HOLLY RYAN HIGGINS
Construct Validity of General Self-Efficacy; Investigation of Overlap in General Self-Efficacy, Domain-Specific Self-Efficacy, and Personality.
(Under the Direction of LYNDA HENLEY WALTERS)

The meaning of generalized or global self-efficacy (GSE) was explored in this study. Domain-specific self-efficacy and personality were examined for similarity to. The sample included 175 undergraduate students who completed a measure of general self-efficacy beliefs, one measure of domain- specific self-efficacy beliefs, and one measure of personality. Results indicated that general self-efficacy cannot be represented by a sum of domain-specific self-efficacies. Dimensions of personality shared more variance with GSE than did specific domains of self-efficacy. The most highly correlated dimension of personality with GSE was Conscientiousness. However, considering the correlation corrected for attenuation, there was less than a 40% overlap in variance of Conscientiousness and GSE. If GSE "is" personality, it is most likely a personality profile rather than a part of a specific dimension of personality. Future research may confirm that GSE is a personality profile, but these results provide greater support for the notion that general self-efficacy represents a belief system about self that is slightly different from both personality and domain-specific self-efficacy.

INDEX WORDS: General Self-Efficacy, Domain-Specific Self-Efficacy, Personality, Construct Validity

CONSTRUCT VALIDITY OF GENERAL SELF-EFFICACY:INVESTIGATION OF OVERLPA IN GENERAL SELF EFFICACY, DOMAIN-SPECIFIC SELF-EFFICACY, AND PERSONALITY

by

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DEDICATION

I would like to dedicate this thesis to my twin sister, Kindle. Thank you for always believing in me, supporting me, and encouraging me. You have been with me every step of the way, always right by my side. I thank you for helping me reach one more goal.

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CHAPTER 1

INTRODUCTION

The origin of human agency has been the object of considerable speculation by many researchers (Bandura, 1977, 1982, 1993, 1997;Gecas, 1982, White, 1959). Through careful examination of motivation, some questions have been answered concerning human performance. However, literature, curiosity, and interest have lead us to question several aspects of why certain behaviors are manifest in some individuals but less apparent in others. More specifically, when people are confronted with a given task, what makes them believe that they are capable, or conversely, incapable of handling it? Although there has been some research on self-efficacy and there are some clues in the personality literature (Bandura, 1977, McCrae & Costa, 1986), there has been little attempt to explain whether human agency is a function of personality, a general form of self-efficacy, a domain specific aspect of self-efficacy, or an interaction between personality and general or specific self-efficacy.

Self-Efficacy

Perceived self-efficacy refers to the confidence in one's abilities to do the things that he/she tries to do (Bandura, 1977). We engage in those activities in which we feel competent and avoid those in which we do not. How we behave can often be better predicted by the beliefs we hold about our capabilities than by what we are actually capable of doing (Bandura, 1977, 1997).

In the psychological literature, self–efficacy is typically conceptualized as task specific. In the sociological literature, it is typically conceptualized as a general characteristic (Franks & Marolla 1976; Gecas, 1982; Rosenburg, 1974) Bandura has studied the concept and discussed it both at the "domain linked" level (in new situations an individual's expectancies would be based on experiences in the most similar type of situation) and at general level. Most psychological researchers have studied self-efficacy in the way Bandura originally presented it, as domain specific. A more encompassing model that is relevant to social cognitive theory was just published (Chen, Gully, & Eden, 2001). Researchers first theorized this model in the early 1980s and into the 1990s (Shelton, 1990, Tipton & Worthington, 1984). In this model there is the suggestion that efficacy exists at three levels; task specific, domain specific, and global.

Several important ways in which self-efficacy beliefs affect behavior are identifiable. One is that they affect decision-making and the endeavors individuals pursue. Efficacy beliefs are also found to influence how much effort individuals give to activities, their perseverance during challenging times, and their ability to come through positively when experiencing adversity (resilience) (Lennings, 1994, Masten & Coatsworth, 1998, Pajares, 1996). The more confidence individuals have in their ability to do things, the greater their effort, tenacity, and resilience. From the sociological literature, global/general self-efficacy has been found to be relevant in the success of individual pursuits regarding less familiar, or more ambiguous, activities.

Bandura (1977, 1997) has asserted that the scope of generality within self-efficacy is limited to similar domains (i.e., If we have confidence in our underwater basket weaving ability, that would generalize to our underwater cross-stitching ability).

The notion of self-efficacy beliefs that generalize to other, less related domains (i.e. efficacy beliefs in reading ability generalizing to efficacy beliefs in writing ability) is controversial because it goes against his operationalization of self-efficacy theory. More recently, researchers have become more intrigued by the idea of a more "trait" like global dimension of self-efficacy, labeled general-self-efficacy (GSE) (Chen, Gully, & Eden, 2001).

General Self-Efficacy

General/global self-efficacy is thought by some to be derived from task specific self-efficacy; that is, it is defined as individuals' perception of overall ability to perform successfully across a wide variety of achievement situations (Chen, Gully & Eden 2001, Jerusalem & Schwarzer, 1992, Shelton, 1990; Sherer et al 1982; Tipton & Worthington, 1984). Theory and empirical research support that an individual's past experiences with success and failure in a variety of situations should result in a general set of expectations that would be carried into new situation (Swann, Pelham, Brett & Krull 1989). Swann et al. (1989) found that we have a self-maintenance system in which we seek feedback from others that maintains both our positive and negative self-perceptions. Tesser (2000) argued that we perceive things so as to maintain positive self-perceptions. Such expectations would contribute to individual differences in attitudes and performance.

Because personality has been considered a stable form of individual difference (Costa & McCrae, 1989), it might be assumed that personality has an influence on an individual's beliefs about both task-or domain-specific efficacy and global efficacy. Indeed, it is even possible that some aspects of personality or GSE are the same constructs. Considering the similarity of the definition of GSE and the Conscientiousness

component of personality, it is important to determine whether personality and GSE are independent constructs. Ashby & Kottman (2000), in a study on the relationship between the Adlerian construct of personality priorities and self-efficacy, found that participants with achieving personality priorities had higher levels of GSE than those with outdoing, pleasing, or avoiding personality priorities. Similarly, some researchers have suggested that self-efficacy is an important mediator of the conscientiousness-performance relationship (Chen, Casper, & Cortina, 2001). Eden (2001) suggests that as the task complexity increases, GSE may be more useful in explaining how individual differences (personality) influence task performance, than task specific self-efficacy. These findings support the fruitfulness for further investigation of the association(s) between GSE and personality dimensions.

Personality

The Big Five model of personality describes the five major dimensions of adult personality: Neuroticism, Extroversion, and Openness to New Experiences, Agreeableness, and Conscientiousness (McCrae & Costa, 1986). Examining these five personality attributes can shed light on which ones might be positively or negatively correlated with GSE. Identifying specific relations between the two constructs would produce greater understanding of the conditions under which self-beliefs and or personality factors generalize to differing activities.

Purpose

The purpose of this study was to explore the meaning of global/general self-efficacy. To do so, global self-efficacy was examined for its similarity to task/domain-specific self-efficacy and for its overlap with personality.

The following questions were asked. (See Table 1 for description of measures of constructs.)

1.Is general self-efficacy an independent construct as measured?

2. Among the specific domains of personality and the specific domains of self efficacy, which predict GSE the best?

CHAPTER 2

REVIEW OF LITERATURE

Having been educated in the Freudian tradition of drive theory, White concluded that drives explicated by Freud were inadequate for explaining all motivation(White, 1959). White articulated a rationale for a new drive that would be more useful in explaining much of behavior. He called it effectance motivation and referred to it as the drive for competence. Without naming it, his observations led him to think about the importance of self-efficacy. The following sums up White's view of the shortcomings of drive theory.

> I consider it necessary to treat competence as having a motivational aspect and my central argument will be that the motivation needed to attain competence cannot be wholly derived from sources of energy currently conceptualized as drives or instincts. We need a different kind of motivational idea to account fully for the fact that man and the higher mammals develop a competence in dealing with the environment, which they certainly do not have at birth and certainly do not arrive at simply through maturation. Such an idea, I believe, is essential for any biologically sound view of nature (White, 1959).

An internal drive of humans for interaction with the environment that developed through an accumulation of knowledge and skills was what White (1959) termed effectance motivation. Effectance motivation is not a haphazard behavior brought on by an excess of energy. Rather, it is selective, purposive, and persistent. The motive is not derived

from internal drives, but rather from an internal desire to manage the external world. The experience produced by such management is characterized as a feeling of efficacy. Effectance motivation produces a desire for the feeling of efficacy, not for the crucial learning that comes as a consequence. Gecas and Schwalbe (1983) described effectance motivation as a person's experience of themselves as causal agents of their environment. White (1959) chose the word competence to refer to a human's capacity to interact effectively with its surroundings.

Harter (1999) considered the concept of effectance motivation as a component that falls under an umbrella concept she has called global self-esteem. Also under the global self-esteem umbrella are power or control, moral worth, and acceptance. These facets of global self-esteem provide a more detailed more detailed manifestations of self. For example, competence in individuals would include, peer relationships, problem solving skills and math skills. Harter goes on to say that in order to maintain positive self-evaluations of competence one does not have to be the best of the best in the games of life. More accurately, individuals need a number of areas in which there is a good match between level of competence and the value placed on the domain by the individual. Moreover, in order to develop efficacy-based self-esteem, individuals must have the opportunities to experience efficacy in valued contexts of action (Harter, 1999). Yarrow et al. (1983) translated effectance motivation into a more testable form. They called it mastery motivation, and defined it as striving for competence or an effective action in dealing with the environment.

As studies of competence and self-efficacy have evolved, several investigators have questioned whether theoretically the construct of self-efficacy is distinct from self-

esteem. The difference between the two however, seems apparent in their conceptualization. Theorists conceptualize self- esteem as a person's beliefs about self-worth and self-acceptance; self-efficacy is conceptualized as a person's beliefs about their ability to perform successfully (Harter, 1999, Gecas & Schwalbe, 1983).

Efficacious action as the basis for self-esteem is in principle different from esteem that is based upon the opinions of others. Franks and Marolla (1976) differentiated the two as inner and outer self-esteem. Inner self-esteem is earned through one's own efficacious actions, whereas others (through their approval/disapproval) affect outer self-esteem of the individual. The overlap of these two sources occurs when, for example, one is praised by others for a performance and then uses the appraisals as evidence of one's own competence. Epstein (1973) argued that from infancy onward, self-esteem is closely tied to feelings of self-efficacy. As it develops, self-esteem is associated with the more general cumulative sense of competence. (GSE)

Few have explored whether the concept of general self-efficacy is distinct empirically from specific self-efficacy. The GSE construct is still in the early stages of development. The development of the GSE construct was done by early sociological and social psychological researchers (Gecas, 1976; Frank & Marolla, 1982; Rosenburg, 1976) who found evidence that supported the hypothesis that individuals with high general self-efficacy gave more effort and persevered on task longer than those with weak general self-efficacy. As noted in the introductory section of this paper, general self-efficacy has also been proposed as an aspect of personality. To clarify these positions, I will first discuss domain specific self-efficacy, then general self-efficacy, and

then briefly overview some of the reasons for the conceptual overlap of efficacy and personality.

Specific Self-Efficacy

During the 1970s, social cognitive theory captured the imagination of self theorists, particularly psychologists. It served as a framework for understanding self-efficacy. Social cognitive theory (1977, 1997) maintained that individuals possess a self-system that gives them authority over their thoughts, feelings, and actions. It includes the individual's cognitive structures in the self system and proposed that the structures help to interpret interactions with the outside world. The self-system included self-reflection, which Bandura (1982) termed "the most uniquely human characteristic." Through self-reflection, individuals can examine their own thoughts and experiences. Self-reflective judgments include perceptions of self-efficacy.

Self-beliefs are formed as individuals evaluate the consequences of their behavior, then use those evaluations to create beliefs about their capacities to behave in similar ways in the future. Those beliefs are often better predictors of future actions than are their actual capacities for accomplishment (Bandura, 1977). For example, in middle school/junior high school, a student's perception of academic ability helps to determine which specific courses are selected. In this way, beliefs about past performance influence future achievement. Research findings strongly support Bandura's contention that efficacy beliefs mediate the effect of skills or other self-beliefs on subsequent performances (Kane et al., 1996; Lent, Brown, & Hackett, 1999; Pajares & Johnson, 1996; Weiss et. al., 1989). An illustration of the mediation effect would be: if a student believes that she passed an exam because she studied successfully (diligently enough to

master the material), then she is likely to study in the same manner for future exams and would believe that she would be proficient in the subject matter.

Bandura (1977, 1998) contended that efficacy beliefs help individuals determine the amount of effort they will invest in a given activity, how long they will persevere in the face of obstacles, and their resilience amidst adversity. Greater self-efficacy leads to greater effort, greater persistence, and greater resiliency, (Bandura, 1977; Masten, 2000; Masten & Coatsworth, 1998).

Efficacy beliefs also influence the levels of anxiety and stress individuals experience when faced with particular tasks. For example, high efficacy helps create feelings of calmness in approaching difficult tasks and activities. On the other hand, individuals with low self-efficacy may perceive situations as more difficult than they really are, a response that can cause stress, depression, and a limited perspective on how to complete a task successfully. Moreover, levels of task-induced negative affect can influence individual performance. This can be seen in a situation such as a student who hates math, preparing for a math test. The student may have actually mastered the material, but due to the stress brought on by low efficacy in the subject, he/she performs poorly on the examination. Consequently, how individuals perform can often be better predicted by their perceptions of their ability to succeed than by what they are truly capable of accomplishing. This effect has been observed for both academic and athletic performance (Kane et al., 1996; Lent et al., 1999; Pajares, 1996; Weiss et al., 1989).

Pajares and Miller (1997) examined perceived self-efficacy in mathematics and problem solving among eighth grade students. They found that variations in performance were associated with the variations in the predictive power of self-efficacy beliefs.

Students' performance was influenced by their confidence in their ability to perform successfully in the format of a particular exam (i.e., fill in the blank, multiple choice, etc.).

Kane et al. (1996) examined the association of self-efficacy with personal goals and self-regulation among wrestlers. Contrary to their expectations, self-efficacy effects were mediated by personal goals; that is self-efficacy affected performance indirectly rather than directly. This finding, however, differs from Bandura's mediation theory. When comparing prior ability, personal goals, and self-efficacy beliefs among wrestlers in overtime performance (when the winner could not be determined during regulation competition and they had to compete longer than expected to determine a champion), self-efficacy beliefs did serve as a mediator and were the strongest predictor of the wrestler who came out of the match victorious. The authors suggested that Bandura's (1997) proposition, that strong self-efficacy beliefs influence performance by increasing individuals' effort and perseverance in challenging situations help explain why self-efficacy predicted successful overtime performance, above and beyond personal goals and prior performance. The results also indicated that coaches could enhance their wrestlers' self-efficacy beliefs by working with them to set challenging yet attainable goals.

Pajares and Johnson (1996) examined the association of self-efficacy beliefs with ninth grade students' essay writing performance. They found that self-efficacy beliefs had significant effects on performance even after controlling for previously assessed writing aptitude. Some students lacked confidence in their writing as a result of past negative experiences or present difficulty with writing. In social cognitive theory this effect is

called the "perseverance phenomenon". After an individual acquires certain beliefs (e.g., "I'm not very good at writing because I've done poorly on writing assignments"), these beliefs persist even when the individual is presented with information contradictory to the acquired perception (i.e., the individual who previously did poorly does exceptionally well on subsequent writing assignments; Bandura, 1977, 1998).

Pajares and Johnson (1996) identified two implications from their study. First, teachers should try to keep students from forming persistent negative perceptions of their abilities. Academic difficulty and failure should be framed as temporary problems that can be changed through persistent effort. Second, teachers should help students increase both their confidence and their competence, creating a positive feedback loop in which these constructs enhance each other. Pajares and Johnson concluded that researchers should examine students' beliefs about their academic skills and the origins of those beliefs. The information could be used to enhance students' beliefs, which in turn would enhance their motivation and performance.

Taris and Semin (1998) examined the association between mothers' parenting styles and adolescents' sexual self-efficacy (the degree to which adolescents feel able to discuss sexually sensitive issues with a potential sexual partner). Their results indicated that maternal involvement fostered high self-efficacy, whereas maternal control detracted. The researchers theorized that mothers who are involved with their children and emphasize autonomy promote an internal locus of control (the feeling that one has control over the events in one's life), which in turn increases children's feelings of sexual self-efficacy.

Bandura suggested that there are four primary sources from which self-efficacy beliefs originate. They are presented here in order of the strength of the source; that is, Bandura considered mastery experience to have the most powerful influence on efficacy beliefs. The four sources are: mastery experience, vicarious experience, verbal persuasion, and physiological states.

Mastery experience, the perceived result of one's performance, is the most influential source of self-efficacy beliefs. Individuals judge the consequences of their actions and these judgments can contribute to efficacy beliefs. Success raises self-efficacy and failure lowers it.

Vicarious experience, through a significant other that models achievement, also contributes to self-efficacy. For example, students are likely to develop confidence in their abilities when a highly regarded teacher provides an example of academic excellence. Peers are also important models, particularly for adolescents.

Verbal persuasion, involves feedback from others regarding one's capabilities and also helps to determine self-efficacy. Family members, peers, teachers, and others can have a lifelong influence on a young person's perception of ability.

Physiological states, such as anxiety, fatigue, and stress, also contribute to self-efficacy beliefs. To the extent that individuals can alter their thinking, they can also influence their own physiological states. For example, an individual experiencing extreme fear when required to speak before a large group can engage in self-reassurances, reducing fear by deliberately focusing thoughts on successful performance.

However, it is likely, taking into consideration individual differences, that these sources identified by Bandura do not influence all individual self-efficacy beliefs in an

identical fashion. For example, even though successful completion of an assignment (mastery) is expected to have the greatest influence; in some cases, due to reflective thinking, positive feedback received on performance from a teacher (verbal persuasion) might have the greatest influence.

Bandura (1977, 1997) maintained that the personal mastery experiences that contribute to efficacy expectations generalize to actions other than the target behavior, but only across similar domains. For example, if a person was confident about poetry writing ability, he or she might also feel efficacious about fiction writing ability.

Some researchers believe that self-efficacy, as presented in Bandura's social cognitive and learning theories tends to be narrow in scope (Chen, Gully & Eden, 2001, Eden, 2001, Gecas & Schwalbe, 1983, Gardner & Pierce, 1998, Shelton, 1990; Wang & Richarde, 1988). With the role that strong general self-efficacy theoretically plays in the success of human functioning, Shelton (1990) argued for more examination of the construct and the development of valid measurement of general self-efficacy.

General Self-Efficacy

General self-efficacy (GSE) refers to an internal desire to manage the external world successfully/competently. It is thought to be cumulative and to be reinforced by perceptions of success. Several researchers have operationalized the construct through formulation of measures of GSE (Cowen et al., 1991; Jerusalem & Schwarzer as cited in Schwarzer, 1992; Sherer et al., 1982; Shelton, 1990; Tipton & Worthington, 1984). These instruments were designed to measure the relatively enduring belief that one can cope effectively in a broad range of situations. Results of these studies support the notion of a global sense of confidence as measured by the instruments. Sherer et al. (1982) focused

on past experiences with success and failure in a variety of situations that should result in a general set of expectations that the individual carries into new situations.

Tipton and Worthington (1984) focused more on individuals' perceptions of their ability to perform across a wide variety of situations that are challenging and require effort and perseverance; in other words, cognitive appraisal of one's competence to deal with challenges and stick with general tasks. They found that individuals have generalized self-efficacy that is measurable, and that it explains a significant portion of their performance across a range of situations. Using Tipton and Worthington's measure along with measures of domain specific self-efficacy, Wang and Richarde (1988) showed that global and task specific measures assess relatively distinct aspects of the construct of self-efficacy.

Although definitions of generalized self-efficacy all include a general success-oriented attitude, they differ in some specific aspects of the definition. For example, Sherer et al., (1982) attributed a success-oriented attitude to past experience. Gardner and Pierce (1998) suggested that because self-efficacy gradually emerges through accumulated experiences, frequent experiences of personal success both over time and across situations would give rise to general self-efficacy. Tipton and Worthington attributed it to the ability to perform across a wide variety of challenging situations. Hoeltje et al., (1996) attributed it to the belief that one can deal effectively with everyday life problems and challenges at large. The definition Shelton (1990) used is closer to attribution theory. She defined high GSE as composed of more credits to the self for valued success than blame for aversive failures, resulting in an efficacious or success-oriented attitude toward new challenges.

Generalized self-efficacy scales are not intended to replace more specific measures of self-efficacy that assess expectations for specific target behaviors (Sherer et al., 1982). In specific, unambiguous situations exact measures are likely to provide the most accurate evaluation. Sherer's (1982) scale measures general self-efficacy that depends on past experiences and the attribution of success to skill rather than to chance. These expectancies are likely to be manifested in general patterns of behavior and in response to situations about which the individual is quite unfamiliar. Similarly, others have found that in unfamiliar situations, persons rely on general self-efficacy. In their study of global versus task-specific self-efficacy, Wang and Richarde (1988) demonstrated that a GSE measure is more successful for predicting performance in unfamiliar, ambiguous situations. Likewise, Hoeltje et al. (1996) found that youths' general self-efficacy could be more clearly discerned during times when engaged in new experiences. Eden (2001) suggested when predicting complex performances, a measure of general self-efficacy is more useful than measures of task-specific self-efficacy. Wang and Richarde (1988) argued that their results provided evidence that a global scale, such as GSE provides a stable and valid measure of an individual's degree of perseverance for tasks that are vague or occur under adverse conditions. Schwarzer (1992) has reported additional evidence of the importance of general self-efficacy. Examining self-efficacy as a resource factor in the process of stress appraisal, he found that individuals with high-generalized self-efficacy seemed less invulnerable to stressful situations, whereas individuals with low general self-efficacy seemed to experience more anxiety in stressful situations and in experiences of failure. He concluded that general self-efficacy mediates the impact of demands on physiological stress.

Shelton (1990) viewed general self-efficacy as an influence on specific self-efficacy. That is, belief in general self-efficacy supports feelings of efficacy in specific situations. Consequently, she suggested that behaviors and their outcomes affect both specific and general self-efficacy. For example, the outcome, whether negative or positive, of an important challenge such as writing a master's thesis, flows back into the domain-specific area of self-efficacy related to writing, which is part of the general arena of important successes and failures that make up general self-efficacy.

As with specific self-efficacy, controversy is evident as some researchers have argued that measurements of GSE really measure self-esteem (Eden & Kinnar, 1991; Harter, 1983, Stanley & Murphy, 1997). Self-esteem measures include a self-worth component and a self –competence and confidence (efficacy) component. Still, most researchers do not believe that GSE is identical to self-esteem (Rosenburg, 1979; Shelton, 1990; Schwarzer, 1997; Sherer et al., 1982; Woodruff & Cashman, 1993).

On the other hand, because of it's notion of generality, some (Chen, Casper, & Cortina, 2001, Ramassini, 2000, and Shelton, 1990) have suggested that GSE may be the same thing as personality or at least an aspect of personality. According to Hoeltje et al., (1996), little data exists on sources of children's and adolescents' GSE beliefs. This is a significant field of research, especially in view of the suggested role of self-efficacy in resiliency outcomes (Masten, 2000, Masten & Coatsworth, 1998).

Personality

Personality can be used to describe individual inclinations to be confident and resilient. Personality theory is important for guiding our understanding of individuals, with emphasis on an underlying structure that gives meaning to who we are and how we

develop, mature, and change with time (Piedmont, 1998). Although the Five-Factor Model (FFM) of personality is relatively new, the effect of personality on human agency has been well-documented (Bandura 1997, Costa & McCrae, 1989, Kohnstamnn, Halverson, Mervielde & Havill, 1998). Digman (1996) suggested that while the FFM is not a complete theory of personality, the model, over the past ten years has been found to be a useful model of personality for individuals in various cultures, and of different ages (Digman, 1996).

The newer personality inventory (NEO-PI) was developed by Costa and McCrae (1985). It was based on their studies of personality and aging. It measures the five dimensions of adult personality: Neuroticism, Extraversion, Openness to Experience, Agreeableness, and Conscientiousness. The revised NEO-PI (NEO-PI-R) yields a factor structure that is easily replicated (Costa & McCrae, 1987, Piedmont, 1998).

Ramassini (2000) argued that general self-efficacy as defined by Tipton and Worthington (1984) shows considerable similarity to the personality component of Conscientiousness (determined, goal-oriented, committed, and not quick to give up on a task). She found that parents with strong GSE were also highly conscientious. She cautioned that further exploration of the similarity between the constructs of GSE and Conscientiousness is needed. In addition, Chen, Gully, and Eden (2000) found that GSE is positively related to other motivational traits, including need for achievement and conscientiousness.

It is possible that the positive and negative characteristics of each of the five factors of personality might predict associations between the factors and the construct of general self-efficacy. For example, Judge et al (1997) found GSE strongly related to self-

evaluation constructs (i.e., self-esteem) and suggested that GSE is related to locus of control and Neuroticism. Neuroticism is reflected in characteristics such as anxiety, depression, impulsively, insecurity and vulnerability, and it is associated with ineffective coping mechanisms such as violent reactions, withdrawal, self-blame, and indecisiveness (Costa & McCrae, 1986). These characteristics are expected to be associated with low scores on measures of general self-efficacy.

To assess the construct validity of their measure of general self-efficacy, Sherer et al (1982) correlated scores on their Perceived Self-Efficacy instrument with measures of several other personality characteristics. They found theoretically appropriate correlations between MMPI subscales and their GSE scale. However, the question of whether the MMPI is an adequate measure of personality calls for the need of more studies looking at the relation between personality and GSE. There have been no studies of the association between general self-efficacy and the major factors of adult personality. However, there is both theoretical and empirical evidence for some overlap of general self-efficacy with personality. Individuals with high self-efficacy are more likely to attempt new behaviors (Sherer et al., 1982) something that is characteristic of individuals who score high on the Openness dimension of the NEO-PI. Individuals with strong general self-efficacy beliefs are also likely to persist in novel behaviors, another trait of individuals who score high on the Conscientiousness factor. Hoeltje et al (1996) found in their examination of GSE and families and adjustment problems, that individuals with high GSE had fewer mental health problems and higher achievement, suggesting that individuals with strong general self-efficacy will not score high on Neuroticism.

Harter (1982) also has argued for the examination of the associations between self-efficacy and personality. She suggested breaking down effectance into more specific components, such as the desire for challenge, curiosity, and task accomplishment. These components are similar to attitudes and beliefs that are measured in the NEO-PI-R.

Ashby and Kottman (2000) explored the relation between personality priorities, affect, depression, self-efficacy, and fear of intimacy. They measured individual personality priorities from an Adlerian perspective using five dimensions of the Langenfeld Inventory of Personality Priorities (Langenfeld & Main, 1983): Pleasing, Achieving, Outdoing, Detaching, and Avoiding. They found significant associations between these personality priorities and general self-efficacy, social self-efficacy, and positive affect measures. Individuals with Achieving personality priorities had higher levels of general self-efficacy than those for whom the personality profiles were Outdoing, Pleasing or Avoiding. In addition, the participants who scored high on the Achieving priority also had higher social self-efficacy and positive affect scores than those with Pleasing personality priorities.

In the looking at the history of construction of a reliable/valid measure of personality, it is understandable that the plethora of personality measures could be overwhelming to choose from. This is why the taxonomic approach of the FFM has been so attractive to researchers. The lexical version of the FFM is derived from examining the words and phrases people actually use to describe themselves and others they know. This, along with evidence for reliability and validity, explains its popularity and acceptance as a useful measure of adult personality (Kohnstamnn, Halverson, Mervielde & Havill, 1998).

Summary

The notion of effectance motivation was developed as a way to explain human behavior that, according to White (1959), was not well explained by Freudian drive theory. The importance of perceived competence to confidence and success was well accepted by the early 1970s. Although initially conceptualized as a general perception of efficacy Gecas (1989), Harter (1983) and especially Bandura (1977) were instrumental in promoting the idea that feelings of efficacy are maintained from one domain of experience to the next. As powerful and influential as was their theorizing, others continued to believe that all perceived self-efficacy is not specific to a particular domain or behavior. They suggested that the construct of general self-efficacy is valid, that it is not necessarily the "sum" of specific self-efficacies, and that it is more useful for understanding attitude, perseverance, and success in unfamiliar or complex situations.

Because of its generality, the notion of general self-efficacy appeared to some to be more like a personality characteristic than an acquired belief (Shelton, 1990). Indeed, it is readily apparent that aspects of personality overlap with qualities associated with general self-efficacy. The need to clarify the relation between specific forms of self-efficacy and general self-efficacy is clear, as is the importance of understanding the relation of self-efficacy to personality. There are issues addressed in this study.

CHAPTER 3

METHOD

The participants included a sample of 175 undergraduate students at the University of Georgia who agreed through formal consent to participate in the study. The age range was 18-23 years. The mean age was 21 years. Questionnaires completed by persons older than 23 were not used. Of the sample, 60 % were female. Eighty-nine percent were of white European ethnic heritage. A t-test to determine if there were gender differences was calculated for each measure. No significant differences were found so no control for gender was used.

Data were collected in 4 classes and in the psychology research pool. A record was kept of each class in which data were collected, and a one-way analysis of variance was used to compare scores across classes to determine if there was a bias in any classes. There were no significant differences on any of the measures, so no control for class was used.

Because it might have been possible to obtain differences in self-efficacy in different ethnic groups, ethnic heritage was used to compare scores on all measures. (Oettinngen, in Bandura, 1988). No significant differences were found so no control was used for ethnic heritage.

Questionnaires were distributed to participants in their classrooms at the University of Georgia. The teaching assistant or professor introduced me to the class, and I explained to the class that I was conducting a study on perceptions of self for my

Master's thesis. I told them I was asking them to complete a questionnaire that should take them approximately 20-30 minutes. It took about five minutes to complete the introduction and instructions.

I explained that I was collecting data in several classrooms and that they should participate only once and that if they participated by filling out the packet of questionnaires they would be entered in a drawing to win a pair of movie tickets. Questionnaire packets were distributed to all students who were present. I told participants that I would return in two weeks to collect their consent forms and completed questionnaires, and to give them their lottery ticket for a chance to win a pair of movie tickets. Participants in the Psychology research pool were not offered a lottery ticket because incentives are not allowed in the research pool.

When I returned to the first class of participants to collect their signed consent forms and completed packet of questionnaires (two weeks later), I was at the door with two boxes. Each participant placed his or her consent form in one box (Box A). I held their questionnaire while they wrote their name on my sheet of paper; then I handed them a lottery ticket (their half had a number on it and my half will had a number, their name, and mailing address on it) and placed their questionnaire packet in Box B. By having consent forms in Box A and completed questionnaires in Box B, there was no way I could match a questionnaire to a name.

When I went to the other classes to collect the completed questionnaires, I followed the same procedures as I did in the first class except when they returned their questionnaire packets, I checked their names against my roster of participants I have already collected data from in the other class. If their name was already on the list, I put

their questionnaire in a third box (Box C); a box designated for duplicate data. As requested by the Internal Review Board, those who participated more than once were given lottery tickets for each participation. After each data collection, I returned to my office and immediately shredded all of the data in Box C.

Participants completed an 8-page questionnaire. The questionnaire contained one measure of general self-efficacy beliefs, one measure of domain- specific self-efficacy beliefs, and one measure of personality. Demographic questions included age, sex and ethnicity.

General Self-Efficacy

The items of the GSE (Tipton & Worthington, 1984) measure an individual's outlook concerning his/her perceived competence for performance across a variety of challenging activities that require persistence and effort. The GSE contains 10 items with a Likert-type response format. Answers range from 1 (strongly agree) to 7 (strongly disagree). Some items are written in the negative, and those responses were reversed before analysis. A high score means high general perceived self-efficacy.

In a sample of college students, Lennings, in a study using Tipton and Worthington's measure of GSE, (1994) estimated internal consistency to be, $\alpha = .83$. This measure has been the most widely used and accepted measure of general self-efficacy in both psychological and sociological literature (Lennings, 1994; Shelton, 1990). In this study Cronbach's alpha estimate of internal consistency was $\alpha = .82$.

Domain Specific-Efficacy

The SDQ III (Marsh, 1999) This questionnaire was designed to measure specific aspects of self-concept. Some of the subscales are very similar to specific aspects of self-

efficacy; the subscales measuring physical ability, physical appearance, same sex peer relations, opposite sex peer relations, honesty/ trustworthiness, maths, verbal, academic, problem solving, and general esteem, was used in this study. The reason for using this measure was the strong support for construct validity of both self-concept and interpretations based upon the SDQ III (Marsh &, O'Neill, 1984). The measure contains 150 questions designed to measure 13 factors of self-concept. These dimensions were identified with conventional and confirmatory factor analysis. In two different studies, the reliabilities of the 13 factors were high with an average alpha for the two, $\alpha = .89$. The average of correlations among factors was low, $r = 0.09$. Responses are made on a Likert-type scale with answers ranging from 1 (definitely false) to 7 (definitely true). On the subscales used in this study, a high score means high efficacy in whatever that scale was measuring. In addition to efficacy subscales, this measure contains a general self-esteem subscale.

In this sample, Cronbach's alpha for each subscale was as follows: physical ability, $\alpha = .90$; physical appearance, $\alpha = .92$; same sex peer relations, $\alpha = .90$; opposite sex peer relations, $\alpha = .79$; honesty/ trustworthiness, $\alpha = .81$; math , $\alpha = .95$; verbal, $\alpha = .89$; academic, $\alpha = .84$; problem solving, $\alpha = .78$ and general esteem, $\alpha = .94$.

Personality

The short version of Form S of the NEO -Five Factor Inventory (NEO-FFI; Costa & McCrae, 1989) was developed to measure personality. The NEO-FFI was developed from a sample of 983 men and women. The validimax method was used to rotate factors to maximize convergent and discriminant validity with the NEO-PI factors. Twelve items for each domain having high positive and high negative loadings were selected

from the initial 180 items from the NEO-PI. The NEO-FFI and NEO-PI factors correlate with ranges between .75 and .89. Costa and McCrae (1989), using Cronbach's alpha, estimated internal consistency: Neuroticism α = .89, Extraversion α= .79, Openness to Experience α=. 76, Agreeableness α = .74, and Conscientiousness α= .84 (Costa & McCrae, 1989). The internal consistency and discriminate validity of the NEO-FFI has been judged to be adequate in studies by Allen (1993), Ramassini (2000). This version of the NEO was used in this study because it is much shorter (60 questions) than the longer version of the NEO (180 questions).

The NEO-FFI consists of 12-item subscales that measure five dimensions of adult personality: Neuroticism, Extraversion, Openness to Experience, Agreeableness, and Conscientiousness. Responses are made on Likert-style scale of 1(strongly disagree) to 7 (strongly agree). A high score on each subscale means a higher level of the dimension as named (e.g., a high score on the Neuroticism scale means a high level of Neuroticism). In this sample, reliability of each subscale was as follows: Neuroticism, α=. 90; Extraversion, α=. 81; Openness, α=. 72; Agreeableness, α=. 74 and Conscientiousness, α=. 84.

Analysis of Data

All items were standardized within scale before analyses were conducted. Distributions of scores were examined for variability on items. Acceptable variability was observed, and measures were correlated as expected.

The first question was answered by examining zero-order correlations among all scores, factor analyzing personality and GSE items, factor analyzing personality and

domain specific self-efficacy scores, factor analyzing personality subscale scores and GSE, and factor analyzing domain specific self-efficacy scores and GSE. The second question was answered by regressing the GSE score on dimensions of personality and domain specific self-efficacy, GSE on personality subscale scores, and regressing GSE on only the domains of specific self-efficacy scores. Results of these analyses follow.

CHAPTER 4

RESULTS

The meaning of generalized or global self-efficacy (GSE) was explored in this study. Personality and task/domain self-efficacy were examined in relation to GSE. Domain specific self-efficacy was examined for its similarity to GSE and personality was examined for its overlap with GSE.

Variability was examined at the item level. Although all items were not normally distributed, there clearly was variability in the answers to each question. With this assurance, analyses of research questions proceeded.

Is General Self-Efficacy an Independent Construct As Measured? To answer the first research question, first, correlations were calculated for the dimensions of personality, dimensions of domain specific self-efficacy, and general self-efficacy. As can be seen in Table 2, there are correlations between self-efficacy domains, and personality dimensions, and GSE. Considering personality, GSE was most related to the Conscientiousness dimension of personality, $r = .56$ $(2, 173)$ $p < .01$, two-tailed.

In addition, GSE was significantly, positively correlated with 6 of the 9 specific self-efficacy dimensions, but most highly correlated with the problem solving subscale, $r = .50$. The General Esteem subscale yielded the second highest correlation with GSE (of the specific self-efficacy subscales), $r = .44$.

Considering intercorrelations among subscale scores, both same sex and opposite sex peer relationships were most highly related to the Extroversion dimension of

personality, r=. 37, and r=. 45, respectively. Physical Ability, Physical Appearance, and Math efficacy were most highly correlated with Neuroticism, r =-. 41, r =-. 46, r =-. 21, respectively. Trustworthiness/Honesty was most highly related to Conscientiousness, r=. 40. Verbal self-efficacy was most highly related to Openness, r=. 34 and Academic efficacy was most highly related to Conscientiousness, r=. 44,

Considered from the perspective of personality, Neuroticism was significantly/negatively related to eight of the nine domains of specific self-efficacy at the .01 level of significance, but most highly related to General esteem r=-. 53 and Physical Appearance, r. -. 46. Extraversion was most highly related to Same Sex Peer Relations, r=. 45. Openness to New Experiences was most highly related to Problem Solving Efficacy, r=. 48. Agreeableness was most highly associated with Trustworthiness/Honesty self-efficacy, r=. 37. As said earlier, Conscientiousness was found to be most related to GSE, r=. 56.

To obtain a more complete picture of the correlations among these constructs, an item level factor analyses was calculated (See Table 3). It was a principal axis analysis rotated to a varimax criterion. Looking at the scree plot, it appeared that there were 5 useful factors. The first factor explained 15% of the variance, and it was indicated primarily by Neuroticism items. The second factor explained 7.2% of the variance and comprised most of the conscientiousness items and the GSE items. Subsequent factors were Openness (6.7% variance), Extraversion (5.9% variance), and Agreeableness (5.6% variance). At the item level, it appeared that there was considerable overlap between conscientiousness and general self-efficacy.

A second factor analysis was calculated using the subscale scores for domain specific dimensions of self-efficacy, general self-efficacy and personality dimensions. As can be seen in Table 4, it appears that general self-efficacy again overlaps with conscientiousness. Twenty-one percent of the variance in this analysis was explained in the first factor. However, when the percent of variance extracted from each subscale score is considered, a question is raised about the relevance of conscientiousness to the latent variable represented in factor one. As can be seen in the variance extracted column, 66% of conscientiousness was explained in the entire factor analysis. Thus, it appears possible that the construct of general self-efficacy is somewhat influenced by personality/conscientiousness.

These results suggest that there is some overlap of personality and self-efficacy. At the bivariate level of analysis, Neuroticism and Extraversion appeared to be particularly highly related to self-efficacy. At the multivariate level of analysis, conscientiousness and general self-efficacy served as indicators of the same latent construct. However, so little of the variance of conscientiousness was used in the analysis of subscale scores, it cannot be concluded with certainty that conscientiousness and general self-efficacy are the "same" construct. A third factor analysis was conducted, using Principal Axis Factoring and rotated to a varimax solution. This analysis included all the domain specific self-efficacy and personality subscales. The results of this analysis are found in Table 5. The pattern of results was logical, but helped little to understand what the relations between general self-efficacy and personality might be. A factor analysis conducted with only the GSE score and personality dimensions indicated

again the relevance of conscientiousness to GSE. However, again, GSE dominated Factor 1 and little of the variance in Conscientiousness was extracted (See Table 6).

As a final examination of independence, a factor analysis of GSE with only the domain-specific self-efficacy scores was calculated. As can be seen in Table 7, GSE loaded on the third factor (a factor which accounted for only 15% of the variance in this analysis). The only other variable that could be considered to load with GSE was Problem Solving, and it also loaded on the third factor. As with Conscientiousness, little variance in Problem Solving (34%) was extracted for use in the analysis. These analyses suggest that when GSE was considered with personality dimension scores and domain-specific self-efficacy scores, there is some overlap with Conscientiousness and Problem Solving, but not enough to consider these even equal partners in indicating a latent variable. GSE appears to be independent.

The second question provides yet another look at the relation of the constructs of self-efficacy and personality. This question involves the prediction of general self-efficacy.

Among the specific domains of self-efficacy and the domains of personality, which predict general self-efficacy the best? In order to answer this question, GSE was regressed onto personality subscales and domain-specific self-efficacy subscales. Within the linear combination of predictors, the Conscientiousness dimension of personality was the best predictor of GSE. Perceived efficacy in Problem Solving and Agreeableness (personality) were the only other significant contributors to the predictor equation. See Table 8 for these results.

Because of the great discrepancy in the numbers of males and females, I could not be certain whether these results were equally applicable to both males and females. Thus, the regression analysis was calculated separately for males and females.

For females, the results were virtually identical to results from the combined analysis. Conscientiousness and problem solving, along with General Esteem, were the best predictors (Table 9). However, in the sample of males, Extroversion contributed most to the prediction equation followed by Conscientiousness. There were not enough males in the sample (n=65) to be confident of these results; but, in their favor, the $\underline{R}^2$ was significant. ($\underline{R}^2$= .60, and the adjusted $\underline{R}^2$ was .44 (see Table 10).

The regression analyses confirmed again the relevance of personality to general self-esteem, especially Conscientiousness. However, none of the multivariate correlations exceeded .50, leading to the conclusion that Conscientiousness certainly shares variance with General Self-Efficacy, but it is not the same thing.

Because of these results, and after observing significant predictors of GSE, I decided to regress GSE on the personality subscales only, to achieve a clearer picture of the association between Personality and GSE. (See table 11). Interestingly, when domain-specific self-efficacy scores were taken out of the equation, all dimensions, with the exception of Extroversion, were significant predictors of GSE. Clearly Conscientiousness was the best predictor of GSE. Still, with all of the personality subscales, less than 50 % of the variance was accounted for in the linear regression. In the context of social sciences research, that is a lot of explained variance. This means personality, especially Conscientiousness, is a good predictor of GSE. However, this also means that more than 50% of the variance in GSE was not explained. This clearly

indicates that although GSE and Conscientiousness share variance, they are not the same construct.

CHAPTER 5

DISCUSSION

This study involved an exploration of the meaning of GSE. Although exploratory in nature, the findings proved to be interesting. Moreover, evidence supporting the need for future examinations of GSE was clear.

The primary goal of this study was to explore the idea of general self-efficacy as an independent construct. From White's (1959) paper on effectance motivation, we see just how far efficacy theory has come. We are indebted to him for his articulation of the construct. Recent literature examining self-efficacy has highlighted the extent to which high general self-efficacy beliefs benefit individuals (Bandura, 1997, Shelton, 1990, Tipton & Worthington, 1984). Because of the importance of self-efficacy, it is important to know whether it is multiply indicated (i.e., it has multiple dimensions) and if general self-efficacy is related to domain specific self-efficacy. Also, it is important to know whether self-efficacy is a separate construct or if it is embedded in personality.

The method I used to consider this question was to examine the validity of a measure of GSE. This particular measure was chosen because Lennings (1994) used this measure in a sample of college students (1994) and reported internal consistency to be high, $\alpha = .83$. Also, this measure has been the most widely used and accepted measure of general self-efficacy in both psychological and sociological literature (Lennings, 1994; Shelton, 1990).

Bandura (1998) and Harter (1999) each viewed self-efficacy as a domain or task oriented construct. Bandura did not examine efficacy at the global level; instead, he considered efficacy at the domain level, and the occurrence of reflective efficacy beliefs across similar domains. Findings in this study that are similar to Bandura's were; the significant correlations of opposite sex peer relations and same sex peer relations r (2, 173) =. 21. p<. 001 and problem solving and academics r= .44, p<. 001. Indeed, these data support the notion that there are specific domains of self-efficacy as Bandura and Harter conceptualized, but GSE and specific domains of self-efficacy do not appear to be the same thing. Taking this into consideration, it is helpful to observe how GSE is related to specific self-efficacy.

The significant bivariate correlation between problem solving efficacy and GSE, r=. 50, p<. 01 is particularly interesting. This correlation makes sense because GSE measures individuals' beliefs about their ability to complete everyday tasks successfully, their level persistence, as well as their perseverance. All of these behaviors are involved in successful problem solving skills. Confirmation of the association of GSE and Problem Solving was found in factor analysis. However, the factor analysis clarified that Problem Solving and GSE should not be considered the same construct. The loading of Problem Solving on the GSE factor was low, and only a small part of Problem Solving overlapped with any of the variables in the analysis, as indicated by the amount of variance in Problem Solving that was used in the analysis. Problem Solving was also the only domain of specific self-efficacy that was useful as a predictor of GSE. Thus it may be a predictor, but problem-solving efficacy clearly is not the same construct as GSE. Bandura

and Harter have argued effectively for the domain-rooted conceptualization of efficacy, so it is surprising that these data did not support their findings.

Others have suggested that general self-efficacy is one expression of personality. Ashby and Kottman (2000) reported that the personality dimension of Agreeableness (as measured in the Lagenfield Inventory of Personality Priorities, LIPP Lagenfield & Main, 1983) is related to GSE (Ashby & Kottman, 2000). Present data also suggest the Agreeableness dimension of Personality is associated with GSE, but negatively so. Possible lack of similarity in findings could originate from the discrepancy in the two operational definitions of Agreeableness. The LIPP describes an agreeable person as one who attempts to make others happy. This classifies GSE as being related the pursuit of happiness, rather than an overall feeling of confidence in ability to do the things one wants to do. On the other hand, as defined by Costa and McCrae an Agreeable individual is courteous, not cynical or skeptical, someone who is conciliatory, cooperative, charitable, and more concerned with the condition and well being of others than perhaps themselves.

Extroversion on the other hand, was expected in this study to be related to GSE because the description of this dimension (outgoing, full of energy, sociable) includes behaviors that would enhance self-efficacy. In this study Extroversion was found to be significantly related to GSE, $r = .29$, $p < .01$, but only for males. Perhaps further examinations of why Extroversion matters to males and not females when predicting GSE will clarify this phenomenon. Neuroticism has also been reported to be negatively related to GSE (Chen et al., 2001). This study supported that conclusion. However, when other personality and efficacy indicators were included in analyses with Neuroticism, the

partial correlations were substantially lower than the zero-order correlation between Neuroticism and GSE, especially for females.

It is important to note that there is a historic expectation for a difference in sources of self-efficacy beliefs in males and females as well as for strength of the beliefs across gender. Block (1983) reviewed the research on gender-related socialization and found differences between the social orientation of males and females. Her findings are relevant to the results of this study. Some of her findings were that boys were more aggressive, as well as more active, than girls were. Boys displayed more curious and exploratory behavior, and girls were prone to display more anxiety than boys were. In addition, men were more likely to participate in ego-engaging and challenging behaviors than women were. These characteristics of males are consistent with the importance of extraversion for predicting general self-efficacy in males. Similarly, in their well-known review, Maccoby and Jacklin (1974) found males to be more assertive and aggressive, and females to be more anxious.

Block's (1983) report also provided a context for understanding why general self-esteem was not a predictor of GSE for males, but was for females, in this study. In these data, as general-esteem increased for females, so did GSE. Block (1983) reported females were prone to have lower self-esteem than males in general.

Franks and Marolla (1976) and Gecas and Schwalbe's (1983) research on efficacy based self-esteem may also help explain why predictors of GSE differ slightly for males and females. Efficacious action as a basis for self-esteem is different in principle from esteem that is based on the opinion of others (Franks & Marolla, 1976). Efficacy-based esteem is dependent in large part upon externalized expectations from the environment in

which an individual lives (Gecas & Schwalbe, 1983). Additionally, females may act efficaciously and experience efficacy in a way that enhances self-esteem, more than it does for males. In this study general esteem is found to predict GSE in females, but not in males. Perhaps the environment (how society contributes in the socialization of males and females) promotes or hinders efficacious action, as well as influences the meaning that both males and females would give to efficacy.

These qualities are also consistent with my finding of Problem Solving as the most important predictor of GSE among the domain specific efficacies, in females. Therefore, if problem solving is something they would have to "persist at to master" or a goal they would have to " work hard to accomplish", wouldn't feeling efficacious in problem solving give rise to a greater sense of general self-efficacy?

Block (1983) explained that males are more confident in their problem solving (perhaps socialized that way); thus they might not base feelings of efficacy on confidence in problem solving. On the other hand, females would relate feelings of high GSE with confidence in their problem solving because they do not take for granted their ability to succeed in this task.

In this study, conscientiousness was a significant predictor of self-efficacy for both males and females. For males, there was one other significant predictor: Extraversion. For females there were two other significant predictors: problem solving and general esteem. This suggests that GSE may be a slightly more complex phenomenon in females than it is in males.

In this study, when factor analyzed with the 10 items of the GSE (Tipton & Worthington, 1984), the 60 personality items of the NEO-PI (Costa & McCrae, 1989)

clustered very similarly to the Big Five model of personality. However, this analysis was most interesting because of the inclusion of most of the items from both conscientiousness and GSE on the same factor. Also in the factor analysis of subscale scores, Conscientiousness and GSE loaded on the same factor. The near duplication of results of an item level analysis with a subscale level of analysis is very interesting. However, it should be noted that general self-efficacy dominated the factor. Indeed, very little variance from Conscientiousness was used in the factor analysis. This seems to suggest that there is some aspect of Conscientiousness that overlaps with GSE, but Conscientiousness is much more than GSE.

Supported in this study and speculated in past studies (Ramassini, 2001), individuals who have high GSE are also highly conscientious. In these data, Conscientiousness is the best predictor of GSE. This is the association that Ramassini (2000) found in her study of parenting efficacy. She found that parents who had strong beliefs in their ability to parent, were also highly conscientious as well as very confident about their abilities to perform across a wide variety of situations (GSE, as measured by Tipton and Worthington, 1984). Present data suggest GSE has something to do with Conscientiousness, but little association with any other dimension of Personality (with the exception of Extroversion as a predictor of GSE in males). It is not conclusive from this data that Personality and GSE are the same thing.

Although the reliabilities for these measure were high, it still seemed possible that attenuation of correlations lead to stronger support for the independence of personality and GSE that might be warranted. Thus corrections for attenuation were calculated for all variables with GSE. Results of the corrected correlations can be found in Table 12

(Appendix B). As can bee seen in the table, there was some attenuation, but it was not great. Still, the fact that there was any suggests that attenuation should be taken into account before concluding that personality and general self-efficacy definitely are not the same thing.

Finally a point that has been raised in the literature but was not emphasized in this study concerns the independence of general self-esteem and general self-efficacy. In these data, the correlations between dimensions of self-esteem and general self-efficacy are similar to those found in the literature. For example, general self-esteem was significantly correlated with general self-efficacy, r=. 44, p < 001. Allen (1993) Woodruf and Cashman (1993) Stanley and Murphy (1997) found a similar correlation. Woodruf and Cashman compared Sherer's GSE scale and Rosenburg's self-esteem scale and reported a strong correlation r=. 51. In fact, using multiple regression Stanley and Murphy concluded that GSE scales actually measured self-esteem. However, with the limitations of their study, one can only conclude that more research is needed before accepting this conclusion. The debate about the independence of self-esteem and self-efficacy continues (Stanley & Murphy, 1997). As studies of competence and self-efficacy have evolved, researchers have questioned whether theoretically, the construct of self-efficacy is distinct from self-esteem (Gecas, 1983). Theoretically, the difference between the two is evident in their conceptualization. Empirically, researchers have found that there is a moderate association between self- esteem/self-worth/ self-acceptance and feelings about abilities to perform successfully (Franks & Marolla, 1973). Results of this study support the notion that self-esteem and self-efficacy are moderately related. Thus, these results also support earlier research and that the argument that self-esteem and self-

efficacy (both specific and general) are not the same thing. The significant correlation of self-esteem and self-efficacy was too low, r=. 44, to suggest that the constructs are the same thing.

Summary

These results indicate that general self-efficacy represents a belief system about self that is slightly different from both personality and domain specific self-efficacy. Although correlated with specific domains of self-efficacy, the domains included in this study did not serve as good predictors of general self-efficacy. Also, general self-efficacy does not appear to be the same thing as personality. The personality dimension of conscientiousness overlapped the most with self-efficacy for both males and females, but its correlation was not high enough -- even for females -- to provide strong support for the possibility that the measures used in this study represented the same construct. Also, general self-esteem and general self-efficacy were found to be moderately correlated with only 19% of the variance in the two measures overlapping. These data argue for GSE to be considered independent of specific domains of efficacy, of personality, and of general self-esteem. Given this, what needs to be done to capture the meaning and potential usefulness of GSE?

Recommendations for Research

Results from this study are clear regarding the relevance of a construct of general self-efficacy. However, only one measure of general self-efficacy was used. To insure that these results are not a function of the measure used, it would be desirable to study several measures of general self-efficacy to examine their association with each other and with other constructs, such as personality traits. Looking at GSE as it is conceptualized in

the recent literature suggests that perhaps it would be useful to reexamine White's operationalization of efficacy. Is GSE a developmental issue, or perhaps more like a drive for competence early in life, but later in life becoming more like a personality characteristic? The developmental notion is especially relevant for future studies considering the role efficacy plays in resiliency outcomes among at-risk children. (Masten, 2000).

There are multiple measures of domain specific self-efficacy. Again, to insure that the results of this study are not an artifact of measurement, studies of other measures of domain specific self-efficacy need to be conducted with multiple measures of general self-efficacy.

Although I do not believe these data were highly distorted by participants' need for social desirability, in a subsequent study, one would want to check for the possibility of social desirability. .

The differences that were found for males and females are compelling. The literature is consistent in the conclusion that males and females are different in their personality, their socialization, their attitudes, and their behaviors. These results suggest that the differences in self-efficacy in males and females are subtle but important. Efficacy appears to have more to do with esteem in females than males, and more with Extraversion in males than females. Perhaps a closer examination of the facets (i.e., positive affect, sociability) within the Extraversion dimension of the FFM would aid in the understanding of this finding. Recognition of these subtle differences will hopefully, lead to more specific theorizing about gender and GSE. In addition, different ethnic

groups should be examined to explore possible differences in GSE beliefs between ethnicities and if they are predicted differently as well.

Finally, these data suggest that general self-efficacy is not simply an expression of personality. If, as some have suggested (Shelton, 1990, Woodruff & Cashman, 1996) general self-efficacy "is" personality, it certainly is not a simple example of personality. However, it is possible that general self-efficacy would correspond to a particular profile of personality. If so, it is probable that the profile would be different for males and females.

Global/general self-efficacy has been found to be a significant factor in the success of individual pursuits regarding less familiar, or more ambiguous, situations and highly complex tasks (Chen et al., 2001). Efficacy beliefs affect decision-making and the endeavors individuals pursue, help determine how much effort individuals give to activities, their perseverance in challenges, and their ability to come through positively when experiencing adversity (resilience) (Masten, 2000, Masten & Coatsworth, 1998, Pajares, 1996). GSE should not be set aside as just another expression of personality. These data suggest that it is complex in its definition and that it is not necessarily the same for males and females. It warrants a great deal more research.

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Table 1.
Information about Instrumentation

Variable	Source	Items in Questionnaire	Scoring
Neuroticism	NEO-PI (Costa & McCrae, 1989)	1, 6, 11, 16, 21, 26, 31, 36, 41, 46, 51, 56	High score = Neurotic
Extraversion	NEO-PI	2, 7, 12, 17, 22 ,27, 32, 37, 42, 47, 52, 57	High score = Extroverted
Openness to New Experiences	NEO-PI	3, 8, 13, 18, 23, 28, 33, 38, 43, 48, 53, 58	High score = Open to New Experiences
Agreeableness	NEO-PI	4, 9, 14, 19, 24, 29, 34, 39, 44, 49, 54, 59	High score = Agreeable
Conscientiousness	NEO-PI	5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60	High score = Conscientious
General Self-Efficacy	GSE (Tipton & Worthington, 1984)	1-10	High score = high Self-Efficacy
Math	SDQ (Marsh, 1999)	1, 14, 27, 40, 53, 66, 79, 92, 105, 118,	High score = efficacy in Math
Verbal	SDQ	6, 19, 32, 45, 58, 71, 84, 97, 110, 123	High score = efficacy in Verbal
Academic	SDQ	9, 22, 35, 48, 61, 74, 87, 100, 113, 126	High score = efficacy in academics
Problem Solving	SDQ	19, 23, 36, 49, 62, 75, 88, 101, 114, 127	High score = efficacy in problem solving
Physical Ability	SDQ	13, 26, 39, 52, 65, 78, 91, 104, 117, 130	High score = efficacy in physical ability
Physical Appearance	SDQ	11, 24, 37, 50, 63, 76, 89, 102, 115, 128	High score = Efficacy in physical appearance
Same Sex Peer Relationships	SDQ	12, 25, 38, 51, 64, 77, 90, 103, 116, 129	High score = efficacy in same sex peer relations
Opposite Sex Peer Relationships	SDQ	5, 18, 31, 44, 57, 70, 83, 96, 109, 122	High score = efficacy in opposite sex peer relations

Honesty/Trustworthiness	SDQ	4, 17, 30, 43, 56, 69, 82, 95, 108, 121, 132, 134	High score = efficacy in honesty/trustworthiness
General Esteem	SDQ	3, 16, 29, 42, 55, 68, 81, 94, 107, 120, 131, 135	High score = high general self-esteem

Table 2

Bivariate Correlations between Dimensions of Personality, General Self-Efficacy, and Specific Self-Efficacy Dimensions

Dimensions	Neuroticism	Extraversion	Openness	Agreeableness	Conscientiousness	General Self-Efficacy
General Self Efficacy Scale	-.43**	.29**	.15	-.04	.56**	1.00
Problem Solving	-.30**	.21**	.48**	-.03	.15	.50**
Same Sex Peer Relationships	-.25**	.45**	-.05	.28**	.10	.07
Math	-.21**	.16*	-.11	-.01	.11	.13
Verbal	-.10	.00	.34**	.11	.13	.18
General Esteem	-.56**	.38**	-.07	.03	.33**	.44**
Academics	-.25**	.15	.20*	.14	.44**	.38**
Trustworthiness/ Honesty	-.16*	.02	.00	.37**	.40**	.27**
Opposite Sex Peer Relationships	-.22**	.37**	-.01	-.04	.03	.09
Physical Ability	-.41**	.30**	.00	.03	.20*	.29**
Physical Appearance	-.46**	.27**	.03	-.08	.17*	.30**

* $p<.05$, ** $p< .01$

Table 3.

Factor Analysis of Dimensions of Personality and GSE (z-scores)

Source [1]	Variables	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6
PN	Sometimes I feel completely worthless.	**0.719**	-0.186	0.003	-0.005	0.002	-0.003
PN	I am seldom sad or depressed.	**-0.703**	0.192	0.004	0.009	0.006	0.007
PN	I often feel inferior to others.	**0.686**	-0.239	0.002	-0.161	-0.136	-0.004
PN	I often feel tense and jittery	**0.681**	0.103	0.004	-0.006	0.004	0.001
PN	When I am under a great deal of stress, sometimes I feel like I'm going to pieces.	**0.667**	-0.007	-0.008	0.005	-0.100	-0.002
PN	I rarely feel fearful or anxious	**-0.659**	0.003	-0.008	0.005	0.004	0.003
PN	I often feel helpless and want to someone else to solve my problems.	**0.641**	-0.32	-0.154	0.003	0.004	-0.001
PN	I rarely feel lonely or blue.	**-0.626**	0.144	-0.229	0.117	0.002	0.005
PN	Too often when things go wrong,	**0.603**	-0.205	-0.002	-0.143	0.137	0.006

PN	I am not a worrier.	**-0.585**	-0.21	-0.123	0.007	0.17	-0.009
PN	At times I have just been so ashamed I just want to hide.	**0.515**	-0.002	0.002	0.126	0.185	-0.112
PC	I waste a lot of time before settling down to work.	**0.421**	-0.292	0.009	-0.001	0.116	0.142
G	I would rather not try something I am not good at.	**0.421**	-0.143	-0.159	-0.002	0.153	-0.006
G	Once I have set my mind to a task almost nothing can stop me.	-0.14	**0.749**	0.000	0.001	0.136	-0.007
G	I am a very determined person.	-0.114	**0.710**	0.005	0.18	-0.002	0.176
G	I work hard to accomplish my goals.	-0.005	**0.675**	0.176	0.009	-0.118	0.000
G	When I have difficulty getting what I want I just try harder.	-0.208	**0.622**	0.006	0.117	-0.002	0.007
G	I have more willpower than most people.	-0.200	**0.589**	-0.002	-0.009	0.115	0.003
PC	I have a clear set of goals and work toward them in an orderly fashion.	-0.147	**0.580**	-0.008	0.002	-0.004	0.005
G	I believe it is shameful to give up something once I start.	0.118	**0.571**	0.003	-0.008	-0.001	-0.003
G	I strive for excellence in everything I do.	-0.008	**0.567**	0.005	0.118	-0.108	0.007

PC	I am a productive person who always gets the job done.	-0.189	**0.535**	-0.135	0.115	0.138	0.006
PC	When I make commitments, I can always be counted on to follow through.	-0.006	**0.524**	0.006	0.002	-0.007	-0.004
PC	Sometimes I am not as dependable or reliable as I should be.	0.311	**-0.452**	-0.003	0.007	-0.008	0.149
G	I would endure physical discomfort to complete a task just because I do not like to give up.	-0.113	**0.402**	0.009	-0.195	-0.005	-0.006
PC	I'm pretty good about pacing myself so as to get things done on time.	-0.24	**0.381**	-0.147	-0.003	0.002	-0.001
PO	Sometimes when I am reading poetry or looking at a work of art, I feel a chill or a wave of excitement.	0.005	0.003	**0.771**	-0.001	-0.147	-0.006
PO	Poetry has little or no effect on me.	-0.004	-0.005	**-0.770**	-0.003	0.009	-0.002
PO	I often enjoy playing with theories	-0.006	0.113	**0.678**	-0.002	0.179	0.115
PO	I have a lot of intellectual curiosity.	0.007	0.300	**0.662**	-0.002	0.007	0.001
PO	I am intrigued by the patterns I find in art and nature.	-0.002	0.002	**0.655**	-0.006	-0.008	-0.193
PO	I have little interest in speculating on the nature of the universe or the human condition.	-0.002	0.130	**-0.629**	-0.132	0.002	0.185

PO	I believe letting students hear controversial speakers can only confuse and mislead them.	-0.002	0.007	**-0.414**	-0.002	0.002	0.000
PE	I don't consider myself especially light hearted.	0.138	0.001	-0.004	**0.697**	0.004	-0.004
PE	I am not a cheerful optimist.	0.009	-0.178	0.002	**-0.652**	0.001	-0.245
PE	I laugh easily.	-0.006	0.001	-0.002	**0.628**	-0.001	0.272
PE	I am a cheerful high-spirited person.	-0.146	0.173	0.002	**0.559**	-0.002	0.268
PA	If necessary, I am willing to manipulate people to get what I want.	0.006	-0.002	0.117	0.119	**0.723**	-0.009
PA	Some people think I'm selfish and egotistical.	0.009	0.002	-0.008	-0.009	**0.721**	0.125
PA	If I don't like people, I let them know it.	-0.123	-0.003	-0.007	0.001	**0.595**	0.002
PA	Some people think of me as cold and calculating.	-0.006	0.192	0.002	-0.25	**0.554**	-0.007
PE	I like to have a lot of people around me.	0.003	0.006	-0.169	0.109	-0.003	**0.875**
PE	I like to be where the action is.	-0.007	0.005	-0.004	0.116	0.135	**0.675**
PE	I really enjoy talking to people.	-0.002	-0.003	0.004	0.301	-0.003	**0.626**

PE	I am a very active person.	-0.227	0.216	0.22	0.154	-0.003	**0.402**
PE	I usually prefer to do things alone.	0.103	0.001	0.006	-0.241	0.106	-0.357
PE	I would rather go on my own way than be the leader of others.	0.003	-0.149	-0.104	-0.253	-0.196	-0.255

KMO = .705

Bartlett's = 5702.663, p,< .000

[1] G= General Self-Efficacy, P= Personality, N= Neuroticism, E= Extroversion, O= Openness, A= Agreeableness, C= Conscientiousness

Table 4.
Factor Analysis of Dimensions of Personality and Specific Self-Efficacy and GSE

Subscale	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Variance Extracted
Physical Appearance	**0.839**	0.006	0.214	-0.004	0.003	72%
General Esteem	**0.819**	0.006	-0.199	0.006	0.003	78%
Opposite Sex Peer Relationships	**0.614**	0.004	0.006	0.008	0.008	41%
Neuroticism	**-0.480**	-0.005	0.005	0.005	0.005	40%
Physical Ability	0.366	0.007	0.005	0.005	0.164	21%
Problem Solving	0.239	**0.764**	0.13	-0.006	0.002	70%
Openness	-0.009	**0.689**	-0.117	0.008	0.007	50%
Verbal	0.191	**0.609**	0.322	0.443	0.002	64%
GSE	0.197	0.253	**0.792**	0.182	0.182	77%
Conscientiousness	0.008	-0.002	**0.599**	0.526	0.124	66%
Academics	0.008	0.451	0.187	**0.587**	0.002	55%
Honesty /Trustworthiness	0.007	0.003	0.14	**0.555**	0.172	38%
Agreeableness	-0.117	-0.009	0.283	0.351	**0.573**	44%
Same Sex Peer Relationships	0.369	0.008	0.008	-0.009	**0.519**	44%
Extraversion	0.364	-0.005	-0.005	0.146	**0.513**	52%
Math	0.007	0.005	0.005	0.002	0.004	64%
h^2	26%	13%	10%	8%	7%	

Note KMO= .724
Bartlett's = 825.854, p<. 000

Table 5.
Factor Analysis of Dimensions of Personality and Specific Self-Efficacy

Subscale	Factor 1	Factor 2	Factor 3	Factor 4	Extracted
Physical Appearance	**0.848**	0.006	0.214	-0.004	73%
General Esteem	**0.822**	0.006	-0.199	0.006	78%
Opposite Sex Peer Relationships	**0.611**	0.004	0.006	0.008	41%
Neuroticism	**-0.464**	-0.005	0.005	0.005	44%
Physical Ability	0.353	0.007	0.005	0.005	21%
Problem Solving	0.239	**0.764**	0.13	-0.006	70%
Openness	-0.009	**0.665**	-0.117	0.008	48%
Verbal	0.191	**0.645**	0.322	0.003	64%
Conscientiousness	0.008	-0.002	**0.679**	0.007	55%
Academics	0.008	0.451	**0.573**	0.004	55%
Honesty and Trustworthiness	0.007	0.003	**0.560**	0.242	38%
Agreeableness	-0.117	-0.009	0.283	**0.645**	50%
Same Sex Peer Relationships	0.369	0.008	0.008	**0.466**	40%
Extraversion	0.364	-0.005	-0.005	**0.425**	52%
Math	0.007	0.005	0.005	0.002	14%
h^2	26%	14%	11%	8%	

Note KMO= .710
Bartlett's = 709.958, p<. 000

Table 6.

Factor Analysis of Dimensions of Personality and General Self-Efficacy

Subscale	Factor 1	Factor 2	Factor 3	Variance Extracted
General Self-Efficacy	**.900**	-.141	.214	88%
Conscientiousness	**.678**	.243	-.199	56%
Neuroticism	**-.504**	.000	.006	26%
Extraversion	**.354**	.171	.005	16%
Agreeableness	.007	**.803**	.005	65%
Openness	.000	.005	**.704**	50%
h^2	35%	19%	17%	

Note KMO= .557

Bartlett's = 159.039, p<. 000

Table 7.

Factor analysis of GSE and Domain-Specific self-efficacy Subscales

Subscales	Factor 1	Factor 2	Factor 3	Variance Extracted
Physical Appearance	**0.835**	0.009	0.183	74%
General Esteem	**0.761**	0.29	0.263	73%
Opposite Sex Peer Relationships	**0.645**	-0.002	0.002	42%
Same Sex Peer Relationships	**0.397**	0.256	0.004	22%
Physical Ability	**0.360**	0.006	0.220	18%
Math	0.148	0.147	0.004	4%
Academics	0.007	**0.854**	0.168	76%
Honesty/Trustworthiness	0.008	**0.393**	0.139	18%
GSE	0.122	0.269	**0.916**	93%
Problem Solving	0.235	0.363	**0.392**	34%
h^2	33%	19%	15%	

Note KMO= .738

Bartlett's = 411.129, p<. 000

Table 8

Regression of General Self-Efficacy on the Five Personality factors and Specific Self-Efficacy
(Adjusted $\underline{R}^2$=.51)

Variables	Pearson r	Beta
Math	.08	-.02
Academics	.36	-.02
Honesty and Trustworthiness	.26	.11
Opposite Sex Peer Relationships	.08	-.12
Physical Ability	.24	.03
Physical Appearance	.26	-.03
Problem Solving	.48	.32**
Same Sex Peer Relationships	.05	-.11
Verbal	.18	-.12
General Esteem	.41	.21
Neuroticism	-.40	-.01
Extraversion	.27	.13
Openness to New Experiences	.16	.13
Agreeableness	-.05	-.19*
Conscientiousness	.55	.43**

* $\underline{p}$<.05, ** $\underline{p}$<.01

Table 9

Regression of General Self-Efficacy on Dimensions of Personality and Specific Self-Efficacy (females, n=104) (Adjusted R^2=. 56)

Variables	Pearson r	Beta
Math	.02	-.01
Academics	.39	-.02
Honesty and Trustworthiness	.35	.16
Opposite Sex Peer Relationships	-.12	-.01
Physical Ability	.21	.06
Physical Appearance	.21	-.03
Problem Solving	.46	.39**
Same Sex Peer Relationships	-.08	-.07
Verbal	-.24	-.20
General Esteem	.41	.36*
Neuroticism	-.35	.01
Extraversion	.25	.01
Openness to New Experiences	.13	.07
Agreeableness	-.19	-.14
Conscientiousness	.62	.48**

* p<. 01, ** p<. 001

Table 10

Regression of General Self-Efficacy on Dimensions of Personality and Specific Self-Efficacy (males, n=71) (Adjusted R^2=.44)

Variables	Pearson r	Beta
Math	.17	.08
Academics	.34	-.20
Honesty and Trustworthiness	.15	.07
Opposite Sex Peer Relationships	.34	-.44
Physical Ability	.26	.01
Physical Appearance	.36	.27
Problem Solving	.47	.06
Same Sex Peer Relationships	.01	-.23
Verbal	.41	.26
General Esteem	.40	.25
Neuroticism	-.49	-.25
Extraversion	.37	.46*
Openness to New Experiences	.26	.16
Agreeableness	-.08	-.28
Conscientiousness	.38	.36*

* p<. 05

Table 11

Regression of General Self-Efficacy on Dimensions of Personality (Adjusted $\underline{R}^2$=.67)

Variables	Pearson r	Beta
Conscientiousness	.38	.53*
Agreeableness	-.08	-.22*
Openness	.26	.24*
Extraversion	.37	.13
Neuroticism	-.49	-. 22*

* P<. 05

APPENDIX A
INSTRUMENTS EMPLOYED IN PRESENT STUDY

Dear Research Participant,

Your participation if being requested in the research about personality and self-efficacy, which is being, conducted by Holly Higgins in the Department of Child and Family Development at the University of Georgia. The purpose of this study is to explore the meaning of some personal characteristics. As a part of this project you will receive a packet of questionnaires.

No risks, discomforts or stresses are foreseen by your participation in this study, however should you have any questions or concerns at any time you are invited to contact the researcher for more information or explanation of any part of the project (telephone: [office] (706) 542-4905). In addition, in case any issues in these questions leads you to want to explore it further, a list of local facilities are provided on a sheet at the end of the packet of questionnaires

Your participation in this study is completely voluntary and you are free to decline participation without penalty. By completing and returning the research materials you will give your consent to allow your responses to be used in this research.

The results of your participation will be anonymous and will not be released in any form that may identify you personally. The researcher will be available to answer any further questions or concerns about the research now or at any time during the course of your participation. Your participation is greatly appreciated. Thank you very much for your time and cooperation.

Sincerely,

Holly Higgins
Masters Candidate
Department of Child and Family Development
University of Georgia

Lynda Henley Walters
Professor
Department of Child and Family Development
University of Georgia

Research at the University of Georgia, which involves human participants, is carried out under the oversight of the Institutional Review Board. Questions or problems regarding your rights as a participant should be addressed to the Institutional Review Board; Office of V.P. for Research; The University of Georgia, 606 A Graduate Studies Research Center; Athens, GA 30602-7411; Telephone (706) 542-6514.

GIVE THIS COPY TO THE RESEARCHER

PARTICIPANT'S SIGNATURE _____(PLEASE SIGN)

RESEARCHER'S SIGNATURE_____

Dear Research Participant,

Your participation if being requested in the research about personality and self-efficacy, which is being, conducted by Holly Higgins in the Department of Child and Family Development at the University of Georgia. The purpose of this study is to explore the meaning of some personal characteristics. As a part of this project you will receive a packet of questionnaires. You will be asked to return this completed packet to the researcher in one week upon my return to your classroom to collect the packet.

No risks, discomforts or stresses are foreseen by your participation in this study, however should you have any questions or concerns at any time you are invited to contact the researcher for more information or explanation of any part of the project (telephone: [office] (706) 542-4905). In addition, in case any issues in these questions leads you to want to explore it further, a list of local facilities are provided on a sheet at the end of the packet of questionnaires. Please tear off this sheet and take it with you. A possible benefit from participating in this study, is the chance to win one of 15 pairs of movie tickets.

Your participation in this study is completely voluntary and you are free to decline participation without penalty. By completing and returning the research materials you will give your consent to allow your responses to be used in this research.

The results of your participation will be anonymous and will not be released in any form that may identify you personally. To identify participants whose lottery tickets are drawn, (for your chance to win movie tickets) your name, address, and telephone number are requested on one half of the lottery ticket. This information will not be made available to anyone except the researcher. Only identification numbers will be used on the questionnaires. You will be asked to sign your name on a separate list when you return your completed questionnaire. This list will be destroyed when data collection is complete.

The researcher will be available to answer any further questions or concerns about the research now or at any time during the course of your participation. Your participation is greatly appreciated. Thank you very much for your time and cooperation.

Sincerely,

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***PLEASE DETACH THIS PAGE ONLY AND KEEP IT FOR YOUR RECORDS IN CASE YOU NEED TO CONTACT THE RESEARCHER AT ANY TIME. ***

General Self-Efficacy

The following are statements that represent your beliefs about your abilities in *general.* Please answer each item as carefully as you can by circling only one answer for each item.

1. I am a very determined person.	STRONGLY DISAGREE	DISAGREE	SLIGHTLY DISAGREE	NEUTRAL	SLIGHTLY AGREE	AGREE	STRONGLY AGREE
2. Once I have set my mind to a task almost nothing can stop me.	STRONGLY DISAGREE	DISAGREE	SLIGHTLY DISAGREE	NEUTRAL	SLIGHTLY AGREE	AGREE	STRONGLY AGREE
3. I believe it is shameful to give up something I start.	STRONGLY DISAGREE	DISAGREE	SLIGHTLY DISAGREE	NEUTRAL	SLIGHTLY AGREE	AGREE	STRONGLY AGREE
4. Sometimes things just don't seem worth the effort.	STRONGLY DISAGREE	DISAGREE	SLIGHTLY DISAGREE	NEUTRAL	SLIGHTLY AGREE	AGREE	STRONGLY AGREE
5. I would rather not try something I am not good at.	STRONGLY DISAGREE	DISAGREE	SLIGHTLY DISAGREE	NEUTRAL	SLIGHTLY AGREE	AGREE	STRONGLY AGREE
6. I can succeed at most anything, which I set my mind.	STRONGLY DISAGREE	DISAGREE	SLIGHTLY DISAGREE	NEUTRAL	SLIGHTLY AGREE	AGREE	STRONGLY AGREE
7. Nothing is impossible if I really put my mind to it.	STRONGLY DISAGREE	DISAGREE	SLIGHTLY DISAGREE	NEUTRAL	SLIGHTLY AGREE	AGREE	STRONGLY AGREE
8. When I have difficulty getting what I want, I just try harder.	STRONGLY DISAGREE	DISAGREE	SLIGHTLY DISAGREE	NEUTRAL	SLIGHTLY AGREE	AGREE	STRONGLY AGREE
9. I have more willpower than most people.	STRONGLY DISAGREE	DISAGREE	SLIGHTLY DISAGREE	NEUTRAL	SLIGHTLY AGREE	AGREE	STRONGLY AGREE
10. I would endure physical discomfort to complete a task just because I don't like to give up.	STRONGLY DISAGREE	DISAGREE	SLIGHTLY DISAGREE	NEUTRAL	SLIGHTLY AGREE	AGREE	STRONGLY AGREE

Please turn the page

SDQ III

1 Definitely False	2 False	3 Mostly False	4 More False Than True	5 More True Than False	6 Mostly True	7 True	8 Definitely True

__1 I find mathematical problems intriguing and challenging.
__2 My parents are not very spiritual or religious.
__3 Overall, I have a lot of respect for myself.
__4 I often tell small lies to avoid embarrassing situations.
__ 5 I get a lot of attention from members of the opposite sex.
__ 6 I have trouble expressing myself when I try to write something.
__ 7 I am usually pretty calm and relaxed.
__ 8 I hardly ever saw things the same way as my parents when I was growing up.
__ 9 I enjoy doing work for most academic subjects.
__ 10 I am never able to think up answers to problems that haven't been already figured out.
__ 11 I have a physically attractive body.
__ 12 I have few friends of the same sex that I can really count on.
__ 13 I am a good athlete.
__ 14 I have hesitated to take courses that involve mathematics.
__ 15 I am a spiritual/religious person.
__ 16 Overall, I lack self-confidence.
__ 17 People can always rely on me.
__ 18 I find it difficult to meet members of the opposite sex whom I like.
__ 19 I can write effectively.
__ 20 I worry a lot.
__ 21 I would like to bring up children of my own (if I have any) like my parents raised me.
__ 22 I hate studying for many academic subjects.
__ 23 I am good at combining ideas in ways that others have not tried.
__ 24 I am ugly.
__ 25 I am comfortable talking to members of the same sex.
__ 26 I am awkward and poorly coordinated at many sports and physical activities.
__ 27 I have generally done better in mathematics courses than other courses.
__ 28 Spiritual/religious beliefs have little to do with my life philosophy.
__ 29 Overall, I am pretty accepting of myself.
__ 30 Being honest if not particularly important to me.
__ 31 I have lots of friends of the opposite sex.
__ 32 I have a poor vocabulary
__ 33 I am happy most of the time.
__ 34 I still have many unresolved conflicts with my parents.
__ 35 I like most academic subjects.
__ 36 I wish I had more imagination and originality.
__ 37 I have a good body build.
__ 38 I don't get along very well with members of the same sex.
__ 39 I have good endurance an stamina in sports and other physical activities.
__ 40 Mathematics makes me feel inadequate.
__ 41 Spiritual/religious beliefs make my life better and make me a better person.
__ 42 Overall, I don't have very much respect for myself.
__ 43 I nearly always tell the truth.
__ 44 Most of my friends are more comfortable with members of the opposite sex than I am.
__ 45 I am an avid reader.
__ 46 I am anxious much of the time.
__ 47 My parents have usually been unhappy or disappointed with what I do and have done.
__ 48 I have trouble with most academic subjects.
__ 49 I enjoy working out new ways of solving problems.
__ 50 There are lots of things about the way I look that I would like to change.
__ 51 I make friend easily with members of the same sex.
__ 52 I hate sports and physical activities.
__ 53 I am quite good at mathematics.
__ 54 My spiritual/religious beliefs provide the guidelines by which I conduct my life.
__ 55 Overall, I have a lot of self-confidence.
__ 56 I sometimes take things that do not belong to me.
__ 57 I am comfortable talking to members of the opposite sex.
__ 58 I do not do well on tests that require a lot of verbal reasoning ability.
__ 59 I hardly ever feel sad or depressed.
__ 60 My values are similar to those of my parents.

1 Definitely False	2 False	3 Mostly False	4 More False Than True	5 More True Than False	6 Mostly True	7 True	8 Definitely True

__ 61 I am good at most academic subjects.

__ 62 I am not much good at problem solving.

__ 63 My body weight is about right (not to fat, not to skinny).

__ 64 Other members of the same sex find me boring.

__ 65 I have a high energy level in sports and other physical activities.

__ 66 I have trouble understanding anything that is based upon mathematics.

__ 67 Continuous spiritual/religious growth is important to me.

__ 68 Overall, I have a very good self concept.

__ 69 I never cheat.

__ 70 I am shy with members of the opposite sex.

__ 71 Relative to most people, my verbal skills are quite good.

__ 72 I tend to be highly- strung, tense, restless.

__ 73 My parents have never had much respect for me.

__ 74 I am not particularly interested in most academic subjects.

__ 75 I have a lot of intellectual curiosity.

__ 76 I dislike the way I look.

__ 77 I share lots of activities with members of the same sex.

__ 78 I am not very good at activities that require physical ability and coordination.

__ 79 I have always done well in mathematics classes.

__ 80 I rarely, if ever, spend time in spiritual meditation or religious prayer.

__ 81 Overall, nothing I do is very important.

__ 82 Being dishonest is often the lesser of two evils.

__ 83 I make friends easily with members of the opposite sex.

__ 84 I often have to read things several times before I understand them.

__ 85 I do not spend a lot of time worrying about things

__ 86 My parents treated me fairly when I was young.

__ 87 I learn quickly in most academic subjects.

__ 88 I am not very original in my ideas, thoughts, and actions.

__ 89 I have nice facial features.

__ 90 Not many people of the same sex like me.

__ 91 I like to exercise vigorously at sports and /or physical activities.

__ 92 I never do well on tests that require mathematical reasoning.

__ 93 I am a better person as a consequence of my spiritual/religious beliefs.

__ 94 Overall, I have pretty positive feelings about myself.

__ 95 I am a very honest person.

__ 96 I have lots of feelings of inadequacy about relating to members of the opposite sex.

__ 97 I am good at expressing myself.

__ 98 I am often depressed.

__ 99 It has often been difficult for me to talk to my parents.

__ 100 I hate most academic subjects.

__ 101 I am an imaginative person.

__ 102 I wish that I were physically more attractive.

__ 103 I am popular with other members of the same sex.

__ 104 I am poor at most sports and physical activities.

__ 105 At school, my friends always came to me for help in mathematics.

__ 106 I am basically an atheist, and believe that there is no being higher than man.

__ 107 Overall, I have poor self-concept.

__ 108 I would feel okay about cheating on a test as long as I did not get caught.

__ 109 I am comfortable being affectionate with members of the opposite sex.

__ 110 In school I had more trouble learning to read than most other students.

__ 111 I am inclined towards being an optimist.

__ 112 My parents understand me.

__ 113 I get good marks in most academic subjects.

__ 114 I would have no interest in being an inventor.

__ 115 Most of my friends are better looking than me.

__ 116 Most people of more friends of the same sex than I do.

__ 117 I enjoy sport sand physical activities.

__ 118 I have never been excited about mathematics.

__ 119 I believe there will be some form of continuation of my spirit or soul after my death.

__ 120 Overall, I have pretty negative feelings about myself.

__ 121 I value integrity above all other virtues.

__ 122 I never seem to have much in common with members of the opposite sex.

1 Definitely False	2 False	3 Mostly False	4 More False Than True	5 More True Than False	6 Mostly True	7 True	8 Definitely True

__ 123 I have good reading comprehension.

__ 124 I tend to be a very nervous person.

__ 125 I like my parents.

__ 126 I could never achieve academic honors, even if I worked harder.

__ 127 I can often see better ways of doing routine tasks.

__ 128 I am good looking.

__ 129 I have lots of friends of the same sex.

__ 130 I am a sedentary type that avoids strenuous activity.

__ 131 Overall, I do lots of things that are very important.

__ 132 I am not a very reliable person.

__ 133 Spiritual/religious beliefs have little to do with the type of person I am.

__ 134 I have never stolen anything of consequence.

__ 135 Overall, I am not very accepting of myself.

__ 136 Few, if any of my friends are very spiritual/ religious.

NEO-PI-R
Please read each of the statements carefully. Circle the response that best represents your opinion.
Please fill in only one response for each statement and respond to all statements.

1.	I am not a worrier.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
2.	I like to have a lot of people around me.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
3.	I don't like to waste my time daydreaming.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
4.	I try to be courteous to everyone I meet.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
5.	I keep my belongings clean and neat.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
6.	I often feel inferior to others.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
7.	I laugh easily.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
8.	Once I find the right way to do something, I stick to it.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
9.	I often get into arguments with my family and co-workers.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
10.	I'm pretty good about pacing myself so as to get things done on time.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
11.	When I am under a great deal of stress, sometimes I feel like I am going to pieces.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
12.	I don't consider myself especially light-hearted.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
13.	I am intriguing by the patterns I find in art and nature.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
14.	Some people think I'm selfish and egoistical.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
15.	I am not a very methodological person.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
16.	I rarely feel lonely or blue.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
17.	I really enjoy talking to people.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
18.	I believe letting students hear controversial speakers can only confuse and mislead them.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
19.	I would rather cooperate with others than compete with them.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
20.	I try to perform all tasks assigned to me conscientiously.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
21.	I often feel tense and jittery.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
22.	I like to where the action is.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
23.	Poetry has little or no effect on me.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
24.	I tend to be cynical and skeptical of others intentions.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
25.	I have a clear set of goals and work toward them in an orderly fashion.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
26.	Sometimes I feel completely worthless.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
27.	I usually prefer to do things alone.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
28.	I often try new and foreign foods.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
29.	I believe that most people will take advantage of you if you let them.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
30.	I waste a lot of time before settling down to work.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
31.	I rarely feel fearful or anxious.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
32.	I often feel as if I'm bursting with energy.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
33.	I seldom notice the moods or feelings that different environments produce.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

34.	Most people I know like me.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
35.	I work hard to accomplish my goals.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
36.	I often get angry at the way people treat me.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
37.	I am cheerful, high-spirited person.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
38.	I believe we should look to our religious authorities for decisions on moral issues.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
39.	Some people think of me as cold and calculating.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
40.	When I make a commitment, I can always b counted on to follow through.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
41.	Too often, when things go wrong I feel discouraged and feel like giving up.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
42.	I am not a cheerful optimist.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
43.	Sometimes when I am reading poetry or looking at a work of art, I feel a chill or wave of excitement.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
44.	I'm hard-headed and tough-minded in my attitudes.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
45.	Sometimes I'm not as dependable or reliable as I should be.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
46.	I am seldom sad or depressed.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
47.	My life is fast-paced.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
48.	I have little interest in speculating on the nature of the universe or the human condition.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
49.	I generally try to be thoughtful and considerate.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
50.	I am a productive person who always gets the job done.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
51.	I often feel helpless and want someone else to solve my problems.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
52.	I am a very active person.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
53.	I have a lot of intellectual curiosity.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
54.	If I don't like people, I let them know it.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
55.	I never seem to be able to get organized.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
56.	At times I have been so ashamed I just wanted to hide.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
57.	I would rather go on my own way than be a leader of others.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
58.	I often enjoy playing with theories and ideas.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
59.	If necessary, I am willing to manipulate people to get what I want.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
60.	I strive for excellence in everything I do.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

Finally, here are some of the most important questions. Even though I do not want to identify you as an individual, it is important to be able to describe the range of experiences of the people who answer these questions.

Please carefully answer the following questions.

1. What is your present age? _____ YEARS

2. What is your sex? (*Please circle the answer)*

   MALE
   FEMALE

3. With which of the following do you identify most as your racial or ethnic background? (*Please circle a number)*

   1 WHITE, not Hispanic origin
   2 BLACK, not Hispanic origin
   3 HISPANIC
   4 ASIAN
   5 NATIVE AMERICAN INDIAN
   6 OTHER (*please specify)*_____

APPENDIX B

CORRELATIONS CORRECTED FOR ATTENUATION

Correlations of General Self-Efficacy with Domain -Specific Self-Efficacy and Personality

Corrected for Attenuations

Variables	Zero-Order Correlation	Correlation Corrected for Attenuation
Neuroticism	-.43	.50
Extroversion	.29	.36
Openness	.15	.19
Agreeableness	-.04	-.05
Conscientiousness	.56	.64
Problem Solving	.50	.58
Same Sex Peer Relationships	.07	.07
Math	.13	.14
Verbal	.18	.21
General Esteem	.44	.47
Academics	.38	.43
Trustworthiness/Honesty	.27	.31
Opposite Sex Peer Relationships	.09	.10
Physical Ability	.29	.31
Physical Appearance	.30	.33