflect on it. “Object” is literally those aspects of “subject” that we have successfully made an object of psychological awareness (Kegan, 1982a, 1982b). In psychotherapy, what should

be owned as “object” can be denied and made “other” (as in “you make me angry”). The therapeutic goal is then to re-own what is other. This is as old as Freud’s summary of psychoanalysis (“where *it* was *I* shall be.” Freud did not use the words “id” or “ego” but rather “it” (*das es*) and “I” (*das ich*).

- 3) Stage Processes: The subject-object differentiations mark off at least five stages characterized by increasingly complex subject-object differentiations. The stages are supported by what Wood, Bruner & Ross (1976) called scaffolding. This is the way children build on (and are supported by) what they already know. In Loevinger’s theory, this would similar to transitioning stages that then move to stable stages.

Orders of consciousness refer to how we construct experience (Kegan, 1994) including how we think, feel and relate to others. Similar to Loevinger’s ego development, Kegan’s (1979) theory described development across many psychological processes involved in differentiating between what we experience as “self” and what we experience as “other.” This involves more “transformation” which is changing the form of the meaning-making system. We may add new information to the things we know but transformation changes the way we know. As Kegan (1980) wrote “...a given system of meaning organizes our thinking, feeling and acting over a wide range of human functioning” (p. 374).

Kegan’s Truces and Stages

Kegan’s (1982) Orders theory begins with six evolutionary balances or truces. He describes these as six levels of subject-object relations. Similar to James Mark Baldwin,

Kegan's work is characterized by idiosyncratic vocabulary that can complicate the main points. He initially described development as a series of "evolutionary truces" or balances between what is "self" and what is "other" (Kegan, 1982). These truces take shape in a holding environment similar to that described by Winnicott (1973) which Kegan (1982) described as our "cultures of embeddedness." With regard to these cultures, he wrote we can either let go of, hold onto, or choose to stay for reintegration.

Similar to Loewinger's theory, in the earliest levels of Kegan's theory there is not really a concept of "self" and these levels only serve as the foundation for the self to begin developing. To represent these truces, he began nominally labeling the first level (Incorporative) as "0." In the Incorporative level, an infant experiences reflexes as subject and has yet to make even her physical relation to caregivers an object of awareness. This corresponds to Piaget's Sensorimotor stage and the culture of embeddedness is that of one's primary caregivers.

The second level (nominally labeled "1") is the Impulsive level. Here the subject is one's impulses and perceptions while the reflexes of the earlier Incorporative level are now objects of awareness. This corresponds to Piaget's Preoperational stage. The culture of embeddedness at the Impulsive level is the family. The third level (labeled "2") is the Imperial level. Here the subjects are one's needs, wishes and dispositions. What becomes object are the impulses and perceptions of the Impulsive level. The culture of embeddedness at the Imperial level is the role-recognizing culture including family, school and institutions of authority. Role-taking play occurs in the peer-group which serves as a culture of embeddedness at the Imperial stage. The fourth level (labeled "3")

is the Interpersonal level where mutuality becomes what is subject to one and the self-centered needs of the Imperial level (sometimes called the “terrible twos”) become objects of awareness. In the Interpersonal level the culture of embeddedness is reciprocal one-to-one relationships that the subject is learning to navigate.

In the fifth level (labeled “4”) is the Institutional stage what is subject is personal autonomy and one’s identity. What is object being the mutuality and reciprocal interpersonal interactions of the previous level. The culture of embeddedness at the Institutional stage is the idea of identity as self-authored and admission to the public arena be this personal or professional. The final and sixth level (labeled “5”) is the Inter-individual level where subject includes interpenetration of system and what is object is the personal autonomy and identity of the previous level. The culture of embeddedness is one of intimacy (love and work) and genuine loving adult relationships.

Kegan’s Orders of Consciousness

From this foundational work, Kegan (1994) focused on what he called “Orders of Consciousness.” He wrote that he used the word “orders” to represent something more multi-dimensional than stages or levels. This is one of the important assumptions of the theory in that the orders are not like “steps” one climbs in a stage theory but in this theory each order “goes meta” (Kegan, 1994, p.34) on the previous stage. This means that each order transcends and includes the previous orders. Kegan and Lahey (2001; 2009) even suggest that each order has its own language and that one can learn which order another identifies with by evaluating the language they use. They developed this into an interview

format that people can be trained to use called The Subject-Object Interview (Lahey, et al. 2011). Following is a summary of Kegan's five orders of consciousness.

First Order

The first order [sometimes called Impulsive (Eriksen, 2006)] ranges from birth to around ages 7-8. The child does not have any abstract thinking ability in this order and meaning is very egocentric and fantasy filled. Children at the first order can recognize objects as separate from self but the objects are subjected to changes in the child's perception – e.g. if the child's perception of an object changes the child believes the object changes.

Second Order

The second order ranges age-wise from late childhood through adolescence or early adulthood. In this order individuals make meaning by creating lasting classifications called "durable categories" (Love & Guthrie, 1999, p. 69) in which people, objects and desires have lasting properties of their own that the individual uses to distinguish "them" from "me" (or "objects" from "subject"). At this order, people begin to classify themselves as for example, people who like sports. In addition, individuals develop the capacity to "take the role of another" Individuals at this order are still more concerned with their own affairs than their membership in a larger community.

Third Order

Between the ages of 12 and 20 people transition from the 2nd to the 3rd order. This may occur in adolescence but for many it may not occur until young adulthood. In the third order individuals develop the ability to think abstractly, become more

psychologically minded, become more focused on relationships and subordinate their own interests to some greater good. The characteristic ability in the third order is experiencing self in relation to others. People at this order do not just think about what is happening to them but also what the ramifications are of their actions on others. In addition to creating one's own viewpoint, individuals recognize that other people are equally creating their own viewpoints. Similar to the Pluralist of Loevinger's theory, the third order identity is very adept at taking others' perspectives.

Fourth Order

Kegan (1994) labeled the fourth order of consciousness "cross-categorical thinking" (p. 94) characterized by an individual's ability to construct generalizations across abstractions. This allows an individual to stand outside of their own value system to form an even deeper, broader set of convictions. In this order, they can subordinate one of their ideals to a larger ideology that can regulate the ideal. In clinical settings this can be illustrated in assessing how to apply the "first do no harm" ethical imperative. While a therapist may know there is no support for the idea that mental illness is caused by a chemical imbalance in the brain (Ingersoll & Rak, 2016), clients may use that idea to encourage themselves to continue taking medications that have some unpleasant side effects but beneficial main effects. In Kegan's theory, many adults never make the transition to the fourth order.

Fifth Order

The fifth and final order in Kegan's theory of consciousness is thought to be rare (akin to Loevinger's Magicians and Unitives). Kegan (1994) claims no one ever reaches

this order prior to age 40. Here the person actually moves from subject-object to seeing self and other as incomplete until we meet in relationship. Seeing self or other as only separate is a partial view at this level. This order points to the importance of being able to share intimately with others. At this order, individuals use a perspective of “multipleness” where sharing and interacting facilitate the further emergence of each self. Similar to Loevinger’s and Cook-Greuter’s Magician stage, at the fifth order of consciousness the concept of self becomes suspect and one as likely to identify with others and the field of awareness they arise in as they are an individual in that field. Similar to the Magician this order can bring a sense of losing one’s balance and requires incredible flexibility with boundaries.

Alexander’s Vedic Model

Another theory that tries to present a developmental map of human growth is Alexander’s (1990) Vedic model. Alexander’s model is not concerned with the full spectrum of human identity development but the shift from personal (or “conventional”) to transpersonal (or “post-conventional”). He discussed a shift from personal to the transpersonal, developing from verbal to a more post-symbolic processing as we move into adulthood. This model is different and more speculative in that Alexander referred to it as a Vedic or top-down model, rather than a linear stage model or bottom-up developmental stage model as postulated by previously discussed theories. The “Vedic” label refers to the period 1500-500 BCE in Indian history when the Vedic scriptures (Vedas) were written. “Veda” is Sanskrit for “knowledge” and the Vedic scriptures are considered by Hindus to be “apauruseya” or “not of human origin, impersonal.” In this

sense, Alexander's theory is akin to the Divine reaching "down" into humanity and lifting us up into growth and development. The model that is suggested by Alexander aligns with previous theories by discussing how progression to more mature stages of cognitive development occurs through improvement of integration or "capacities of knowing" (Nidich, Nidich & Alexander, 2000) though he uses the term "levels of mind" for his stage model (Alexander, Davies, Dixon, Dillbeck, Druker, Oetzel, Muelman, & Orme-Johnson, 1990). Though some of the ideas are specific to the Vedic model (Maharishi, 1972), he discusses the idea of adult progression based on ability for integration of cognition and emotional experience as similar to the post-conventional stages of Loevinger's ego identity.

Validity and Reliability for Loevinger's Theory of Ego Development

Ravinder (1986) explored the universality of ego development, and supported Loevinger's claims that the theory of is not limited by cultural boundaries. Loevinger's initial version of The Washington University Sentence Completion Test (WUSCT) was administered to 171 Australian and 110 Indian post-secondary students. Results indicated that the instrument did not need alteration to be relevant in these cultures. Additionally, as previously found in Loevinger's own research (1979), there is support for the prediction that differences in ego development levels are positively correlated with socio-economic groups. Other early research demonstrates support for the use of the test in cultures outside that of the United States such as Canada (Sullivan, McCullough & Stager, 1970), Curacao (Lasker & Strodbeck, 1975) and Israel (Snarey & Blasi, 1980). Some criticism of cross-cultural utilization of the SCT includes agreement that although

ego development structures may be universal, the content of the stems in the test must be somewhat altered so that they may be more culturally relevant (Snarey & Blasi, 1980).

Ego development is related to individuals' ability to adapt to their environments in a variety of ways, including adjustment to life change (Bursik, 1991) and adaptability in relationships (Zilbermann, 1984). Other studies indicate positive correlations between ego development and career success (Vaillant and McCullough, 1987), specifically advantages for management and leadership due to greater ability to adapt characteristic of later stages (Barker and Torbert, 2011; King and Roberts, 1992). These advantages are also described in detail by Vincent, Ward, and Denson (2013) who utilized Australian leadership program participants to explore the effects of personality on ego development. Although personality (in this case assessed using the five-factor model) may be a modifier when considering an individual's capacity to move through the stages. In their case high scores on "Openness" were correlated with great growth. Further support comes from in Chandler, Alexander and Heaton's 2005 study utilizing Transcendental Meditation over ten years for 136 subjects. In this study, ego development was measured then compared controls to a Transcendental Meditation (TM) practice. Over a ten-year period, subjects practicing TM showed significantly more growth in ego development (measured by Hy and Loevinger's WUSCT) than matched controls. Considering Vincent, Ward and Denson's 2013 data that correlated ego development growth with high Openness scores on the five-factor model, it may be that a personality variable influenced some subjects' willingness to engage in a 10-year meditation practice.

Sentence Completion Test

Since Loevinger's sentence completion test is integral to testing her theory, it is discussed here in chapter 2 as well as chapter 3. Loevinger (1970) developed the Washington University Sentence Completion Test (WUSCT) as a measure to assess ego development. The semi-structured projective test consists of 36 brief sentence stems that individuals are required to complete (for example "Raising a family..."). Each response is rated and matched to an ego level for each of the 36 items. The rater then calculates ogives (cumulative frequency graphs) with a copyrighted program. Finally, the rater re-reads the entire protocol and assigns a Total Protocol Rating (for example "4/5 Pluralist"). Raters assign ratings working with a manual with hundreds of categories and examples for each of the 36 rated responses. The earlier the response, the more likely the rater is to find an exact match. The later the response the more unique it is. In this case raters analyze the content of the response and use rules for analyzing the structure. Rater rules are summarized in Table 2.1:

Table 2.1

Rater Rules for Rating Responses

Rule Number	Rule
Rule 1	Match the content of the completion with one of the listed categories in the manual
Rule 2	Where the combination of two or more elements in a compound response generates a higher level of conceptual complexity, rate the response one level later.
Rule 3	Where the combination of two or more elements in a compound response does not generate a higher level of conceptual complexity, rate the response at the earlier level.
Rule 4	In the case of a meaningful response where there is no appropriate category and Rules 2 and 3 do not apply, use the general theory to arrive at a rating. Keep a log of such responses so we can perhaps build a category later.

Rule 5	Where the response is omitted, illegible or too strange to make sense of, rate it at Level 3 (Diplomat), rule 5. 3 functions as the mean in this case.
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(Ravinder, 1986). Loevinger and Wessler (1970) as well as Hy and Loevinger (1998) provide a set of graduated exercises for those training to score SCT's, as well as a scoring manual. Cook-Greuter and Associates have their own manual that builds on Hy and Loevinger's (1998). Cook-Greuter undertook this research with the permission of Loevinger [although Loevinger, ever the materialist, told Cook-Greuter "just leave my name off of the new manual if you refer to that spirituality stuff" (Cook-Greuter, personal communication, 2015)].

Cook-Greuter's 1999 study that confirmed the existence of two later post-conventional levels also resulted in rules for those levels. Because the responses tend to be so unique, categories are applicable but must be able to work around the uniqueness and complexity of responses (for example "Raising a family...is like tending a pot of delicious stew in which you are one of the ingredients"). These categories grew out of analyzing actual responses from these stages and represent common themes. Table 2.2 summarizes these additional categories for analyzing responses at the Magician or Unitive levels.

Table 2.2

Categories for Analyzing Responses at the Magician or Unitive Level

Ego Development Level	Category
Magician	1: complex matrix of content (panoramic, telescoping view, not merely linear lists)
Magician	2: Exploration and evaluation of habits of the heart – thinking about one’s feelings and how one feels about one’s feelings. Includes recognition of the multi-layered, complex, intrapsychic, interpersonal and group mind dynamics.
Magician	3: Exploration of habits of the mind – thinking about one’s thinking. Observes and evaluates own thoughts with distance.
Magician	4: Reference to the constructed nature of reality and the limits of language to express what is really going on.
Unitive	1: Wide range of thoughts on human relationships (self not the center) with unique positive affect and gratitude for people as they are

Unitive	2: Expression of high tolerance, acceptance of self and world “as is” – openness to life, comfort with ambiguity, and appreciation of “shadow side” of life
Unitive	3: Expression of sense of universal connectedness and all-encompassing embrace; self as part of a larger world, larger process.
Unitive	4: Fundamental thoughts and feelings about the human condition including the wonder of being, creation and destruction, joy and suffering, global concerns
Unitive	5: Shifting effortlessly between proximate and distal, the mundane and sublime, the somber and the ridiculous, now and eternity, between different states of consciousness with attachment to none.

Loevinger (1979) stated that the rationale for the SCT is that ego development reflects a person’s frame of reference and an unstructured test that gathers information about that frame of reference is appropriate. Loevinger (1979; 1998) provides support for

the psychometric simplicity of the SCT by explaining that having 36 discrete answers with partially restricted domains allows the test to be less complex than other projective tests (like Kegan' subject-object interview) and require less interpretation from the scorer.

Cross-Cultural Studies of the SCT

Ravinder (1986) studied Loevinger's model and method in cross-cultural contexts by administering the SCT to 171 Australian and 110 Indian students. Results from this study found some support for the universality of the ego development model indicated by Loevinger (1976), though indicated the need for continued research. Her ability to recognize varied responses was congruent with responses subjects provided in the study, and these were also reflected in the scoring manual (Ravinder, 1986). Sociocultural differences were present as hypothesized by the model, and findings from this study were supportive of Loevinger's (1979) prediction that differences ego development levels will tend to favor higher socio-economic groups. Conversely, Snarey and Blasi's (1980) study of Israeli responses encouraged small changes to the SCT due to differences in sociocultural systems. Support continues for the universality of the theory with the awareness that modal state of ego development can vary slightly depending on the subject sample (Ravinder, 1986). Support for the ability of the SCT to measure ego development across cultures is important for the current study. Providing accurate representations of the individuals assessed despite culture differences that might be present in the sample will help to validate the universality of the theory and allow future research that may expand upon the current data.

Rootes, et. al (1980) collected data to determine the validity of sociometrically evaluated maturity using the WUSCT and found that there is a modest significant relationship between overall maturity as it was identified by peers and the outcomes for the subjects on the test. These data indicate additional support for the construct of ego development as measurable, and an effective psychometric to identify level or stage.

Mental Health and Ego Development

Ego development and personality characteristics may be connected to mental health. Understanding how level of ego development may be connected to the experience of mental health symptoms can help us treat clients suffering from symptoms and may inform further maintenance of a healthy self. Meng, Li, Loerbroks, Wu and Chen (2013) discuss the ability to cope and problem solve as well as the desire to socially compete as they correlate to depression and suicidal ideation. Although this work is not directly reflective of ego development theory, the subjects in the study were college students who face similar stressors to the sample from the current study. The authors provided some insight into the experience students have, and may inform further understanding of students when looking at outcomes in this study.

It is important to note that the authors reported cultural differences regarding the severity of depressive and suicidal difficulties. Meng, et. al (2013) utilized the SCL-90-R to measure depressive symptoms in students in China. These authors discuss the correlation between depression and suicidal ideation, noting that this correlation is present even in those students who lack a psychiatric diagnosis. Understanding student levels of development and functioning as they relate to psychological distress may help

build insight to how these individuals cope with depression, anxiety or other states that affect functioning.

Ego Development and Psychopathology

There are a few older studies that explored correlations between ego identity and psychopathology but the results are mixed. Vincent and Vincent (1979) found that when comparing scores on Loevinger's WUSCT and the Minnesota Multiphasic Personality Inventory (MMPI), ego development scores were lower (earlier¹) in patient samples than in the WUSCT manual sample and character-disordered patients scored lower (earlier) on the WUSCT than other patient groups. Waugh and McCaulley (1981) replicated this study with improvements in the design and concluded ego development was *not* meaningfully predictive of psychopathology. Conversely, Vincent and Castillo (1984) found that the majority of people in their sample diagnosed with Anti-Social, Narcissistic, Histrionic or Borderline personality disorders, scored at pre-conventional levels of ego identity (e.g. Opportunist) thus suggesting ego development may be predictive of certain types of psychopathology at earlier stages of ego development.

Newer longitudinal data demonstrate that ego development may impact symptoms. Syed & Seiffge-Krenke (2015) examined ego development, coping behaviors and whether those were correlated with symptom reduction over time. In a 10-year longitudinal study, they found that adolescents who had rapid increases in ego identity

¹ The testing community that uses ego development tests avoids use of "higher" and "lower" in reference to ego levels because of the pejorative connotation of "lower." This spatial metaphor is not accurate since the stages really refer to "later" or "earlier." Since much of the literature uses "higher" and "lower" that is what I will use until the results section.

that leveled off in adulthood, had more psychological symptoms than those who had slower, steadier growth in ego identity. So here it is not particularly ego identity, but the pace at which it proceeds that is correlated with symptoms.

Psychopathology has been connected with ego development in specific clinical populations where significant relationships were identified (Suchman, McMahon, DeCoste, Castiglioni, & Luthor, (2008). Suchman et. al (2008) studied 182 women who struggled with opioid addiction and found a significant relationship between ego development level and level of psychological symptoms. Their sample was confounded with the fact that many of the subjects were still experiencing withdrawal which can exacerbate any psychological symptoms. Noam, Young and Jilnina (2006) wrote that though individuals at all stages of ego development may experience differing levels of psychological distress, the manner in which symptoms are expressed may differ depending on identified ego stage. This is one thing the results of this study suggest is worth further research.

Mental Health, Sense of Purpose, Coherence, Self-Efficacy and Self-Esteem

Having purpose, feeling that one's life has purpose, and being hopeful about life are important factors in mental health (Yalom, 1980; Frankl, 1997; Feldman & Snyder, 2005). Bonab, Lavasani, and Rahimi (2007) found that having purpose is correlated with psychological symptoms. They collected data from 563 Iranian college students. In Bonab's study, the SCL-90-R was used to study symptoms. The results suggested that the greater one's sense of purpose, the few psychological symptoms one endorsed. This meaning making may be related to ego development. Cohn and Westenberg (2004)

explain that as the ego develops, it gains greater ability for complex meaning making as well as healthy interpersonal relations, skill mastery and integration across life domains. Thus, it would seem logical to suggest that the later one's ego identity, the more efficiently one could make meaning and that this meaning may serve as a defense against psychological symptoms.

When exploring psychological symptoms or psychopathology, it is helpful to identify what is considered healthy for individuals. One construct initially called salutogenesis, is now more often referred to as resilience (Antonovsky, 1987; Antonovsky, McCubbin, Thompson, Thompson and Fromer, 1998). Resilience as a construct, similar to coherence, that outlines a worldview in which one's outlook of their environment is predictable and constant and where one can manage with the resources they possess. This leads to what others call self-efficacy - an approach to life with a sense that one can meet the challenges life brings and succeed in getting what one wants in life.

Self-efficacy has been considered a factor that helps to moderate symptoms of depression and other negative health aspects (Kröninger-Jungaberle & Grevenstein, 2013; Kadden & Litt, 2011; Walker, Neighbors, Rodriguez, Stephens & Roffman, 2011; Sheilds, Spink & Odnokon, 2010; Tate, Wu, Cummins, Shriver, Krenek & Brown, 2008). It has been defined by Bandura (1997) as the belief one can succeed in a situation, and therefore impacts the manner in which one might approach aspects and challenges of a situation.

This construct of coherence is comprised of three things: the sense that life makes sense (is comprehensible), that life is manageable (similar to self-efficacy) and that life

has meaning or purpose. In this sense, coherence would seem to correlate more with Loevinger's stable stages rather than transitional stages but this hypothesis was not tested. Nonetheless, if coherence is an experience people have in the "stable" ego development stages, perhaps disrupting that coherence is related to specific symptoms that differ in the so-called "transitional" stages.

In a longitudinal study of 318 participants, Kröniger-Jungaberle and Grevenstein (2013) found that sense of coherence appears as a personality trait that underlies emotional stability and is inverse to the five-factor trait of neuroticism. The authors consider this a protective factor when addressing mental health symptoms such as anxiety or depression, and find sense of coherence to be very highly correlated with self-efficacy. Similar results were found for self-efficacy, again indicating that these positive attributes are protective for individuals and are negatively correlated with psychological symptoms (Kröniger-Jungaberle & Grevenstein, 2013). If meaning making is directly related to ego development, perhaps later ego identity may also serve as a protective factor against psychological symptoms.

Somewhat different from Self-efficacy, the construct of self-esteem evaluates one's general psychological well-being (Sánchez & Barron, 2003). This relates to the respect and value one allows for oneself. Morris Rosenberg (1965) who developed a well-known measure for self-esteem, defines the construct as one's overall sense of worth as an individual. Self-esteem has been shown to increase as we move from our 20's to our 30's, suggesting higher self-reported levels in emerging and early adulthood (Kling, Hyde, Showers, & Buswell, 1999; Robins, Trzesniewski, Tracy, Gosling & Potter, 2002;

Galambos, Barker & Krahn, 2006). Galambos et. Al (2006) sampled 920 participants over a 7-year period to measure changes in self-esteem, anger and depressive symptoms. They found significant increases in self-esteem moving from age 18 to age 25. This study also indicates importance of social support because the more social support people had, the lower the reports of depression. So here, higher self-esteem seems correlated with fewer psychological symptoms. Self-esteem was included as part of this study because Maslow (1943) wrote that one's perception of self becomes more integrated as one matures and this can serve as a protection from psychological suffering. This is consistent with the studies described related to ego development. Following this theoretical assumption, obtaining data related to psychological symptoms, self-esteem and ego development I hoped to clarify what factors promoted mental health as people develop.

CHAPTER III
RESEARCH METHOD

Measures Used

Washington University Sentence Completion Test and Sentence Completion Test Integral (SCTi)

The Washington University Sentence Completion Test (WUSCT) and Sentence Completion Test Integral (SCTi) are considered to be semi projective measures of personality growth, and have been administered to more than 11,000 individuals and used in more than 300 studies. WUSCT is regarded as one of the "...most psychometrically sound measures of maturity and personality development", (Cohn & Westenber, 2004, p. 760). Translated into 11 or more languages the WUSCT has been used in various clinical and applied settings. Additionally, this measure has already been utilized in several hundred studies (Westenber, Blasi, & Cohn, 1998) and is considered an extensively validated technique for projective testing (Lilienfeld, Wood, & Garb, 2000). The Sentence Completion Test Integral (SCTi) version of the WUSCT is an amended version of the test further developed by Cook-Greuter (1999) was used for this study and took approximately 45 minutes to complete.

Pfaffenberger (2011) noted that the WUSCT and SCTi are unlike any other instruments available. They measure the normal range of personality functioning expressed as a developmental variable. It is assumed the test-takers project their own thoughts, feelings and worldview onto the sentence stems in their completions. Loevinger (1998) argued that these responses correlate with real-life data and that is important to validity because a test that only correlates with other tests may be of limited value. Loevinger (1994) was also merciless when criticizing factor-analysis to identify personality traits. She wrote that “There is no reason to believe the bedrock of personality is a set of orthogonal (independent) factors, unless you think that nature is constrained to present us a world of rows and columns” (p. 6). As noted, trained raters, using match-based manuals for each item, score the individual items and use a computer program to arrive at an initial total protocol rating score. This is based on an algorithm developed by Loevinger and advanced by Cook-Greuter that weights the responses (by level) according to how common they are in the norming population. Then the trained rater reviews the entire protocol again to arrive at a final Total Protocol Rating (TPR). This final review requires the rater to use their training and rules developed to discern which level a protocol should be assigned to if the score is on the boundary between two levels. This scoring process highlights the uniqueness of the test in that qualitative data are translated into quantitative developmental categories.

The Sentence Completion Test Integral (SCTi) and its predecessor the Washington University Sentence Completion Test (WUSCT) have undergone critical review for validity and reliability by a number of researchers over the past 30 years

(Blumentritt, Novy, Gaa & Lierman, 1996; Lorr & Manning, Manners & Durking, 2001; 1978; Ravinder, 1986); Redmore, 1976; Redmore & Walden, 1975; Rootes, Moras & Gordon, 1980; Waugh, 1981). The scoring system is designed to reliably assign a specific level of ego development based on the subject's responses to the 36-item test. The milestones connected to development stage have the "measurement advantage of being observable with good inter-rater agreement" (Rootes et. al, 1980). These authors found in a study addressing concerns for the reliability and validity of the SCT that there is a significant correlation between maturity judged by peers and general development as determined by outcomes on the test, but that the validity of the SCT may be less broad than Loevinger's theory indicates. Validity has previously been studied and reported by Loevinger and Wessler (1970) and Loevinger (1998). Loevinger (1979) wrote after a comprehensive literature review that "Overall, the test has adequate validity for research purposes when administered and scored with sufficient care" (p. 281) though requires additional data to support any individual diagnosis made. Since that time further reliability studies have increased the rigor of the test and algorithms and allowed the test to be used ethically in consulting settings (Barker & Torbert, 2011).

Novy and Frances (1992) did an extensive reliability study of the current form of the SCT and found the reliability (Cronbach's alpha) to be .91. Inter-rater agreement of the Total Protocol Rating (TPR) was .94. Waugh (1981) also found inter-rater reliability for the WUSCT and demonstrated "the WUSCT of ego development is generalizable across normal-clinical populations in terms of inter-rater reliability" and "internal consistency" (p. 486). His study consisted of archival records including completed SCT's

which were rated by three separate assessors. Waugh's (1981) study provides support for previous work completed by Loevinger and Wessler (1970) yielding similar results when exploring inter-rater reliability.

Issues about discriminant and convergent validity have also received attention. Discriminant validity is concerned with the uniqueness of the test and the construct it measures. Convergent validity is evidenced by strong correlations with other factor or test results. Loevinger (1998) noted that the SCT correlates with verbosity at about .31. Earlier responses tend to be shorter than later responses. Cook-Greuter (1999) demonstrated though that the correlation of verbosity with the SCT occurs between the stages of Achiever and Pluralist. At later stages (Strategist, Magician, Unitive) verbosity does not tend to make the response "later." In fact, as rule 2 in the manual indicates, if a second sentence merely repeats the first in a response, the rater only rates the first sentence. The SCT also correlates with education and socioeconomic status across international samples. This makes sense because education and social class relate to aspects of impulse control, goal orientation and conscious preoccupations which is what the SCT is supposed to assess (Pfaffenberger, 2011).

The discriminant validity of the SCT regarding intelligence has been hotly debated and the topic of several panel discussions at conferences on assessment and psychotherapy. Cohn and Westenberg (2004) conducted a meta-analysis of 42 studies of the discriminant validity of the SCT and intelligence. Across studies, the correlation between the SCT and intelligence was .31. Loevinger (1998) argued that all tests should

show some correlation with intelligence because it is indeed an aspect of personality that affects other areas of development.

Cohn and Westenberg (2004) examined the incremental validity of the SCT. Incremental validity addresses whether a test allows for useful inferences that could not be made without the test. 16 studies addressed this question and 94% of them reported significant relationships between criterion variables and the SCT after intelligence was controlled for. Based on their research, they rejected the claim by Lubinski and Humphreys (1997) that the SCT did not add anything new to the study of personality.

Finally, the issue of norms is particularly important for the SCT. People who take psychological inventories are more likely to fall in the middle of the spectrum of ego development so the norming sample (used by Cook-Greuter's organization The Center for Leadership Maturity) has to be diverse so as to represent as much of the human experience as possible. As early as 1976 Loevinger (1976) discussed the sample size as a threat to the validity of the SCT. Her original sample was based on only a few hundred test takers. She and her co-researchers reached out to other trained raters using the test and these raters shared their data increasing the norming sample to over 1000.

Over time, many other researchers and consulting groups including Harthill, Harthill USA, and Cook-Greuter and Associates allowed their data to be used in the database at the Center for Leadership Maturity. These data span a spectrum of test-takers from those who have been repeatedly incarcerated for crimes to those earning graduate degrees at Ivy League schools. The database contains over 10,000 protocols from five countries and these make up the norming sample that test-takers results are compared

against. It was this sample that the subjects' SCT scores in this study were compared against (see hypothesis 1).

SCL-90R

This study used the Sentence Checklist 90 Revised Form (SCL-90 R) developed by Derogatis (1974) to measure psychological distress. First developed in 1954, the original SCL was used to measure neurotic distress in outpatient clients at John's Hopkins Hospital (Parlo, Kelman, & Frank, 1954). Originally, it was developed with 41 items, and has been expanded throughout the years to the 90-item version, which has been revised to the most current form of the SCL-90 R (Derogatis, 1994). As discussed in chapter five, the most current form evolved in the atmosphere of the American Psychiatric Association's (2013) Diagnostic and Statistical Manual of Mental Disorders (DSM). This means that many symptoms in the current form are similar to those found in the DSM. This form also differs from the original SCL-90 due to the addition of two new items on the anxiety subscale. The inventory takes about 15 minutes to administer.

The SCL-90R measures an individual's general experience of symptom severity in addition to a more specific subscale profile. The outcome from the instrument informs clinical practice, as well as provides insight for those in primary care settings (Derogatis, 2000). The SCL-90-R consists of three global indexes of distress and nine subscales. The global indexes of distress include the Global Severity Index (GSI); the Positive Symptom Total (PST) and the Positive Symptom Distress (PSD). The Global Severity Index (GSI) is the best reflection of an individual's level of distress. This score is a combination of the number of symptoms reported and the intensity of perceived distress. The Positive

Symptom Total (PST) reflects how many symptoms have been endorsed, and is independent from the level of stress that is reported. The Positive Symptom Distress Index (PSDI) is a reflection of the symptom intensity. It addresses the average level of distress for all of the symptoms reported or endorsed.

The SCL-90-R was normed with 3,092 participants from four groups of adolescents, non-psychiatric individuals and psychiatric individuals who were primarily Caucasian and African American. Some individuals who identify as Hispanic were included as well (in Martinez, Stillerman, & Waldo, 2005). When interpreting results, knowledge of the participants' cultural diversity via demographic information will be important to accurately process and analyze the data.

The nine subscales included in the SCL-90R are as follows: Somatization (SOM), Obsessive-compulsive (O-C); Interpersonal sensitivity (I-S); Depression (DEP); Anxiety (ANX); Hostility (HOS); Phobic anxiety (PHOB); Paranoid ideation (PAR); and Psychoticism (PSY). Additionally, seven items identified as (OTHER) explore disturbances in sleep and appetite. The SCL-90R is often used in clinical populations. However, there is research indicating use of the instrument to measure general psychological distress in outpatient and other groups as well. Brophy, Norvell and Kiluk (1988) found in 368 university students that the SCL-90R was useful to determine distress, and "...measures a general dimension of psychopathology or emotional discomfort" (p. 338). Although short versions of the SCL-90 exist, the research indicates support for use of the full 90 item form to assess general psychology (Müller, Postert, Beyer, Furniss & Achtergarde, 2010). Additionally, though there are high correlations for

the short or abbreviated versions and the full versions, Müller, et. al (2010) found in a comparison of measures that, "...of all versions the full SCL-90-R shows the highest psychometric quality and should be applied whenever there is sufficient time" (p. 252).

Due to the Müller, et. al (2010) finding that the revised 90 item version of the SCL appears to be most beneficial when assessing the presence of different psychological states, this was the version (in its revised form) used in this study. Self-report measures possess a unique ability to provide information beyond that of other measures (Simonds, Handel, & Archer, 2008). The most-researched instrument that provides valid and reliable information about affective and personality states is the Minnesota Multiphasic Personality Inventory 2 (MMPI-2) developed in 1943 by Hathaway and McKinley. Although this method is noted to be reliable and valid, it is a costly method not frequently utilized in studies like this one. The MMPI-2 is usually used when one suspects psychopathology which was not the case with these subjects. Also due to the costly nature, and the time required for administration, the SCL-90 R was chosen instead.

Cross-Cultural Use of the SCL-90R

The SCL-90R has been used internationally and the culturally adapted forms have been validated. Nations where the SCL-90R has been used include Hungary (Urbán et al, 2014); Germany (Kröniger-Jungaberle & Grevenstein, 2013; Schmitz, Hartkamp, Kiuse, Franke, Reister & Tress, 2000); Iran (Bonab et al, 2007); China (Meng, Li, Loerbroks, Wu & Chen, 2013); Norway (Paap et al., 2012) and Italy (Prunas et al., 2012). The SCL-90 R has been widely used cross-culturally (Urbán et al, 2014; Kröniger-Jungaberle & Grevenstein, 2013; Meng, Li, Loerbroks, Wu & Chen, 2013; Paap et al., 2012; Prunas et

al., 2012; Bonab et al, 2007; Schmitz, Hartkamp, Kiuse, Franke, Reister & Tress, 2000), and found to be an effective tool for symptom measurement after being adjusted to accurately reflect cultural norms. In the United States, the SCL-90 R has been compared across and between groups of university students who identify as African American or Caucasian (Ayalon & Young, 2000). Findings from this study "...suggest that the use of the SCL-90-R with African American college students is justified" (p. 429). This conclusion was developed after reviewing responses and finding little difference in group responding, indicating that the previous norming for the test continues to provide an accurate outlook for individuals in the U.S.

Urban et al. (2007) found support for the multidimensionality, usefulness and "feasibility" (p. 153) of the SCL-90R. These authors reported higher scores for women on global severity, depression, anxiety and several other subscales; supporting the notion that exploring sex differences could inform future research or clinical work. The SCL-90R is also useful to aid in exploring symptomology as it relates to protective personality constructs such as self-efficacy. Kröniger-Jungaberle et al. (2013) found self-efficacy to be a stable construct that is rooted in childhood and mediates resilience for individuals to maintain positive emotional states. Researchers in Germany (Schmitz et al., 2000) supported the SCL-90R as a reliable measure of psychological distress and felt the anxiety and depression subscales were robust enough to be used as screening instruments.

Bonab et al. (2007) explored SCL-90R scores as they relate to Iranian students' identification of purpose, hope and meaning in their life. The authors wrote that having meaning can reduce negative psychological symptoms. Since people make meaning in

different ways at different ego development levels, it was important to explore if this was correlated with psychological symptoms endorsed.

Cha and Sok (2013) used the SCL-90-R to assess depression in nursing Korean students. In a sample of 3,631 students, they found the depression score for the participants was below what was expected as average. The authors wrote there was a need for further study of students in the helping professions that assessed negative emotions. This shaped the current study's hypotheses since it was exploring psychological states in students enrolled in counseling courses. In New Zealand (Barker-Collo, 2003) found culturally rooted sex differences compared to other cultures. The authors reported that in contrast to what is typically found in American students, "...it is more culturally acceptable for males in to report psychological distress in New Zealand than in America" (p. 194). This is an important when interpreting data with American students in this study. Since urban universities tend to be more culturally diverse than other settings, race and ethnicity may be important variables. Since females made up a majority of subjects (who completed all protocols) in this study, there were not enough data to compare males to females. This is addressed further in chapter five.

Using the SCL-90R with an inpatient clinical population in Norway, Paap et al. (2012) found differences between males and females in the level of distress that they endorsed and concluded that the Global Severity Index (GSI) for the SCL-90R is influenced by the level of distress reported. Higher levels of distress indicate more symptoms on multiple scales, therefore reducing the dimensionality of the SCL-90R. This can be explained further when one considers the comorbidity of symptoms across

diagnoses as the individual's symptoms become more significant. In a clinical sample, this may result in less usefulness for the SCL-90R when other instruments such as the MMPI-II are available. However, for a university population who are less likely to demonstrate inpatient clinical levels of symptomology, the SCL-90R can provide dimensionality to identify patterns of symptomology.

Prunas et. al (2012) also explored dimensionality for the SCL-90R due to the tendency of the subscales to be correlated with each other. It was found that the GSI can provide an index of general distress when applied in the appropriate population. The authors state

Our results are consistent with previous research that showed different symptom dimensions across different populations and underline the importance of assessing the structural validity of an instrument for the particular population in which it is applied". (p. 596).

The research supports use for the SCL-90R more in non-clinical populations due to the tendency for the level of distress to be lower and the subscales to be less correlated (Urbán et al., 2014; Paap et al., 2012; Prunas et al., 2012; Brophy et al., 1988)

Symptom Reporting

When using the SCL-90R it is important to be aware of some differences across populations in regards to symptom reporting. Ayalon and Young (2009) found that symptoms may be interpreted differently in different groups. The authors state "...guilt may be a stronger manifestation of depression in one group compared to the other" (p. 422). Additionally, they explore the idea that one group demonstrating behaviors that

could be identified as related to depression, such as crying, may be occurring for reasons other than depression. The authors indicate that women crying more "...maybe because some women in general cry more than men, not because the relationship between crying and depression is different for men and women" (p. 422). The main focus for this study was to address possible problems with utilizing the SCL-90R in African American populations. The findings provide support both for the use of the SCL-90R in college student populations, and for African Americans, with one small difference. The difference found by Ayalon et al. (2009) was for the specifier "distrust in others", which for this population is not an indicator of paranoia as outlined in the SCL-90R.

Reliability and Validity of the SCL-90 R Subscales

The subscales have been the topic of some controversy due to problems with correlations between them (Brophy, Norvell & Kiluk, 1988; Paap, Meijer, Bebbler, Pedersen, Karterud, Hellem & Haraldsen, 2011; Prunas, Sarno, Preti, Madeddu & Perugini, 2012). Concerns include similarities of symptoms and how they present for different psychological states. Despite these concerns, there is also research confirming the multidimensionality of the SCL-90-R, and endorsement for its use in a variety of settings (Steer, Clark & Ranieri, 1994; Urbán, Kun, Farkas, Paksi, Kökönyei, Unoka, Felvincizi, Oláh & Dmetrovics, 2014). Steer et. al (1994) specifically found support for validity for the anxiety and depression subscales by comparing them with the Beck Anxiety Inventory (BAI) and the Beck Depression Inventory (BDI). There was support for the convergent and discriminate validity of the SCL-90-R compared with these inventories.

Some difficulties related to the anxiety and depression subscales have been found in relation to their ability to influence the Global Severity Index (GSI) more than other subscales. Brophy et al. (1988) and Ranieri (1994) found strong influences by these subscales on the overall GSI. Steer et al. (1994) reported that items that tended to measure depression and anxiety impacted the variance of the overall distress score. This is an important factor to be aware of when interpreting results.

There has been some controversy regarding the factorial structure of the SCL-90R, with concerns focusing on the tendency for there to be high correlations among the subscales which impacts ability to distinguish between the subscales (Cyr, McKenna-Foley & Peacock, 1985; Hafkenscheid, 1993). Others indicate it is a strength to support the notion that negative emotional states are similar in their symptomology, and that the overlap helps to validate the comorbidity of disorders (Vassend & Skrondal, 1999). Paap et al. (2011) found support for the multidimensionality of the SCL-90R in their study of 3,078 clinical participants, also indicating "...measurement precision may be dependent on the estimated level of distress" (p. 52). This was important to keep in mind for the current study because the subjects endorsed surprisingly high levels of distress.

Rosenberg Self-Esteem Scale

The Rosenberg Self-Esteem Scale (RSES) was developed by Morris Rosenberg (1965) and is one of the most widely used measures of overall self-esteem (Byrne, 1996 in Sinclair, Blais, Ansler, Sandberg, Bistis & LoCicero, 2010). The measure is a 10 item instrument with items answered on a four point Likert scale from strongly agree to strongly disagree. Five of the items have positively worded statements, and five of the

items have negatively worded statements. The original sample utilized to develop the measure included 5,024 High School upperclassmen chosen through random selection in the state of New York. The scale asks the respondents to reflect on their current feelings and measures self-esteem based on their responses.

There is much evidence to support validity, particularly structural and predictive validity, rest-retest reliability and internal consistency, (Schmitt & Allik, 2005; Torrey, Mueser, McHugo & Drake, 2000; Sinclair et. Al, 2010). Schmitt et. al (2005) found support for the cultural universality of self-esteem as a construct after conducting research across 53 nations utilizing the RSES, further specifying that self-esteem appears to demonstrate as higher in individualistic societies when compared with collectivistic societies.

Concerns related to the RSES are focused mostly on the ability to measure a single dimension of the construct versus two or more dimensions. Sinclair et. al (2010) discusses that most evidence appears to point to a bi-dimensional factor structure that stems from a separation of the positively worded items and the negatively worded items (Carmines & Zeller, 1979; Corwyn, 2000; Owens, 1994). Another study that supports a similar factor structure by Vecchione, Eisenberg and Laguna (2015) compared the RSES in four studies and state that, “Psychometric findings corroborate the value and the robustness of the bifactor structure and its substantive interpretation”, (p. 621). The Roseberg Self-Esteem Scale takes approximately 5 minutes to complete.

Research Questions and Hypotheses

Utilizing the measures SCTi, SCL-90 and Rosenberg Self-Esteem Scale the current study explores the following questions:

Research Question 1: What ego development stages do participants identify with in this study?

Hypothesis 1: Graduate students in counseling programs will identify with conventional and post-conventional stages of development. In addition, there will be more graduate students testing at post-conventional stages than in the general population.

Research question 2: What psychological symptoms do people at different levels of ego identity endorse?

Hypothesis 2: Participants at conventional stage of development will report different psychological symptoms than participants at later stages of development.

Research question 3: Because later levels of ego development are associated with existential concerns and earlier levels with fitting in, do people at later levels experience more depression. Further, along the same lines do people at earlier levels experience more anxiety?

Hypothesis 3: Participants in this sample who score at later, post-conventional levels of ego development will report more symptoms of depression while those who score at conventional levels of ego development will endorse more symptoms of anxiety.

Research question 4: Since people at later stages of ego development can hold their identity “lighter” than those at earlier stages, do they report higher levels of self-esteem?

Hypothesis 4: Participants at post-conventional stage of ego development will report higher scores of self-esteem than those who score at conventional levels of ego development.

Quantitative Method

67 graduate students from a public university were recruited voluntarily as a convenience sample from graduate counseling courses. Of the 67, 54 completed all the inventories. Students were asked to complete a consent to participate in the study form and a demographics form at the start of the data collection. They were provided instructions for completing the Sentence Completion Test, Integral (SCTi), the Symptom Checklist 90 Revised and the Rosenberg Self-Esteem Scale. Certainly a larger sample would have helped discern if the trend-level results were in fact significant but that will be a dimension of future research. Because each SCTi takes anywhere from 45 to 70 minutes to rate, finding scorers who could fit free scoring into their schedule was also a challenge.

In this study, ego development functioned as a non-metric (ordinal) variable, and its relation to two ratio dependent variables (psychological symptoms endorsed and self-esteem) was studied. ANOVAs were run of all study variables by ego development level. Analysis was separate for each. A data imputation test was also done to see if the 13 participants who had incomplete inventories may have changed the outcomes but it appears the additional data would not have. Sample size and lack of significance ruled out post-hoc tests.

CHAPTER IV

RESULTS

Descriptives

Participant Demographics

Participant demographics of age, gender identification, and ethnicity are illustrated in tables 4.1, 4.2 and 4.3. Of the 54 subjects who completed all the tests, 80% identified as female, 15% male, .02% as “queer” and .02% as transgender and one subject did not enter anything.

Table 4.1

Participant Gender

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Female	43	79.6	81.1	81.1
Male	8	14.8	15.1	96.2
Queer	1	1.9	1.9	100
Transgender	1	1.9	1.9	
Total	53	98.1	100	
Missing System	1	1.9		

Total 54 100

In terms of age, participants were predominantly between 21 and 25 years of age (43%) and between 26 and 30 years of age (40.7%). Breaking down participants ages by 5-year range, 22.2% were between 21 and 25; 40.7% were between ages 26 and 30; 13% were between ages 31 and 35; 5.6% were between ages 36 and 40; 7.4% were between ages 41 and 45; 3.7% were between ages 46 and 50; 1.9% were between ages 51 and 55; 3.7% were between ages 56 and 60. One participant did not enter an age on the demographics sheet.

Table 4.2

Participant Age

	Frequency	Percent	Valid Percent	Cumulative Percent
21-25	12	22.2	22.6	22.6
26-30	22	40.7	41.5	64.2
31-35	7	5.6	5.7	77.4
36-40	3	5.6	5.7	83
41-45	4	7.4	7.5	90.6
46-50	2	3.7	3.8	94.3
51-55	1	1.9	1.9	96.2
56-60	2	3.7	3.8	100
Total	53	98.1	100	

Missing System 1		1.9	1.9
Total	54	100	

Participant ethnic identification was diverse with 50% of subjects identifying as Caucasian; 33.3% as African-American; 1.9% as Asian Pacific Islander; 3.8% as mixed race; 3.7% as Hispanic and 5.6% as other.

Table 4.3

Participant Ethnic Identification

	Frequency	Percent	Valid Percent	Cumulative Percent
Caucasian	27	50	50.9	50.9
African-American	18	33.3	34	84.9
American-Pacific Islander	1	1.9	1.9	86.8
Mixed Race	2	3.7	3.8	90.6
Other	3	5.6	5.7	96.2
Hispanic	2	3.7	3.8	100
Total	53	98.1	100	
Missing System	1	1.9		
Total	54	100		

Participant Test Results

Sentence Completion Test Integral (SCTi)

The SCTi tests were scored and reported by raters trained by Cook-Greuter and Associates. Raters reported that all 67 SCTi tests turned in were valid. Only 54 of these could be used because 13 subjects did not complete the other measures. Of the 54 used in this study, 9.3% identified as Diplomats; 24.1% as Experts; 29.6% as Achievers; 27.8% as Pluralists; 9.3% as Strategists. Table 4.4 summarizes the SCTi scores for the sample.

Table 4.4:

SCTi Scores of Sample

	Frequency	Percent	Valid Percent	Cumulative Percent
3	5	9.3	9.3	9.3
3/5	13	24.1	29.6	33.3
4	16	29.6	29.6	63
4/5	15	27.8	27.8	90.7
5	5	9.3	9.3	100

Symptom Checklist 90 Revised (SCL-90 R)

All but one SCL-90 R appeared to be valid but all 54 were used. On the potentially invalid one the subject circled the value of “0” for all 90 symptoms. This appears to be more an expression of fatigue or frustration since that subject’s SCTi and Rosenberg scale were valid. However, since it is technically possible for someone to have never identified with any of these symptoms, however unlikely, it was included.

On the SCL-90 R, raw scores were converted to T-scores to allow comparison with norming groups. It is interesting that over half of the subjects' General Severity Index was at the maximum (>80). I will return to this in chapter 5. This contributed to a mean General Severity Index of 75.6 for this sample. Since the GSI mean for females in the non-patient norming sample is a T-Score of 54 (raw score .36) and the mean for non-patient males is a T-score of 53 (raw score .25), this samples' overall distress is significantly higher than the norming sample. More will be said about that in chapter 5.

Mean subscale scores give a sense of which types of symptoms were commonly endorsed in this sample. The mean Somatization score was 66.6; the mean Obsessive-Compulsive score was 69.2; the mean score for Isolation was 72.5; the mean score for Depression was 72.5; the mean score for Anxiety was 68; the mean score for Phobic Anxiety was 58.5; the mean score for Paranoia was 63.7; and the mean score for Psychoticism was 67.2. Table 4.5 summarizes the means for the 54 subjects on the General Severity Index and all subscales.

Table 4.5

Summary Statistics of Sample's SCL-90 R Scores

Scale	GSI	SOM	O-C	DEP	ANX	HOS	PHOB	PAR	PSY
Mean	75.6	66.6	69.2	72.5	68	68	58.5	63.7	67.2

Again, these seem much higher than those in the norming sample. Tabled 4.6 and 4.7 compare the mean SCL-90-R T-scores from this study's sample (those identified as "male" or "female"), with those of the norming group (non-patient males and females).

Table 4.6

Comparison of Mean Scores Between Study Sample and Norming Sample: Female

SCL-90 R subscale	GSI	SOM	O-C	I-S	DEP	ANX	HOS	PHOB	PAR	PSY
Norming Sample	54	53	53	54	54	53	54	56	54	55
Sample from this study	80	69	80	74	69	76	70	47	65	44

Table 4.7

Comparison of Mean Scores Between Study Sample and Norming Sample: Male

SCL-90 R subscale	GSI	SOM	O-C	I-S	DEP	ANX	HOS	PHOB	PAR	PSY
Norming Sample	53	54	53	54	55	56	54	56	54	55
Sample from this study	69	52	58	60	65	66	61	66	60	72

In both males and females in this study, the majority of SCL-90 R subscale scores appeared higher than those of the norming sample in the SCL-90 R manual. T-tests were conducted to test the statistical significance of the differences between the norming samples and the participants in this study. Table 4.8 shows the results of these T-test.

Table 4.8

T-tests of Norming Samples and Participants

Subscale	Female df = 42	Male df = 7
GSI	t = 26.95, p < .001†	t = 2.75, p = .03**
SOM	t = 8.27, p < .001†	t = .59, p = .58
OC	t = 18.06, p < .001†	t = 1.54, p = .17
IS	t = 10.63, p < .001†	t = 2.04, p = .08*
DEP	t = 20.44, p < .001†	t = 2.59, p = .04**
ANX	t = 8.61, p < .001†	t = .82, p = .44
HOS	t = 8.11, p < .001†	t = 3.08, p = .02**
PHOB	t = 1.29, p = .20	t = .15, p = .88
PAR	t = 6.06, p < .001†	t = 1.09, p = .31
PSY	t = 4.55, p < .001†	t = 4.40, p = .003**

* trend significance at the p < .10 level

** significant at the p < .05 level

† significant at the p < .001 level

The numbers in Table 4.8 represent One-Sample t-tests that used the norming sample value to compare to the mean for the gender split subscales. For females everything was highly significant, besides PHOB ($t(42) = 1.29, p = .20$). Males had four significant areas, GSI, DEP, HOS and PSY, and one trend level area in IS. The gender differences could be the result of difference in sample size between males and females, and regardless there are major differences between this sample and the norm.

Rosenberg Self Esteem Scale

All 54 subjects completed the Rosenberg Self Esteem (RSE) Scale. The range was 20 (subjects scored between 10 and 30). The mean score was 22.98 out of a total possible of 30. Scores between 15 and 25 are within normal range; scores below 15 suggest low self-esteem. Table 4.9 summarizes the RSE scores according to these ranges.

Table 4.9

Rosenberg Self-Esteem Scale Scores

Range	# of Subjects in Range	Percentage of Subjects in Range
Below 15	3	.6%
15-25	29	54%
Above 25	22	40.4%

Because the level of distress reported was statistically significant for so many participant sub-scales, it was decided to compare the subscales with the self-esteem score.

Examining bivariate correlations between RSE and the subscales shows a significant negative correlation between all of them and self-esteem, with the exception of GSI.

Table 4.10 illustrates these correlations.

Table 4.10

Bivariate Correlations Between RSE and the SCL-90 R Subscales

GSI	$r = -.10, p = .47$
PSDI	$r = -.431, p = .001$
SOM	$r = -.265, p = .05$
OC	$r = -.365, p = .007$
IS	$r = -.316, p = .02$
DEP	$r = -.328, p = .02$
ANX	$r = -.47, p < .001$
HOS	$r = -.47, p < .001$
PHOB	$r = -.33, p = .02$
PAR	$r = -.27, p = .05$
PSY	$r = -.36, p = .008$

Results and Research Questions/Hypotheses

Research Question 1: What ego development stages do participants identify with in this study?

Hypothesis 1: Graduate students in counseling programs will identify with conventional and post-conventional stages of development. In addition, there will be more graduate students testing at post-conventional stages than in the general population.

Using the percentages in Table 1.2 of what proportion of the population is thought to be at each tier of stages (Miller & Cook-Greuter, 1994; Cook-Greuter, 2000) in this

small sample the hypothesis was supported. Whereas according to the Miller/Cook-Greuter database, approximately 10% of the population would be expected to identify with the two latest tiers both of which are post-conventional identities, 37.1% of subjects in this study tested at post-conventional ego identities. Since education has been positively correlated with ego identity (the more education, the later the identity), this is not a surprise. The sample was made up of graduate students in counseling who are a very unique group when compared to the general population.

Research question 2: What psychological symptoms do people at different levels of ego identity endorse?

Hypothesis 2: Participants at conventional stage of development will report different psychological symptoms than participants at later stages of development.

To determine if individuals at various stages of ego identity endorsed dissimilar psychological symptom profiles the differences in the symptom subscales of the SCL-90 were first examined among the five different levels of SCTi utilizing one-way ANOVA analysis. Before analysis were run all data was reviewed for violations of assumptions for the particular tests run for each hypothesis, with no assumptions being violated. The ANOVA revealed that there were no significant differences among the reported psychological symptoms by STCi level (Appendix A). This refutes the hypotheses that ego developmental stage would result in different symptomology. Although not a hypothesis, it appeared that participants testing at transitional stages (3/4, 4/5) in this study reported a broader range of symptoms than those at stable stages (3, 4, 5). To explore the 52% of subjects who scored at 3/4 (Expert) or 4/5 (pluralist) their data were

pulled out of the data set and their SCL-90 R scores tested against just those two transitional levels. After re-coding the SCTi scores into a dichotomous variable representing stable or transitional, an independent sample t-test was run. There was no significant difference between the two stages in any of the psychological subscales or the RSE. The file was then split between male and female, and the t-test was run again. There was still no significant difference within males ($t(7) = -.97, p = .37$) but there was a trend level difference between the two groups for females ($t(42) = -1.72, p = .09$). The small number of male participants should be noted here as a possible reason for the lack of significance.

Research question 3: Because later levels of ego development are associated with existential concerns and earlier levels with fitting in, do people at later levels experience more depression. Further, along the same lines do people at earlier levels experience more anxiety?

Hypothesis 3: Participants in this sample who score at later levels of ego development will report more symptoms of depression, while those who score at conventional levels of ego development will endorse more symptoms of anxiety.

To examine the hypothesized relationships, a one-way ANOVA analysis was used to examine whether there are significant differences between STCi groupings and ratings of depression and anxiety. There was found to be no statistically significant difference between the five STCi levels in this sample for their ratings of depression, $F(4, 49) = .61, p = .66$, and anxiety symptoms, $F(4, 49) = .21, p = .93$. Bivariate Pearson correlations were also tested to ascertain direction of relationships, if any. Depression was positively

correlated with ego development ($r = .09$, $p = .52$), though this relationship was not significant. Anxiety was negatively correlated with SCTi level ($r = -.01$, $p = .94$), again not significantly. For this sample it appears that participants reported symptoms were not related to their ego development. The small variance in the reported depression and anxiety scores for this sample is likely the result of the homogenous graduate student sample used.

Research question 4: Since people at later stages of ego development can hold their identity “lighter” than those at earlier stages, do they report higher levels of self-esteem?

Hypothesis 4: Participants at post-conventional stage of ego development will report higher scores of self-esteem than those who score at conventional levels of ego development.

Examining the arc of ego development compared to levels of self-esteem, bivariate Pearson correlations revealed that there is a trend level ($r = -.25$, $p < .10$) relationship between individuals SCTi grouping and the reported self-esteem score. This negative correlation indicates that as an individual moves towards later levels of ego development, their reported self-esteem tends to decrease. Examining this relationship using one-way ANOVA, the difference among SCTi groupings were revealed to be not significant, $F(4, 49) = 1.22$, $p = .31$. This negative correlation is the opposite of what was hypothesized, and the implications are reviewed in the next chapter.

CHAPTER V

DISCUSSION, CONCLUSION AND RECOMMENDATIONS

The aim in this chapter is to work inductively moving from the specific to the general beginning with trend-level findings.

Trend-Level Findings

Trend-level findings are not significant but may point to ways to improve future studies that could then discern trends that may show up with a broader sample and more statistical power. Hypotheses 3 and 4 were not supported but there appear to be trend-level findings.

Hypothesis 3

Hypothesis 3: Participants in this sample who score at later levels of ego development will report more symptoms of depression, while those who score at conventional levels of ego development will endorse more symptoms of anxiety.

As noted in chapter 4, Bivariate Pearson correlations were tested to ascertain the direction of the relationships if any. The directions that were hypothesized were observed at non-significant levels and the question raised is would the directions continue and reach significance with a larger, more representative sample? Graduate students in

counseling are a homogeneous group in some ways but even within that group there are heterogeneous characteristics. The Council for the Accreditation of Counseling and Related Programs (CACREP), in their 2001 standards, emphasized evaluating student “dispositions” in areas such as commitment, openness (as in the Five-Factor Model), respect for self and others, integrity and self-awareness. In two studies of evaluating these dispositions, both sets of researchers found a significant range in the degree to which these dispositions were held by students and an equal range in how they were expressed. (Duba, Paez, & Kindsvatter, 2010; Gibbons, Cochran, Spurgeon & Diambra, 2013). If these findings are generalizable, it is reasonable to think that with a larger sample with greater regional diversity any true relation between ego identity and symptoms endorsed may emerge with more significance.

Hypothesis 4

Hypothesis 4: Participants at post-conventional stage of ego development will report higher scores of self-esteem than those who score at conventional levels of ego development.

The findings here were surprising as there was a trend-level finding in the results that show a negative correlation between ego development and self-esteem. If the trend-level finding is accurate, the later one’s ego identity, the lower one’s reported self-esteem. There are several responses to the suggestion of a negative correlation. First, it makes sense to start with the theory of ego development and what we know from responses across levels on the WUSCT and the SCTi.

As people enter post-conventional ego identity, their sense of self includes increasing psychological-mindedness (Loevinger, 1976; Cook-Greuter, 1999). With psychological-mindedness (the ability to make one's own and others' thoughts and feelings objects of awareness), comes an ability to be in tune with emotions as they emerge. It is possible that the Rosenberg Self-Esteem Inventory, as short and general as it is, is susceptible to reflecting temporary negative emotional states test-takers may be experiencing. So for example if someone at a post-conventional stage of identity is congruent with a feeling of sadness or guilt, their psychological-mindedness allows the emotion to be transparent and they may endorse items on the RSES differently. In this case perhaps the RSES then presents such responses as reflecting "lower" self-esteem. With post-conventional ego identity, people also increase their ability to deconstruct their experience of themselves. In doing so they increase their sense of complexity regarding who they are, and perhaps this complexity goes beyond the boundaries of what the RSES can reflect. Any self-questioning (normal for a post-conventional personality) may be misrepresented as "lower" self-esteem.

Hypotheses 1 and 2

Hypothesis 1

Hypothesis 1: Graduate students in counseling programs will identify with conventional and post-conventional stages of development. In addition, there will be more graduate students testing at post-conventional stages than in the general population.

Hypothesis 1 seems to be supported though that is really no surprise since Loevinger (1994) and Cook-Greuter (1999) found ego development to be positively correlated with

educational level. Again, given that the demands put on an individual to attain one degree and pursue a second are similar to the types of gains one gets as one's ego identity grows (ability to delay gratification, ability to see one's talents/worth, desire to accomplish goals) it makes sense that even in this small sample, ego development appears positively correlated with education.

Hypothesis 2

Hypothesis 2: Participants at conventional stage of development will report different psychological symptoms than participants at later stages of development.

Hypothesis 2 was refuted. However, there was an interesting relationship between symptoms and ego identity that could be the topic of a future study. There appeared to be a relationship between the transitional stages in this sample (3/5, Expert and 4/5, Pluralist) and the subscales on the SCL-90 R. Although it was not a study question, it appears that people who identified at transitional stages endorsed a broader array of symptoms than people who identified at stable stages. Five ego levels were represented in the sample (3, Diplomat; 3/4Expert; 4, Achiever; 4/5Pluralist; and 5, Strategist) but the people at the transitional stages represented (3/4, Expert; 4/5, Pluralist) accounted for 50% of GSI scores >80 and endorsed combinations of depression, anxiety, hostility, phobic anxiety, and psychoticism more intensely than those at so-called "stable" stages.

As noted, the theory work of Loevinger and Cook-Greuter suggest that people at transitional stages are moving away from a shared worldview and sense of community. Because of this, those transitional stages can be more isolating periods of development [although the mean isolation sub-scores on the SCL-90 R were only 2 points apart

between those at stable and those at transitional stages (71 and 73 respectively)]. First the theoretical claim that transitional stages are more psychologically challenging would have to be tested with a more representative sample. If the assertion was supported, then it would make sense to explore the array of symptoms related to these psychologically challenging stages.

Principle Implications of the Findings

The principle implication appears to be that the literature review did not yield substantive studies looking at the relationship between ego identity and psychological symptoms. The data from this study raise interesting questions for further study while at the same time leaving us lacking evidence that there *is* a relationship between the two variables. Of course there may be no relationship at all between these variables.

A second obvious implication seems to be that the subjects that comprised the sample for this study were experiencing significant psychological distress. Whether this is related to the pressures of graduate study, the inventories being given after they had just had a 3-hour class, or some other reason is not known. All participants were told that any concerns they had or any distress participating caused could be discussed with the researcher or the director of the dissertation. No one came forth to discuss distress that may be related to the mean scores being as high as they are on the SCL-90 R.

Limitations of the Study

The study limitations can be grouped in three areas: sample, instruments, and selection of constructs.

Sample

The original aim was to get a sample of 70 students. The reason behind the smaller “N” is that the SCTi takes an hour or more to properly score. 3 raters were very generous with their time which at a total of 63 hours would have earned them anywhere from \$4050 (for research protocols that are scoring only) to approximately \$9000 (for protocols where the rater will then go on the write up comments and recommendations for continued development).

The original full sample of 67 was close to the goal but with 13 of the data sets incomplete, the sample became less adequate - even as a convenient sample. The homogeneity of the convenient sample also makes it ungeneralizable even with regard to counseling students because it is only representative of counseling students in one urban university. Regional diversity would improve the design as well as seeking convenient samples of undergraduate students and people who have never attended university.

Sampling problems will decrease substantially with the opening of two institutes that study ego development and use it in consulting. The Center for Leadership Maturity, founded by Susann Cook-Greuter, has recently created an electronic platform for scoring and storing data from scored protocols. Beginning in 2017, certified raters will be able to access a database of over 10,000 ego development tests for research purposes. These data include protocols scored in the past year where test-takers were asked if they would be willing to consider being participants in future research on ego development. Certified raters will be allowed to contact test-takers who have agreed to this request and, in cases similar to this study, be given additional instruments to be studied with the SCTi they

have already completed. In addition, The Leaders Institute of South Australia will open their database in 2018 to certified raters who wish to conduct further research. The institute was founded by psychologist Niki Vincent who was also certified to rate by Cook-Greuter and Associates.

Instruments

In retrospect, one of the more interesting and unanticipated trend-level findings is the trending negative correlation of self-esteem with ego development. This overlaps with construct concerns. The Rosenberg Self Esteem Scale has the advantage of being affordable and easy to complete but it may be too general a measure of self-esteem. Self-esteem has been further differentiated into implicit and explicit self-esteem (Hetts & Pelham, 2001). Implicit self-esteem is thought to be reflected in automatic self-evaluations. These come in the form of automatic thoughts (things that just come to mind that we do not choose). Implicit self-esteem is contrasted with explicit self-esteem which is conveyed through conscious, reflective cognition (sometimes called linear cognition) (Ziegler-Hill, 2010). The Rosenberg Self-Esteem Scale was designed as an explicit self-esteem scale (Tafarodi & Ho, 2006).

Loevinger and Cook-Greuter's theoretical and applied work both support the idea that the earlier one's ego identity, the more guarded one is. This has been illustrated in the development of scoring manuals (Hy & Loevinger, 1996; Cook-Greuter & Associates, 2013). As an example, Expert responses are often short and general because people who identify with this stage are protective of their newly budding individualism

(Hy & Loevinger, 1996). So in response to the sentence stem “My main problem is...” characteristic responses include “Nothing – I don’t think in terms of problems,” “time,” and “expecting too much of myself” (Cook-Greuter & Associates, 2013, p. 7). Compare that to characteristic Pluralist responses: “my inability to realize I am causing it,” “that I speak too quickly without regard for others,” and “not thinking through decisions I make that will affect other people” (Cook-Greuter & Associates, p. 13).

In ego development theory, guardedness is correlated with social desirability which may lead people at earlier stages to “fake good” on an explicit measure of self-esteem such as the RSES. If people at later stages are less guarded the choice of self-esteem scale may not matter as much. Perhaps the trending negative correlation between ego identity and the score on the RESE is because explicit self-esteem scales draw more from the later stages of ego identity due to the people identifying with them being less guarded and less vulnerable to social desirability. It would be worth studying if an implicit measure of self-esteem would draw more evenly across the ego development spectrum.

Selection of Constructs

As noted in the last section, it may be that an explicit self-esteem scale was not the strongest choice for this study. It is also possible that the construct of self-efficacy would have been more appropriate. Bandura (1977) defined self-efficacy as a person’s belief in her capacity to execute behaviors necessary to attain specific goals. In a word, it can be thought of as similar to confidence (Komarraju & Dial, 2014). As noted in the literature review, there appear to be multiple studies of self-efficacy and constructs

related to ego development (like coherence) but no studies of ego development and self-efficacy proper. Theory suggests that self-efficacy would fluctuate between stable and transitional stages although this would have to be tested.

In terms of measuring psychological symptoms, the SCL-90 R evolved in the same time period as the Diagnostic and Statistical Manual (DSM) of the American Psychiatric Association's program of categorical psychiatry. The approach of DSM, and of categorical psychiatry, is to use statistical probability to see how symptoms clinicians report treating cluster together (thus the "statistical" part of the DSM). In the development of the SCL-90 R, Derogatis (1994) noted that he did rely on client self-report but discusses this in the context of how the language of the symptoms in reliable diagnoses like Major Depressive Disorder, finds its way into symptom descriptions people are asked about on scales like the SCL-90 R. In 2013, the National Institute of Mental Health announced it was no longer evaluating grant funding based on the proposals' relationship with DSM-5 (APA, 2013). Instead they used the Research Domain Criteria (RDoC) that had been around for years but which they had not committed to. The RDoC focus on symptoms that cut across diagnostic categories and these symptoms are studied at the genetic, cellular, molecular, brain circuit, behavioral, cognitive, and affective levels.

Cross-cutting symptoms have two levels. The first level is made of brief surveys across domains and level two is items that are in-depth questions within each domain. It could be worthwhile to use such cross-cutting measures in a study like this. They are available from the American Psychiatric Association at

<https://www.psychiatry.org/psychiatrists/practice/dsm/educational-resources/assessment-measures> . The reasoning is that if people at earlier stages of ego identity are more

guarded, their symptoms may be more accurately assessed with a level one assessment.

On the other hand, because people at later stages are more psychologically minded, we may learn more about their psychological suffering with level two assessments.

Comparing both levels across a spectrum of people with varied ego identities could be the key to understanding some subtle differences if they exist.

Directions for Future Research

Loevinger (1976) noted that there was a correlation between cognition and ego identity. For her, cognition “paved a clearing” (p. 158) and ego identity was basically, standing in the “clearing” seeing what people identify with of the things they can see because of the clearing. She also wrote (1987) that we know psychological suffering hampers cognition. Perhaps a brief measure of cognition (like the Kaufman Brief Intelligence Test) should be given with a measure of psychological symptoms and the SCTi. If psychological suffering can impair cognition, it can likely impair sense of self. If that is the case, we should wonder if, in light of the psychological distress reported by this sample, we even got an accurate measure of ego development. Loevinger (1976) and Cook-Greuter (1999) both agreed that apart from obvious examples (when someone says they are in psychological pain in an SCRi response) it is hard to tease out in the total protocol rating.

As noted, the availability of two large databases of SCTi protocols to trained researchers opens up a wealth of “data mining” (pun intended) and supplies an

inducement for interested researchers to consider getting trained in the rating of protocols and writing of comments. The training of raters itself could be a study. Hy & Loevinger (1996) have a training built into their manual that seems adequate for all but the last 3 of the stages. The performance of raters trained with that manual could be compared with the performance of raters trained by Cook-Greuter and associates. Inter-rater reliability across the two training methods could be compared. This would also build in some quality control for future studies and future researchers.

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APPENDIX

APPENDIX I

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
	Between Groups	130.339	4	32.585	1.224	.313
RSE	Within Groups	1304.642	49	26.625		
	Total	1434.981	53			
	Between Groups	8.917	4	2.229	.031	.998
GSI	Within Groups	3485.231	49	71.127		
	Total	3494.148	53			
	Between Groups	79.898	4	19.975	.179	.948
PSDI	Within Groups	5479.602	49	111.829		
	Total	5559.500	53			
	Between Groups	411.873	4	102.968	.571	.685
SOM	Within Groups	8836.961	49	180.346		
	Total	9248.833	53			
	Between Groups	168.930	4	42.233	.509	.729
OC	Within Groups	4066.940	49	82.999		
	Total	4235.870	53			
	Between Groups	301.056	4	75.264	.550	.700
IS	Within Groups	6710.277	49	136.944		
	Total	7011.333	53			
	Between Groups	154.947	4	38.737	.611	.657
DEP	Within Groups	3108.479	49	63.438		
	Total	3263.426	53			
	Between Groups	160.757	4	40.189	.211	.931
ANX	Within Groups	9339.391	49	190.600		
	Total	9500.148	53			
	Between Groups	84.285	4	21.071	.161	.957
HOS	Within Groups	6407.641	49	130.768		
	Total	6491.926	53			
	Between Groups	446.270	4	111.567	.544	.704
PHOB	Within Groups	10049.879	49	205.100		
	Total	10496.148	53			
	Between Groups	454.408	4	113.602	.651	.629
PAR	Within Groups	8547.240	49	174.433		
	Total	9001.648	53			

	Between Groups	362.010	4	90.502	.355	.839
PSY	Within Groups	12484.361	49	254.783		
	Total	12846.370	53			

APPENDIX II: CONSENT FORM

My name is Heather Bonnett and I am a student in the Counseling Psychology program at Cleveland State University. For my dissertation project, I am exploring a type of development known as ego development. I am studying ego development and how it may relate to emotions and self-esteem. Jane Loevinger in 1976 developed a series of stages. She states there are one of four types of human development. There is little research to how ego development relates to mental health symptoms, such as depression. To my knowledge, this is the first study to explore development in this way in adults. You have been invited to participate in this research because you are a student with the university attended by the doctoral student. You may also be invited because the student or member of the dissertation committee sent this invitation to participate in research to you.

In this study, I would like to ask you some questions about life situations. I would also like to ask questions that relate to your emotions and self-esteem. The questions for this study are open-ended for the ego development portion. For the psychological states and self-esteem portion, the questions are on a scale. The total time required to complete these measures is about one hour. Your participation is completely voluntary. You have the right to choose to withdraw consent. You may stop participation at any time without penalty.

Your answers in this study will be completely confidential. Your name, school and any other personal information will not be needed to complete the questions or measures. Although answers may be used in the final report of the study, your personal information will be kept strictly confidential.

There are some minor risks in this study. These risks may include feeling uncomfortable, or having negative feelings related to the questions. We expect that the possible insight into yourself will be more than the possible negative feelings. Also, the results of the study can help us gain more information about how development and emotions may be related. If you would like further counseling, information will be given to you at the time of the study.

For further information about this study please contact Dr. Elliott Ingersoll at Cleveland State University at 216-687-5291 or email r.ingersoll@csuohio.edu. You can contact me at 803-526-9828 or email hrbonnett@outlook.com. If you have any questions about your rights as a research participant, you may the Cleveland State University Institutional Review Board at (216) 687-3630.

I will ask you to sign two copies of this consent. One copy is for you to keep for your records. Return the other one to me. Thank you in advance for your cooperation and support.

Please indicate your agreement to participate by signing below.

I am 18 years or older and have read and understood this consent form and agree to participate.

Signature: _____

Name (Please Print): _____

APPENDIX III: DEMOGRAPHICS FORM

Directions: Please answer the questions below to the best of your ability. If a question results in feeling uncomfortable, you do not have to respond to the question. Please check the box next to your answer.

What is your gender? Male Female Transgender

What is your age? 15-20 21-25 26-30 31-35 36-40 41-45 46-50 51-55 56-60

What is your Ethnicity? African American/Black

Asian/Pacific Islander

Caucasian/White

Hispanic/Latino

Native American/American Indian

Other (please describe) _____

What is your marital status? Single

Partner Relationship

Married/Domestic Partnership

Separated

Divorced

Widowed

Where do you reside? Urban Area Suburban Area Rural Area

What is your highest level of education degree earned? Undergraduate Graduate Doctoral

What is your current level of education? Undergraduate Graduate Doctoral

What is your current level of employment? Unemployed

Disability

Student

Part-Time

Full-Time

Have you ever engaged in mental health counseling? Yes No

Have you ever been diagnosed with a mental health disorder? Yes No