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General self-efficacy (GSE) is defined as the global confidence one has to successfully perform tasks. General self-efficacy has been criticized for being too similar to the constructs of self-esteem and locus of control. Because task specific self-efficacy (TSSE) has been linked to predicting performance outcomes, the present study tested whether general self-efficacy would be a better predictor of a performance task than other personality measures (i.e., self-esteem and locus of control). A performance task similar to the address-checking test used by the U.S. Postal service was administered to 104 psychology students. Four GSE scales, a self-esteem scale, a locus of control scale and a TSSE scale were also administered to the participants. A multiple regression analysis was conducted with the performance task as the dependent variable and the personality scales, a sample-performance test, and a TSSE scale as the independent variables. None of the personality measures successfully predicted performance, and the sample test and the TSSE scale were the only significant predictors of performance. Findings suggest the GSE scales were measuring the same construct as self-esteem because of their

high intercorrelations and their inability to predict significant performance outcomes. Limitations of the study were listed and recommendations for future research were given.

**A COMPARISON BETWEEN GENERAL SELF-EFFICACY
SCALES AND OTHER PERSONALITY SCALES WITH
TASK PERFORMANCE**

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TABLE OF CONTENTS

	<u>Page</u>
<u>Chapter</u>	
1 INTRODUCTION.....	1
Development of the General Self-Efficacy Concept.....	1
General Self-Efficacy Scales.....	3
Self-efficacy and Performance.....	8
Studies Relating to Sherer et al.'s Scale.....	10
Related Studies with Other Scales.....	14
Relationship with Self-Esteem and Locus of Control....	16
Criticisms.....	20
General Self-Efficacy Comparisons.....	21
Summary.....	22
Hypotheses.....	22
2 METHOD.....	24
Participants.....	24
Instrumentation.....	24
Procedure.....	27
3 RESULTS.....	29
Hypotheses Outcomes.....	45
4 DISCUSSION.....	47
Theoretical Considerations.....	47
Practical Considerations.....	52
Limitations.....	54
Recommendations and Concluding Remarks.....	54
Summary.....	57

REFERENCES.....	58
APPENDIX A.....	65
APPENDIX B.....	66
APPENDIX C.....	68

CHAPTER I

INTRODUCTION

Bandura (1977a) first introduced and defined the concept of task specific self-efficacy (TSSE) in his social learning theory as "the conviction that one can successfully execute the behavior required to produce the desired outcome" (Bandura, 1977b, p. 193). Bandura (1986) believed previous success in similar tasks would increase the strength of one's TSSE. However, Bandura (1986) also believed TSSE can be generalized across a wide range of situations.

Four measures of generalized self-efficacy currently exist. Sherer et al.'s (1982) measure contains two subscales of general self-efficacy and social self-efficacy. Their general self-efficacy (GSE) scale is most commonly used. Tipton and Worthington's (1984) GSE scale is based on the concept of faith. Coppel's (1980) scale is similar to both scales in that it makes general statements concerning one's personality. Shelton's (1987) 101-item GSE inventory is based on the idea that TSSE is generalized on a domain level, so this measure assesses a variety of domains (e.g., home repair) in an individual's life experience.

Development of the General Self-Efficacy Concept

Bandura (1977a) was the first to suggest that TSSE can be generalized to other similar conditions. Sherer et al. (1982) expanded this concept by proposing that TSSE can be generalized into dissimilar situations. "An individual's

past experiences with success or failure should result in a general set of expectations that the individual carries into new situations. These generalized expectancies should influence the individual's expectations of mastery in the new situations" (Sherer et al., 1982, p. 664).

This concept of GSE does not appear to be a major divergence from Bandura's concept of the generality of TSSE. While discussing the treatment of phobias, Bandura (1986) stated "while generalized improvements are, of course, most noticeable in areas that resemble the treated domain, they are by no means bound by stimulus similarity. The nature and scope of the changes people achieve is predictable from the generality of their self-percepts of efficacy" (p. 427).

Sherer et al. (1982) also predicted that individuals with histories of numerous experiences of success in various situations may be expected to have positive TSSE expectancies in a greater variety of situations than individuals with experiences of limited success or failure. Bandura (1986), on the other hand, believed TSSE tends to generalize most often in situations in which performance has been adversely affected by preoccupation with one's perceived shortcomings.

Shelton (1990) theorized that TSSE generalizes across domains and is influenced by success or failure in similar domains. General self-efficacy in contrast is a stable personality trait measured by a variety of domain-specific items. Success or failure will only affect an individual's

GSE if the task has personal value to the individual. Although most people tend to give more credit to success than failure, low GSE people will give more credit to failure.

Tipton and Worthington (1984) constructed a GSE scale based on faith or belief (see Tipton, Harrison, & Mahoney, 1980) conceptualized as four dimensions: faith in God, faith in people, faith in technology, and faith in self. They constructed their GSE scale on the dimension of faith in self. Higher GSE subjects expended more effort and persevered longer than subjects with lower GSE scores.

Eden and Kinnar (1991) defined GSE as the product of lifelong experiences. In spite of disagreement on the particular aspects of general self-efficacy, most researchers agree that TSSE generalizes to other situations. Whether the resulting construct (e.g., GSE) is being accurately measured is a debatable issue.

General Self-Efficacy Scales

Sherer et al. (1982) first published a GSE scale to help therapists match the therapy style to clients' needs, since they predicted that high relative to low GSE clients would exert more effort and persevere longer. Their subjects included 376 introductory psychology undergraduates who completed a GSE prototype scale and six personality measures. Scale items focused on three areas: (a) willingness to initiate behavior, (b) willingness to expend effort, and (c) persistence despite obstacles. After factor

analysis, the GSE scale had 17 items and accounted for 26.50% of the total variance in self-efficacy in a two-factor solution. The second factor, social self-efficacy, accounted for 8.50% of the total variance. A Cronbach alpha reliability coefficient of .86 was obtained. Results were replicated after the scale was administered to a new sample of 298 introductory psychology college students.

To assess construct validity, Sherer et al. (1982) correlated the scores on the tests with the Internal-External Control Scale (Rotter, 1966), the Personal Control Scale (Gurin, Gurin, Lao, & Beattie, 1969), the Marlowe-Crowne Social Desirability Scale (Crowne & Marlowe, 1964), the Ego-Strength Scale (Barron, 1953), the Interpersonal Competency Scale (Holland & Baird, 1968) and a self-esteem inventory (Rosenberg, 1965). The results of the comparison are shown in Table 1. Sherer et al. claimed this study supported the construct validity of the test because the correlations were at the predicted moderate magnitudes and in the expected directions although the other personality scales may not have measured the same underlying characteristics as the GSE scales.

For criterion validity, Sherer et al. (1982) conducted a study to measure success in vocational, educational and military areas. Patients ($N = 150$) from a veteran's administration (VA) alcohol treatment unit took the GSE scale and a demographic questionnaire. The results (see Table 2) support GSE's criterion validity as it generalized

Table 1

Pearson Correlations Between General Self-efficacy
and other Personality Measures' Scores N = 150

Personality Measures	<u>r</u> : General Self-Efficacy
Locus of Control	-.29*
Personal Control	-.36*
Social Desirability	.43*
Ego Strength	.29*
Interpersonal Competency	.45*
Self-esteem	-.51*

*p < .0001.

Table 2

Pearson Correlations between General Self-Efficacy
and Demographic Variables Scores (N = 150)

Demographic Variables	<u>r</u> : General Self-Efficacy
Employed	.28**
Numbers of Jobs Quit	-.24**
Number of Times Fired	-.23*
Educational Level	.27**
Military Rank	.22**

*p < .05

**p < = .01.

self-efficacy expectancies based on past experiences and on a tendency to associate success with skill instead of luck. These general expectancies will likely result in general patterns of behavior in situations in which the individual has little or no information. In other words, general self-efficacy affects an individual's behavior when confronted with new and dissimilar situations, an idea that would seem to differ from Bandura's (1977a) concept of generalized self-efficacy.

Sherer and Adams (1983) conducted a study to provide further evidence of construct validity for their GSE scale. They used 101 students from an introductory psychology course to correlate their GSE scale with the Rathus Assertiveness Schedule, the BEM Sex-role inventory and the validity and basic clinical scales of the MMPI. GSE was positively correlated with masculinity ($r = .54$) and assertiveness ($r = .41$) and negatively with femininity ($r = -.19$). On the MMPI, all of the validity and basic clinical scales were significantly correlated except for scales 1 (the lie scale), 3 (hysteria), 4 (psychopathic deviant), 5 (male-female) and 6 (paranoia). Only scales 7 (defensive scale) and 9 (mania) were positively correlated on the MMPI with GSE. The direction of the correlations were as expected (i.e., a negative correlation between high GSE scores and high MMPI scores).

Shelton's (1990) 101-item GSE inventory incorporated a large variety of domains to measure a personality trait.

She reported that general self-efficacy strongly affects an individual's general confidence in his/her ability to succeed, which would greatly influence the individual's self-efficacy expectations for a specific situation.

Rather than suggesting that TSSE can be generalized across unrelated domains (Sherer et al., 1982), her scale would more accurately measure general self-efficacy than general statements about oneself. However, Shelton's GSE scale is unpublished with no empirical evidence to support its reliability or validity.

On Coppel's (1980) scale, the 22-items are rated on a 5-point scale ranging from Not Like You to Very Much Like You. Smith (1989) reported that the scale had an internal consistency of .91 and a test-retest reliability of .86 over a two-week time interval. However, very limited information concerning this scale exists. Sherer et al.'s (1982) scale is the most widely used because its reliability and validity are known.

Self-efficacy and Performance

The relationship between TSSE and performance is well documented. According to Bandura (1986), "the higher the level of perceived self-efficacy, the greater are the performance accomplishments" (p. 399). Bandura (1986) argued that TSSE judgments vary on three important dimensions: (a) TSSE judgments vary on level (or magnitude), which means that TSSE may be limited to simple tasks or extended to more difficult ones; (b) TSSE

judgments also differ in strength, which refers to whether the individual will persist despite obstacles; (c) TSSE judgments also vary in generality. People may judge themselves competent in only certain domains or across a wide range of domains or situations. This is the dimension that is the basis for the current concept of GSE.

Bandura (1986) stated that TSSE judgments, whether accurate or not, are based on four principle sources of information. These sources of information are (a) enactive attainment, or succeeding at a performance task, (b) vicarious experiences, or situations in which one sees people similar to oneself succeed at performance tasks, (c) verbal persuasion or attempting to talk people into believing that they have the capabilities to perform successfully, and (d) psychological states from which people partly judge their capabilities through dysfunction. Bandura (1980) reported these dysfunctional behaviors can be eliminated by mastery experiences that create a strong personal TSSE.

Bandura (1977b) believed outcome expectancy and TSSE exert powerful influences on behavior. Outcome expectancy is the belief that a particular behavior will result in a certain outcome. However, TSSE is a more powerful predictor of behavior than outcome expectancy or past performance. He stated TSSE expectations are the most powerful determinants of behavioral change since they determine the initial decision to perform a behavior, how much effort will be

expended and the level of persistence despite obstacles. The development of the GSE concept is based on Bandura's concept of TSSE. All four of the GSE scales apply Bandura's ideas pertaining to TSSE and performance.

Studies Using Sherer Et Al.'s GSE Scale

Eden and Kinnar (1991) sampled 556 Israeli youths ranging in age from 17 to 18 years who were about to be inducted into the military. Subjects rated their competence to perform successfully in preinduction activities, a training course, and active duty combat roles. There were nine 10-point TSSE scales anchored with I completely lack the requisite ability and I have the ability to do very well. A Hebrew-translated GSE scale was used. They found the correlation between GSE and TSSE to be .43 ($p < .01$) and based on the moderate correlation concluded GSE and the TSSE measures were overlapping but different constructs. One flaw in their study was that their measure of TSSE was not specific enough to adequately measure task specific self-efficacy. The subjects should have been required to rate their level of confidence on each specific task required in the three career areas, rather than rating their confidence in their abilities to successfully perform in categories (e.g., active duty combat roles) of each overall career area.

Woodruff and Cashman's (1993) study compared the relationship of goal level to GSE. They compared the GSE scores for 400 college students in an introduction to

management course who expected an "A" with students who expected a "B". A Crobach alpha coefficient of .84 was reported, which is comparable to Sherer et al.'s (1982) reported .86. The GSE mean score for the "A" group was 68 (SD = 6.7) and for the "B" group was 65 (SD = 7.2), a statistically significant difference. They argued the results provided further evidence of the validity of the GSE scale.

In developing a Career Attitude Scale (CAS) for measuring career self-efficacy, Bonett and Stickel (1992) correlated their scales with GSE and Coppersmith's (1981) self-esteem inventory. Their CAS correlated .25 with GSE among caucasian subjects and .44 with African-American subjects. They also found a CAS correlation with self-esteem to be .15 among Caucasian subjects and to be .08 for African-Americans. They concluded both GSE and self-esteem were components of career self-efficacy.

Fletcher, Hansson and Bailey's (1992) Occupational Self-Efficacy Index (OSEI) positively correlated with GSE ($r = .39$, $N = 166$) as well as other related measures, such as intrinsic job motivation, a history of previous job successes, retirement income sufficiency, health status, and job stress. The OSEI is reported to measure adults' beliefs in their continued ability to learn, adapt and produce in a changing work environment.

Eden and Aviriam (1993) used GSE to differentiate newly unemployed individuals with low and high GSE. Subjects with

high relative to low GSE scores worked harder at finding new jobs and found new jobs more quickly. Low GSE subjects scored higher on the GSE scale after job training. The subjects who increased their GSE scores worked harder at finding jobs than they previously had. Boosting GSE appears to intensify low GSE people's effort.

Keane and Morgan (1991) gave the GSE scale to 89 students taking a professional communications course and 66 students taking a nursing research course. The subjects were classified as either English being their primary language or English not spoken at home. The non-English speakers had lower general self-efficacy, performed at a lower level and tended to persevere less. Increasing success means boosting their general self-efficacy.

Tobacyk and Shrader (1991) found a negative correlation ($r = -.27$) between GSE and the Revised Paranormal Belief scale. They claimed these findings indicate superstitious belief is related to low GSE, but they did not draw conclusions on the direction of the causal effect (i.e., if low GSE causes high superstitious belief or if high superstitious belief causes low GSE).

Hays and Buckle (1992) administered the GSE scale to 105 adult patients at a psychiatric center and 477 introductory psychology college students. Psychiatric patients ($M = 57.5$, $SD = 12.1$) had lower GSE scores than college students ($M = 62.3$, $SD = 9.8$) and age was significantly correlated with GSE ($r = .23$).

Davis-Bergman (1988) found GSE significantly predicted depression (Beta = .36, R² = .40) in senior citizens (age ranging from 60 to 92 years) as measured by the depression adjective checklist (Lubin, 1967) when physical and social self-efficacy were also used as predictors. However, Davis-Bergman changed the response choices of the GSE scale to a yes or no format, which may have confounded the results.

Ferrari and Parker (1992) found GSE could not significantly predict first year college students' GPA or the number of credit hours completed. They concluded that GSE is not valid in predicting "specific behavioral indices in specific situations" (p. 517).

May and Sowa (1994) administered the GSE scale and the Personal Views Survey (Kobasa, 1974) to students either receiving or not receiving counseling for developmental problems. Scores from the GSE scale and the Personal Views Survey did not significantly differ from each other when measuring these two groups (F = .05, p = .95). They also reported that females' GSE scores did not significantly differ from males' (F = 1.64, p = .20).

Early and Lituchy (1991) reported that GSE did not significantly predict performance. Although one of their studies involved a global criterion measure (i.e., academic performance), a second study used a mathematical test and a third study used a complex-computer task. GSE did not significantly predict performance, however, their criteria measures may have been flawed. Although Early and Lituchy

controlled for ability with the use of a pretest, gender has a moderating effect on TSSE when mathematical performance is being measured (e.g., Hackett, Betz, O'Halloran, & Romac, 1990; Pajares & Miller, 1994) and when computer performance is being measured (e.g., Hill, Smith, & Mann, 1987; Murphy, Coover, & Owen, 1989). Early and Lituchy did not control for gender on these performance tests (e.g., by placing an equal number of males and females in each cell) and thus the validity of their findings is threatened.

Related Studies with Other Scales

Pond and Hay (1989) developed an 11-item GSE scale that was based on Sherer et al.'s GSE scale but was concerned with a job-related domain (e.g., "When I am working at a job, I expect to be able to do well at it"). Using their GSE scale, they found that the interaction between GSE and task preview significantly predicted performance outcomes. However, a flaw in their study was the complexity of the task. The task involved participants pretending to be U.S. customs inspectors processing the paperwork for 16 imaginary import shipments. The lack of controls for clerical ability as well as the low number of participants ($N = 87$) threatened both the internal and external validity of their study.

Mueller (1992) administered the Perceived Physical Ability (PPA) subscale of the Physical Self-efficacy Scale (Ryckman, Robbins, Thorton, & Cantrell, 1982) to categorize her sample as either high GSE or low GSE, depending on their

scores. The performance task was a rotary pursuit task with the dependent variable being the number of times the participant was on-target. The ANOVA analyses revealed a significant difference only for TSSE with task performance indicating participants with higher TSSE scores performed at a higher level compared to low TSSE participants. She claimed her results show that general self-efficacy does not have a significant influence on motor-skill task performance.

A flaw in Mueller's study was the use of the Perceived Physical Ability (PPA) subscale that is purported to measure an individual's perceptions of his or her abilities. Items such as "My physique is rather strong" and "I have excellent reflexes" are part of this subscale. The PPA seems to measure self-efficacy of physical ability. Specifically, it seems to pertain more to domain-efficacy rather than general self-efficacy.

Smith (1989) used Coppel's (1980) GSE scale as well as Rotter's (1966) Internal-External (I-E) scale to determine if cognitive-behavior coping skill training significantly affected individuals' level of locus of control. He found that the training relative to the control group had significantly higher GSE. However, significant differences in locus of control were not found between the two groups.

Researchers overwhelmingly use Sherer et al.'s (1982) GSE scale without any consideration to a possibly better measure of general self-efficacy. Although Sherer et al.'s

(1982) GSE scale seems to be adequately researched, accepting it without considering others seems to be more of a matter of convenience.

Relationship with Self-esteem and Locus of Control

The assumption researchers make when using the GSE concept is that general self-efficacy is a separate construct from other measures of personality. Sherer et al.'s (1982) validity research on their GSE scale suggests the relationship between general self-efficacy and other personality measures is not strong enough for them to be measuring the same construct. Woodruff and Cashman (1993) also support the idea that the scale measures a separate construct.

Curry, Trew, Turner, and Hunter (1994) reported careerists (i.e., females with work as a central life domain) had significantly different GSE scores than female non-careerists. However, no differences between careerists and non-careerists on scores from Harter's (1986) self-esteem measure were found. Results indicate the GSE scale and the self-esteem scale are measuring different constructs. However, only eight GSE items and five self-esteem items were used. Results may have differed if all the items were used from both scales.

Bandura (1986) gave credence to the concept that TSSE and self-esteem are different. He stated "self-esteem pertains to the evaluation of self-worth, which depends on how the culture values the attributes one possesses and how

well one's behavior matches personal standards of worthiness. Perceived self-efficacy is concerned with the judgment of personal capabilities" (p. 410).

Rosenberg (1979) would agree with Bandura that self-esteem and TSSE are different constructs. He would also agree that self-esteem is different from GSE, if Shelton (1990) is accurate in equating general self-efficacy with confidence. According to Rosenberg (1979), "self-confidence essentially refers to the anticipation of successfully mastering challenges or overcoming obstacles or, more generally, to the belief one can make things happen in accord with inner wishes. Self-esteem, on the other hand, implies self-acceptance, self-respect, and feelings of self-worth" (p. 31). Rosenberg's concept of self-confidence is very similar to the operational definition of GSE.

However, not all would agree that GSE is different from self-esteem. Eden and Aviriam (1993) found the correlation between Sherer et al.'s (1982) GSE scale and Rosenberg's (1965) self-esteem scale to range from .75 to .91, which indicates that the two scales may be measuring the same construct. However, their results were based on pilot studies and they did not report the size of their samples. Brockner (1988) reported TSSE, self-confidence, self-esteem, and self-assurance are synonymous. Eden and Kinnar (1991) doubt such related constructs as general self-efficacy and self-esteem can be separated operationally and noted it has also been called global or chronic self-esteem by Brockner

(1988).

Early and Lituchy (1991) reported the term "trait expectancy," as coined by Eden (1988), is actually general self-efficacy. Eden (1988) related trait expectancy to self-esteem and used the term expectancy and efficacy interchangeably.

Saracoglu, Minden, and Wilchesky (1989) provided evidence of self-esteem and general self-efficacy being different constructs. Using Rosenberg's self-esteem inventory and Sherer et al.'s GSE scale, they found significant differences between a learning disabled group and a control group of college students in self-esteem, but they did not find significant differences between the two groups in GSE. They deduced that general self-efficacy focuses more on motivational/effort variables, whereas self-esteem focuses more on actual feelings and learning-disabled individuals tend to be motivated and persistent.

Contradictory evidence exists concerning the relationship between general self-efficacy and locus of control. Ferrari and Parker (1992) did not find a significant correlation between academic locus of control and academic procrastination. However, they did find a significant relationship between general self-efficacy and academic procrastination. This seems to suggest locus of control and general self-efficacy are not measuring the same construct.

Waller and Bates (1990), however, report a significant

relationship between general self-efficacy and locus of control. They administered Sherer et al.'s (1982) GSE scale, a health locus of control scale and a health style self-test for seniors (which reports whether someone utilizes good health practices). They found a significant correlation between internal health locus of control and general self-efficacy.

A possible explanation for the different results concerning the relationship between GSE and locus of control is the locus of control scales that are used. For example, Ferrari and Parker (1992) used an academic locus of control scale while Waller and Bates (1990) used a health locus of control scale. The strength of the relationships between these two locus of control scales is unknown, and thus a weak relationship between these two scales would explain the differing results.

The evidence supporting general self-efficacy as an independent construct is mixed. While some researchers report a very strong relationship between general self-efficacy and such personality measures as self-esteem and locus of control, others report a weaker relationship. The strength of the relationship between GSE and other personality measures must be known to discern if GSE is actually an independent construct. More research is needed to determine if general self-efficacy actually exists before very much credence can be given to studies that use the concept.

Criticisms

As discussed in the previous section, the most resounding criticism of general self-efficacy concerns whether it actually exists as a separate entity from other personality constructs. However, other criticisms of general self-efficacy has included its inconsistency and inaccuracy (Locke & Latham, 1990). Woodruff and Cashman (1993) asserted that Sherer et al. did not measure general self-efficacy, but rather efficacy at a domain level.

Sherer (1990) criticized Shelton's model for ignoring that outcome expectancy influences the strength of TSSE expectancies. Shelton also did not offer any empirical evidence nor discussed factors that relate to different attributional styles.

Another criticism of Shelton's GSE inventory pertains to the domains that are measured. Shelton's GSE inventory attempts to measure domains relating to everyday life. For example, a question from her "Home Repair" domain asks how confident one is in removing a recent coffee stain from his/her living room carpet. This type of domain does not seem to be applicable to everyone (e.g., perhaps some individuals do not drink coffee or have carpet). A more accurate measure of TSSE generalized across domains would relate more to verbal and performance abilities (e.g., arithmetic and motor-skill performance tests). The domains Shelton's GSE inventory accesses are not applicable to many people and consequently may be poor measures of generalized

self-efficacy.

General Self-Efficacy Comparisons

One of the purposes of this study was to determine the relationship between general self-efficacy and two other personality measures, Rosenberg's self-esteem (RSE) scale (1979), and the adult form of the Norwicki-Strickland Internal External (ANS-IE) scale (Norwicki & Duke, 1974), a measure of locus of control. Sherer et al. (1982) have found the correlation between their GSE scale and Rosenberg's self-esteem scale to be .51, but others have found the correlation to be as high as .91 (Eden & Aviram, 1993). Since generalized self-efficacy is described as a personality trait (Shelton, 1990), the current study attempted to assess the relationship between the GSE scales and two other personality measures. A locus of control scale was used since attributional style has also been associated with GSE (Sherer, 1990). This research attempted to determine whether general self-efficacy actually exists or if it is actually a renaming of a well-researched personality trait, self-esteem. As Cliff (1983, p. 117) wrote, "just because we name something does not mean we understand it or even that we have named it correctly." The second purpose of this study was to compare the existing general self-efficacy scales. A third purpose of this study was to determine whether the existing measures of general self-efficacy are more accurate than other personality measures in predicting task performance. A fourth purpose

of this study was to determine if general self-efficacy is comparable to TSSE in predicting performance outcomes. This is important information in ascertaining whether the GSE scales represent a valid construct.

Summary

The concept of general self-efficacy is becoming more accepted in psychology. Although this concept is relatively new, a large number of studies have been conducted using it. A measure of general self-efficacy would be very useful as a standard measure across many different situations (e.g., school, work, therapy, etc.). However, questions remain as to whether general self-efficacy actually exists independent of other personality measures. Although there appears to be empirical evidence to validate general self-efficacy as a separate entity, there is also evidence to the contrary. Even Sherer (1990) proclaimed a need for further research and development for general self-efficacy.

Hypotheses

1. General self-efficacy exists independently from other personality measures. The correlation between the GSE scales and other personality measures will be significant, but not so high that another personality measure subsumes general self-efficacy.
2. A strong and significant relationship exists among the GSE scales.
3. General self-efficacy is a better predictor of

performance outcomes than other personality measures, such as self-esteem and locus of control.

4. A significant relationship exists between general self-efficacy and TSSE.
5. Compared to the other six personality measures, TSSE will be the better predictor of performance outcomes.

CHAPTER II

METHOD

Participants

All participants used in this study were Emporia State University undergraduate volunteers who received extra credit from their instructors in their respective psychology courses. The sample ($N = 104$) consisted of 29% males and 71% females. The mean age of the participants was 21.81 years (range, 18 to 42; $SD = 4.75$).

Instrumentation

The first test used was a sample test similar to the address checking test of the U.S. Postal Service. There were 16 pairs of addresses, with each address pair side by side. The letters "A" and "D" were to one side of each address pair. The letter "A" indicated the addresses were exactly alike, and the letter "D" indicated the addresses were different. The addresses were created randomly with the use of phone books and road atlases. The test measured both speed and accuracy. Dissimilar addresses generally required some discriminatory ability to be detected. The "A" and "D" answers do not follow any detectable response pattern.

On the task specific self-efficacy (TSSE) scale, the participants were asked to predict their score on a 95-item address-checking test and also to rate their level of confidence in successfully achieving their predicted score

on the performance task. The level of confidence subscale ranged from 10% confident to 100% confident. The performance task's design was identical to the sample test with the exception of having 95 pairs of addresses.

Three general self-efficacy (GSE) scales and a self-esteem scale were combined into one test. The first 27 items were from Tipton and Worthington's (1984) GSE scale. The scale's authors have not reported any reliability estimates.

The next 17 items were from Sherer et al.'s (1982) GSE scale with a Cronbach reliability coefficient of $\underline{r} = .86$. The next 22 items were from Coppel's (1980) GSE scale. Smith (1989) reported that the scale has an internal reliability of $\underline{r} = .91$ and a test-retest reliability of $\underline{r} = .86$ over a two-week time interval. However, measures of validity were not reported.

The last ten items were from Rosenberg's (1979) Self-esteem (RSE) scale. Rosenberg (1979) reported a two week test-retest reliability of $\underline{r} = .85$.

The first 44 GSE items were scored on a 7-point scale ranging from Strongly Disagree to Strongly Agree. The next 22 GSE items were scored on a 5-point scale ranging from Not Like You to Very Much Like You. The ten self-esteem items were scored on a 4-point scale ranging from Strongly Agree to Strongly Disagree. Thirty of the items are reverse coded and were converted. High scores signify high GSE on the first 66 items, and low self-esteem on the last 10 items.

Shelton's (1990) 101-item GSE inventory was the next test administered. It was scored on a 9-point scale ranging from Not Confident to Completely Confident. The scale's author did not report any reliability or validity estimates.

The adult form of the Norwicki-Strickland Internal External (ANS-IE) scale (Norwicki & Duke, 1974) was also administered. The ANS-IE scale is purported to measure locus of control based on the same basic construct as Rotter's I-E control scales. It contains 40 questions that are answered either yes or no. The externally oriented items were summed and provided the score for this scale. The ANS-IE was used because of its greater insensitivity to social desirability than Rotter's I-E Control scale (Roueché & Mink, 1976).

Before testing began, a pilot study established norms for the performance task and the sample test. An approximation of the length of time required to complete the entire testing procedure was also obtained so that the participants could receive appropriate credit.

For the performance task, the number of correct responses were totaled. Although the directions on the sample performance task and the performance task indicated that incorrect scores would be subtracted from correct scores, this was not done. The directions indicating that incorrect scores would be subtracted from correct scores were included in an effort to prevent random guessing.

On the TSSE scale, the level of confidence score was

multiplied by the predicted score, with the result being calculated task specific self-efficacy.

The items on the four GSE scales and the self-esteem scale were summed for each scale. Reverse coded items were converted for summing. The number of external responses (i.e., responses indicating an external locus of control) were summed for the locus of control scale.

Procedure

Participants signed an informed letter of consent (see Appendix A) and were assured of the confidentiality of their responses. Two booklets were used. The first included the sample performance test, the TSSE scale, and the performance test. The other included the GSE and personality inventories. The GSE and personality inventories had an identification number on the first page. Participants wrote the identification number on the first page of the performance task. The task performance test was administered first, followed by the four GSE scales, the self-esteem scale and the locus of control scale.

During the task performance testing, the examiner read the instructions for each test to the participants. The sample test and the performance task were timed by the examiner. The sample test was administered to insure that the participants understood the task and to provide baseline data to measure TSSE. During the sample test, participants were given one minute to complete as many of the 16 items as possible. A TSSE test was administered immediately after

the address checking sample test. On the address checking test itself, the participants were given six minutes to answer as many items as possible.

The personality testing stage immediately followed the performance task stage. During the personality testing stage, the participants were read a general set of instructions (see Appendix B). The participants were directed to read the instructions to each test and to ask questions if necessary.

All participants were tested in groups of between 5 and 40 in classrooms. An attempt was made to provide the participants with as much privacy as the situation permitted, both to insure confidentiality and to maintain consistency in the test results. The participants were informed of the purpose of the research after testing (see Appendix C).

CHAPTER III

RESULTS

All data were analyzed at the level of significance, and all multiple-regression analyses used the forced-entry technique. A Cronbach-alpha coefficient was calculated for the personality inventories to evaluate internal consistency. The results of the calculations are shown in Table 3. All of the calculated reliabilities were within an acceptable range with the possible exception of the task specific self-efficacy (TSSE) scale. An alpha coefficient was not calculated for the Norwicki-Strickland Internal External (ANS-IE) scale (Norwicki & Duke, 1974) because of its bipolar format.

The means and standard deviations of the measures administered are shown in Table 4. The correlations among the measures are shown in Table 5.

A multiple-regression analysis was computed with the performance test as the dependent variable and the following as the independent variables; a TSSE scale, the ANS-IE, Rosenberg's Self-Esteem (RSE) scale, the sample performance test, Shelton's general self-efficacy (GSE) scale, Tipton and Worthington's GSE scale, Coppel's GSE scale, and Sherer et al.'s GSE scale. The results of the multiple-regression analysis are shown in Table 6.

The results of the multiple-regression analysis indicated significance ($p < .06$) for only one of the eight independent variables, the task specific self-efficacy

Table 3

Alpha Coefficients of the Personality Inventories (N = 104)

Personality Inventories	Alpha
Sherer et al. GSE scale	.83
Tipton and Worthington GSE scale	.85
Coppel GSE scale	.73
Shelton GSE scale	.97
Rosenberg Self-Esteem scale	.86
Task Specific Self-Efficacy scale	.64

Note. GSE is general self-efficacy.

Table 4

Ranges, Means, and Standard Deviations of the Personality Inventories and Performance Tests (N = 104)

Test	Possible Range	Observed Range	<u>Mean</u>	<u>SD</u>
Sher et al.	17-119	40-114	87.31	13.56
Tip&Wor	27-189	77-167	133.06	16.54
Coppel	22-110	43-107	82.39	13.02
Shelton	0-909	438-873	678.19	101.06
RSE	10-40	10-35	18.12	4.90
ANS-IE	0-40	1-23	10.89	4.33
TSSE	0-95	9-95	51.39	19.69
Sample	0-16	4-16	9.71	2.17
Perform	0-95	27-89	63.04	11.41

Note. Tip&Wor is Tipton and Worthington's GSE scale. RSE is Rosenberg's Self-Esteem scale. ANS-IE is the adult form of Norwicki Strickland's Internal-External scale. TSSE is the task specific self-efficacy scale. Perform is the performance test.

Table 5

Correlations Between Tests

Tests	1	2	3	4	5	6	7	8
1. Sher								
2. Tip&Wor	.79**							
3. Coppel	.77**	.74+						
4. Shelton	.54**	.49**	.60**					
5. RSE	-.69**	-.64**	-.72**	-.54**				
6. ANS-IE	-.35**	-.37**	-.40**	-.34**	.36**			
7. TSSE	.32**	.31**	.30**	.30**	-.27**	-.21*		
8. Sample	.25**	.19*	.23**	.11	-.20*	-.29**	.36**	
9. Perform	.15	.16*	.13	.02	-.18*	-.23**	.34**	.53**

Note. Sher is Sherer et al.'s scale. Tip&Wor is Tipton and Worthington's scale. RSE is Rosenberg's Self-Esteem scale. ANS-IE is the adult form of Norwicki Strickland's Internal-External scale. TSSE is a task specific self-efficacy scale. Perform is the performance test.

$N = 104.$

* $p < .05.$

** $p < .01.$

Table 6

Multiple-Regression Analysis

Multiple R = .57

 R^2 = .33

Adjusted R^2 = .27

Standard Error = 9.74

<u>Variable</u>	<u>B</u>	<u>SE_B</u>	<u>BETA</u>	<u>T</u>	<u>p</u>
TSSE	.11	.06	.18	1.93	.06
ANS-IE	-.23	.25	-.09	-.92	.36
RSE	-.32	.30	-.14	-1.06	.29
Sample	2.33	.50	.44	4.67	.00
Shelton	-.02	.01	-.13	-1.21	.23
Tip & Wor	.07	.10	.10	.70	.49
Coppel	-.01	.14	-.11	-.70	.49
Sher	-.05	.13	-.06	-.40	.69
(Constant)	56.76	17.75		3.20	.00

Note. TSSE is a task specific self-efficacy scale. ANS-IE is the adult form of Norwicki-Strickland's Internal External scale. RSE is Rosenberg's Self-Esteem scale. Tip & Wor is Tipton and Worthington's scale. Sher is Sher et al.'s scale. $N = 104$.

(TSSE) scale. In the multiple regression analysis, adjusted R^2 was .27 that indicates the eight independent variables accounted for 27% of the variance in predicting the performance task outcome. Beta was negative and the simple correlations were positive for the GSE scales of Sherer et al., Coppel, and Shelton, thus making them suppressor variables. Because suppressor variables can be highly correlated with some independent variables and thus reduce the likelihood of these variables reaching significance, a subsequent multiple-regression analysis was run excluding these suppressor variables (see Table 7). Results of this analysis were similar to the previous analysis with only the sample test reaching significance.

The sample test was accounting for a relatively large amount of the explained variance, which may have obscured any possible significance of the other tests. Also, it could be argued that clerical ability may affect performance outcomes on the performance test (i.e., participants with high clerical ability may perform well regardless of their level of general self-efficacy). Consequently, an attempt was made to eliminate the amount of variance accounted for by the sample test, so that any other significant effects could be uncovered and to control for the effects of clerical ability.

A multiple-regression analysis was run with the sample test as the independent variable and the performance test as the dependent variable. The residual was then used as the

Table 7

Multiple-Regression Analysis without Suppressor Variables

Multiple R = .55

 R^2 = .30

Adjusted R^2 = .27

Standard Error = 9.75

<u>Variable</u>	<u>B</u>	<u>SE_B</u>	<u>Beta</u>	<u>T</u>	<u>p</u>
TSSE	.09	.05	.16	1.70	.10
ANS-IE	-.16	.25	-.06	-.64	.52
RSE	-.07	.26	-.03	-.25	.80
Sample	2.35	.49	.45	4.79	.00
Tip&Wor	-.01	.08	-.01	-.07	.94
Constant	39.26	14.94		2.63	.01

Note. TSSE is a task specific self-efficacy scale. ANS-IE is the adult form of the Norwicki-Strickland Internal External scale. RSE is Rosenberg's Self-Esteem scale. Tip&Wor is Tipton and Worthington's scale.

N = 104.

dependent variable with the four GSE scales, the RSE scale, the ANS-IE scale, and the TSSE scale as the independent variables. This method of residualizing the performance test was chosen rather than the hierarchical model because the standard error is decreased while the chances of finding significance is increased. The results are shown in Table 8.

The TSSE scale significantly predicted performance. Adjusted R^2 was .01 indicating that 1.4% of the variance was accounted for after the effects of clerical ability was removed.

The high correlations among the GSE scales (ranging from $r = .49$ to $r = .79$) indicate multicollinearity. In other words, the high correlations among the GSE scales may be limiting each GSE scale's ability to predict performance independently. To investigate this possibility, standardized scores were calculated for each GSE scale and the standardized scores for the GSE scores were combined to provide one GSE score. A multiple-regression analysis was run with the performance test as the dependent variable and the sample test, the ANS-IE scale, the RSE scale, the TSSE scale, and the combined GSE scale as the independent variables. The results are shown in Table 9.

The multiple-regression analysis revealed that only the sample test was significant in predicting performance, though the TSSE scale approached significance ($p < .06$). In this analysis, adjusted R^2 was .28 indicating that this

Table 8

Multiple-Regression Analysis after the Removal of the Sample
Test Variance

Multiple R = .29
R² = .08
Adjusted R² = .01
Standard Error = 9.69

<u>Variable</u>	<u>B</u>	<u>SE_B</u>	<u>Beta</u>	<u>t</u>	<u>p</u>
TSSE	.11	.05	.21	2.04	.04
ANS-IE	-.23	.25	-.10	-.95	.34
RSE	-.32	.30	-.16	-.13	.89
Shelton	-.01	.01	-.16	-1.06	.29
Tip & Wor	-.02	.01	-.16	-1.23	.22
Sher et al.	-.05	.13	-.08	-.41	.68
Coppel	-.10	.14	-.13	-.70	.49
Constant	.00	16.92		.00	1.00

Note. TSSE is a task specific self-efficacy scale. ANS-IE is the adult form of the Norwicki-Strickland Internal External scale. RSE is Rosenberg's Self-Esteem Scale. Tip & Wor is Tipton and Worthington's scale.

N = 104.

Table 9

Multiple-Regression Analysis with Combined GSE Scales

Multiple R = .56
R² = .32
Adjusted R² = .28
Standard Error = 9.68

<u>Variable</u>	<u>B</u>	<u>SE_B</u>	<u>BETA</u>	<u>T</u>	<u>p</u>
TSSE	.10	.06	.18	1.91	.06
ANS-IE	-.23	.25	-.09	-.90	.37
RSE	-.30	.30	-.13	-1.03	.31
Sample	2.34	.49	.45	4.81	.00
GSE	-.54	.44	-.16	-1.22	.23
Constant	42.87	8.02		5.35	.00

Note. TSSE is a task specific self-efficacy scale. ANS-IE is the adult form of the Norwicki-Strickland Internal External scale. RSE is the Rosenberg Self-Esteem scale. GSE is the combined general self-efficacy scales.

N = 104.

analysis accounted for 28% of the total variance in predicting performance.

A subsequent multiple-regression analysis was run without the variance caused by the sample test, because the sample test again seemed to account for a very large portion of the overall variance, which may have obscured any significant results for the other scales, and to control for the effects of clerical ability. The results are shown in Table 10.

The multiple-regression analysis revealed that only the TSSE scale was significant in predicting performance. None of the other scales, including the combined GSE scales' scores, even approached significance. In this analysis, adjusted R^2 was .02, indicating that this analysis accounted for 2.4% of the variance in predicting performance. Thus, the GSE scales did not significantly predict performance even when multicollinearity was taken into account.

The equivalent correlations of the GSE scales with the ANS-IE scale and the RSE scale with the ANS-IE scale may indicate that the GSE and RSE scales are measuring the same variance in predicting locus of control (i.e., self-esteem). A regression analysis was run with the ANS-IE scale as the dependent variable and the RSE as the independent variable to investigate this possibility. The B and A values were used in subsequent regression analyses so that the variance from the self-esteem scale could be removed from the ANS-IE scale with each GSE scale as the independent variable. The

Table 10

Multiple Regression Analysis with Combined GSE scores and
Removal of Sample Test Variance

Multiple R = .25
R² = .06
 Adjusted R² = .02
 Standard Error = 9.63

<u>Variable</u>	<u>B</u>	<u>SE_B</u>	<u>Beta</u>	<u>T</u>	<u>p</u>
TSSE	.10	.05	.21	2.02	.05
ANS-IE	-.23	.24	-.10	-.93	.36
RSE	-.30	.29	-.15	-1.03	.30
GSE	-.54	.44	-.19	-1.22	.22
Constant	.00	6.50		.00	1.00

Note. TSSE is the task specific self-efficacy scale. ANS-IE is the adult form of the Norwicki-Strickland Internal External scale. RSE is Rosenberg's self-esteem scale. GSE is the combined general self-efficacy scales.

N = 104.

GSE combined score was also used as an independent variable. The results of these analyses can be seen in Table 11. Removing the variance accounted for by the RSE scale from the ANS-IE scale dramatically affected the GSE scales' ability to significantly predict locus of control. These results indicate that the GSE scales have a large proportion of variance in common with the self-esteem scale in predicting locus of control. This seems to indicate that the GSE scales are measuring self-esteem.

To investigate the relationship between GSE and self-esteem in predicting TSSE, a regression analysis was run with TSSE as the dependent variable and the RSE scale as the independent variable. The B and A values were used in subsequent analyses to calculate the effects of removing the variance due to the self-esteem scale from TSSE. The results of these analyses are shown in Table 12. Although each GSE scale significantly predicted TSSE at the .01 level before the removal of the self-esteem variance, none of the GSE scales significantly predicted TSSE after the removal of the self-esteem variance. A subsequent analysis with the combined standardized GSE scores yielded similar results (see Table 13). The Beta values, the t values and the variances of the analyses were greatly reduced when the self-esteem variance was removed. These results indicate that the GSE scales are accounting for a large proportion of the same variance in predicting TSSE, which in turn indicates that the GSE scales may be measuring self-esteem.

Table 11

Regression Analyses of the Individual and Combined GSE Scales in Predicting Locus of Control Before and After the Removal of Self-esteem Variance

<u>Variable</u>	<u>Adjusted R²</u>	<u>Beta</u>	<u>T</u>	<u>p</u>
Tip&Wor (Before)	.13	-.37	-4.01	.00
Tip&Wor (After)	.01	-.15	-1.54	.13
Sher (Before)	.11	-.35	-3.78	.00
Sher (After)	.00	-.11	-1.15	.25
Coppel (Before)	.15	-.40	-4.35	.00
Coppel (After)	.01	-.15	-1.50	.14
Shelton (Before)	.11	-.34	-3.67	.00
Shelton (After)	.02	-.16	-1.64	.11
GSE (Before)	.17	-.42	-4.71	.00
GSE (After)	.02	-.17	-1.69	.09

Note. Tip&Wor is Tipton and Worthington's scale. Sher is Sherer et al.'s scale. GSE is the combined general self-efficacy scales.

Table 12

Regression Analyses of the GSE scales in Predicting TSSE
Before and After the Removal of Self-esteem Variance

Variable	<u>Adjusted R²</u>	<u>Beta</u>	<u>T</u>	<u>p</u>
Tip&Wor (Before)	.09	.31	3.25	.00
Tip&Wor (After)	.01	.14	1.42	.16
Sher (Before)	.09	.32	3.40	.00
Sher (After)	.01	.13	1.42	.16
Coppel (Before)	.08	.30	3.20	.00
Coppel (After)	.00	.11	1.13	.26
Shelton (Before)	.08	.30	3.18	.00
Shelton (After)	.02	.16	1.65	.10

Note. Tip&Wor is Tipton and Worthington's scale. Sher is Sherer et al.'s scale.

Table 13

Regression Analyses of the Combined GSE Scales in Predicting TSSE Before and After the Removal of the Self-Esteem Variance

Multiple <u>R</u> (Before)	=	.36
Multiple <u>R</u> (After)	=	.16
<u>R Squared</u> (Before)	=	.13
<u>R Squared</u> (After)	=	.03
Adjusted <u>R Squared</u> (Before)	=	.12
Adjusted <u>R Squared</u> (After)	=	.02
Standard Error (Before)	=	18.48
Standard Error (After)	=	18.80

Variable	<u>B</u>	<u>SE_B</u>	<u>Beta</u>	<u>T</u>	<u>p</u>
GSE(Before)	2.04	.53	.36	3.86	.00
GSE(After)	.88	.54	.16	1.64	.10

N = 104.

Hypotheses Outcomes

Hypothesis 1 predicted that the correlation between the GSE scales and the other personality measures (i.e., self-esteem and locus of control) would be high, but not so high as to be measuring the same construct. This hypothesis was not supported. In fact, the correlations between the GSE scales and the self-esteem scale ranged from $-.54$ to $-.72$. These correlations indicate that it is possible that self-esteem and GSE may be the same construct.

Hypothesis 2 predicted that strong and significant relationships would exist among the GSE scales. This hypothesis was supported, with the correlations ranging from $.49$ to $.79$. This would suggest that the GSE scales are measuring the same construct in a similar fashion.

Hypothesis 3 predicted that general self-efficacy would be a better predictor of performance outcomes than other personality measures (e.g., self-esteem and locus of control). This hypothesis was not supported, because all of the personality measures were poor predictors of performance.

Hypothesis 4 predicted that a significant relationship would exist between general self-efficacy and TSSE. This hypothesis was supported, with the correlations between the GSE scales and the TSSE scale ranging from $.30$ to $.32$. This may suggest that the GSE scales are measuring general self-efficacy, but since the self-esteem scale had a similar correlation with TSSE, it is more likely that the GSE scales

are measuring self-esteem.

Hypothesis 5 predicted that TSSE is a better predictor of performance outcomes than general self-efficacy. This hypothesis was supported, because the TSSE scale reached significance at the .05 level of significance, after the variance accounted for by the sample test was removed. None of the GSE scales significantly predicted performance.

CHAPTER IV

DISCUSSION

Theoretical Considerations

Researchers have tried to show evidence of criterion validity for the general self-efficacy (GSE) scales by correlating global measures of performance (e.g., military performance) with the GSE scales (e.g., Eden & Kinnar, 1991; Sherer et al., 1982;). However, these researchers have failed to recognize the fact that their obtained validity coefficients may not be accurate because of the many confounding variables. The findings of this study cast doubt on the validity studies conducted for GSE scales, because the present study is one of a small number of GSE scale studies that use a specific criterion. The present study was also different than previous studies in that an attempt was made to control for the effects of a potential moderating variable (i.e., clerical ability) on the independent variables in predicting performance. Consequently, the results of the present study may be more interpretable than results of previous studies.

The concept of general self-efficacy, as it is currently measured, seems to be the same construct as self-esteem. The correlations between self-esteem and the GSE scales were very high. The correlations were expected to be negative, because a high self-esteem score indicates low self-esteem, and a high GSE score indicates high general self-efficacy. The failure of the GSE scales to

significantly predict performance outcomes further substantiates the link between general self-efficacy and self-esteem, since a measure of self-esteem that predicts performance for a specific task is not found in the literature. The correlations between general self-efficacy and task specific self-efficacy (TSSE) do not appear to support the idea that GSE is a construct separate from self-esteem. Although the GSE scales were moderately correlated with TSSE, the self-esteem scale was also moderately correlated with TSSE. The differences in the strengths of the correlations between GSE and TSSE (which ranged from .30 to .32) and self-esteem and TSSE (i.e., $r = -.27$) are too small to be significant, which may indicate that they are measuring the same construct. Regression analyses were run with TSSE as the dependent variable, removing the self-esteem variance, and each GSE scale and the combined GSE scales as the independent variable to investigate this possibility. The results of these analyses indicate that in predicting TSSE, the GSE scales are measuring a large amount of the same variance as self-esteem. These results provide additional evidence that the GSE scales are actually measuring self-esteem.

In this study, only the TSSE scale was found to significantly predict task performance after the variance of the sample performance test was removed. The TSSE scale also significantly predicted performance when the variance of the sample test was removed and the GSE scores were

combined into one score. This result supports this study's internal validity because TSSE has been linked to performance outcomes by others (e.g., Bandura, Wood, & Locke, 1987). The ability of the TSSE scale to predict performance was also important because the correlations between the GSE scales and the TSSE scales were examined in an attempt to determine if the GSE scales were related to TSSE. If the TSSE scale did not significantly predict performance, the correlations of the GSE scales with TSSE would be meaningless.

The adult form of the Norwicki-Strickland Internal-External (ANS-IE) locus of control scale and Rosenberg's self-esteem (RSE) scale did not reach significance in predicting task performance even after the variance accounted for by the sample performance test was removed. This is not surprising because very little literature exists that links these two scales with specific task performance. The correlations between the ANS-IE scale and the GSE scales were significant, ranging from -0.34 to -0.40, which are similar to the ranges of the correlations between the GSE scales and the TSSE scale (i.e., .30 to .32). To investigate the variance that the GSE scales have in common with the self-esteem scale in predicting locus of control, regression analyses were run with the self-esteem variance removed from the ANS-IE scores and the residualized ANS-IE scores as the dependent variable, and each GSE scale and the combined GSE scales as the independent variable. The

results of these analyses indicate that the GSE scales have a great deal of variance in common with the self-esteem scale in predicting locus of control. The significant correlations between the self-esteem scale and the ANS-IE scale was not surprising considering the fact that self-esteem has been shown to be positively correlated with locus of control (Abdullah, 1989; Doganis, Theodorakis, & Bagatis, 1991). However, the equivalent correlations and the shared variance between the GSE scales and the RSE scale with the ANS-IE scale seem to indicate that they (i.e., GSE & RSE scales) are measuring the same construct (i.e., self-esteem). The equivalent correlations and shared variance of the GSE scales and the RSE scale in predicting TSSE adds to the argument that the GSE scales are measuring self-esteem. Equivalent correlations and shared variances of two constructs with another construct may be coincidental, but it is unlikely to be coincidental when these same two constructs (i.e., GSE and self-esteem) have equivalent correlations and shared variances with two different constructs (i.e., TSSE and locus of control). Rather, these two constructs (i.e., GSE and self-esteem) are actually one construct (i.e., self-esteem). The significant correlations between GSE and the ANS-IE scale may only give additional evidence that attributional style is related to self-esteem.

The sample performance test also significantly predicted task performance ($p < .0001$) giving additional supporting evidence for the internal validity of this study.

This is not surprising because the sample test was designed to give participants an idea of what was involved in the performance test. The removal of the variance of the sample test resulted in the removal of the effects of clerical ability (a potentially confounding variable). The moderately significant correlation of the sample test with the performance test ($r = .53$) is probably the result of the sample test being administered before the performance test (i.e., the practice effect). The participants appeared to expend greater effort after completing the sample test, which is evident in the relatively high mean of 63.04 on the performance task compared with the mean of 9.71 on the sample test (i.e., the mean on the performance test was 66.36% of the highest possible score of 95, while the mean on the sample test was 60.69% of the highest possible score of 16). However, the sample performance test was a very important reference to which participants could base their predictions of performance on the performance task (i.e., on the TSSE scale). Since both the sample test and the TSSE scale were significant in predicting performance, the sample test can be judged valid in this particular situation in providing a representative sampling of the performance test.

The inability of the GSE scales to significantly predict performance, even after suppressor variables and intercorrelations were accounted for, casts doubt upon the usefulness of the GSE scales as predictors of performance. If the GSE scales in this study were accurately measuring

general self-efficacy, perhaps when TSSE generalizes (if it actually does generalize), its ability to predict performance is diluted to such a degree that GSE is virtually useless in predicting specific task performance. Perhaps when TSSE generalizes, the resulting construct is self-esteem, which seems to be an equally poor predictor of specific task performance. It may also be argued that TSSE does not generalize, and that the GSE scales are actually measuring self-esteem.

In any case, general self-efficacy's existence cannot be concluded from this study. However, if general self-efficacy does exist and the GSE scales are accurately measuring it, this study indicates that general self-efficacy does not significantly predict specific task performance outcomes.

Practical Implications

The GSE scales and the self-esteem scales appear to measure the same construct. Because of the high internal reliabilities of the GSE scales and the self-esteem scale, the scales should be used interchangeably. However, to avoid confusion in the literature, the GSE scales should be renamed to reflect what they seem to measure (i.e., self-esteem).

When searching for a predictor of task specific performance outcomes, Industrial/Organizational (I/O) psychologists should use a TSSE scale. The results of this study indicate that the current GSE scales should not be

used to measure performance outcomes. The GSE scales did not significantly predict performance even after suppressor variables and high intercorrelations were taken into account. Thus, I/O psychologists should avoid the GSE scales unless a measure of self-esteem is needed.

The TSSE scale's ability to predict performance is very useful to I/O psychologists in selection and training. Although a sampling of behavior (e.g., assessment centers) might be a better predictor of performance than inferences made from a test, time and costs are saved.

A TSSE scale that significantly predicts performance could also be very useful in determining which low performing job incumbents could benefit from self-efficacy training. By boosting the job incumbent's TSSE, an increase in performance may result benefitting the organization. Of course, the TSSE scale would have to be validated for each individual organization.

Such a global measure of personality to predict task specific performance outcomes would be very useful to organizations for selection and promotion purposes. If a global measure of personality could be used to predict performance, then various organizations could use the same test to predict performance. However, the results of this study indicate a global measure of personality cannot validly predict performance. If a predictor of performance is desired, a scale that predicts specific performance

outcomes (e.g., a TSSE scale) should be used.

Limitations

1. Sample size. Although a great deal of effort was made to obtain a large sample, the relatively small student population of Emporia State University, as well as other considerations, severely limited these efforts. The small sample size may have confounded the results of the multiple-regression analysis, because larger sample sizes tend to reduce error variance which in turn makes it easier to find significance if it exists.

2. Random sampling. Because of the difficulty of obtaining an adequate sample size, all undergraduate participants who volunteered for this study were tested. The use of a random sample was not possible. Thus, the external validity of this study is restricted.

3. Length of testing. Although it appears that most of the participants made an effort to respond honestly to the tests' questions, some participants might have become fatigued or did not make a consistent effort to be accurate. The length of the tests, as well as the lengthy testing time (approximately one hour), may have affected the accuracy of some of the scores.

Recommendations and Concluding Remarks

This study should be replicated with another criterion, such as a motor-skill task or a repetitive task at a job site being used. If the results are similar to the present ones, the GSE scales should be renamed to reflect what they

seem to measure (i.e., self-esteem).

A different type of TSSE scale should be used in future research. The TSSE scale used in this study only reached significance when the variance accounted for by the sample test was removed but still only accounted for only a very small portion of explained variance. It seems likely that the level of confidence subscale of the TSSE scale may have reduced the accuracy of the prediction of performance. The participants in this study were instructed to predict their performance on the performance test without realizing that they would be required to provide a level of confidence for their prediction. The participants seemed to have a tendency to avoid the extremes of level of confidence (i.e., central tendency error). This is evident by the low number of participants who indicated a confidence level of 100% ($n = 5$) and the complete lack of scores at the lowest level of confidence (i.e., the 10% confidence interval). In fact, the lowest confidence interval used by the participants was the 30% confidence level. This avoidance of the extreme levels of confidence seemed to have resulted in a restriction of range that may have reduced the accuracy of the TSSE scale. A possible alternative to the design of the TSSE scale from this study would be a scale that required the participants to indicate a level of confidence for scores that were provided at ten-point intervals (e.g., a scale that requires the raters to indicate on a scale, from 0% confident to 100% confident, how confident they would be

of achieving a score of 85 out of a possible 95) and averaging the level of confidence to provide the TSSE score.

When considering future GSE scale research, it is recommended that a larger correlation be sought with the TSSE scale, perhaps a minimum correlation of $r = .50$, to establish a strong link between GSE and TSSE. If the proposed GSE scale does not obtain this minimum correlation, it is probably not measuring general self-efficacy, but rather self-esteem.

It is also recommended that future researchers of the GSE scales obtain a larger sample. Random selection procedures would improve the generalizability of future studies, and a large sample (i.e., 200 or more participants) would be more effective than the present study in determining significance (or the lack of significance). Also, a sample that included a different age range and educational level may also yield differing results from this study, since the sample of the present study consisted of young college students.

In conclusion, the existence of general self-efficacy was not determined by this research study. If GSE does exist, the benefits of successfully measuring such a construct would be great. However, the results of the present study suggest that the GSE scales in use today are measuring self-esteem. If future studies support the conclusions of this study, it is hoped that future research will determine if GSE is actually self-esteem or if GSE is

not being accurately measured by the current GSE scales and new efforts need to be undertaken to construct a valid measure of GSE.

Summary

It was asserted that the GSE scales used in this study do not measure general self-efficacy, but rather self-esteem. The similar correlations of self-esteem and GSE with locus of control were proposed to be a result of the GSE scales measuring self-esteem, and the high correlations between self-esteem and general self efficacy, as well as both of their non-significance in predicting performance outcomes, were submitted as further evidence of the two constructs being the same (i.e., self-esteem and GSE). It was asserted that the validity studies that have been conducted to show evidence of criterion validity for the GSE scales involve global performance criteria, and it was suggested that future researchers use more specific criteria. The limitations of the present study were discussed, and recommendations for replication studies were proposed. It was concluded that if these results are replicated in future research, psychologists will either need to conceptualize GSE as self-esteem or undertake new efforts to construct a valid measure of GSE.

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APPENDIX A

Participation Consent Letter

Read this consent form. If you have any questions, ask the examiner and he will answer your questions.

You are invited to participate in a study investigating the relationship between personality characteristics and performance. You will be given two series of tests. The first series will ask you questions pertaining to your feelings and perceptions concerning various topics and situations. The second series of tests will ask you to identify whether pairs of addresses are exactly alike or different.

Information in this study will be identified by a test ID number, your gender and your age. Your name will only be used to indicate that you participated in the study and received extra credit for participating.

Your participation in this study is completely voluntary. Should you wish to terminate your participation, you are welcome to do so at any point in the study. Termination of the study will have no bearing on your class standing. There is no risk of discomfort involved in completing this study.

If you have any questions or comments about this study, feel free to ask the experimenter. If you have any additional questions, please contact Michael Murphy, Division of Psychology and Special Education, 301 Visser Hall, 341-5818.

Thank you for your participation.

I, _____, have read the above information and
(please print name)
have decided to participate. I understand that my participation is voluntary and that I may withdraw at any time without prejudice after signing the form should I choose to discontinue participation in this study.

(signature of Participant)

(date)

(signature of Experimenter)

THIS PROJECT HAS BEEN REVIEWED BY THE EMPORIA STATE UNIVERSITY COMMITTEE FOR THE PROTECTION OF HUMAN SUBJECTS.

APPENDIX B

General Instructions for the Personality Scales

Now that you have completed the performance task, please write the ID number from the first page of the tests I have just handed you onto the first page of the tests that you have just completed. After you have written down the ID number, pass the tests you just completed to your left.

The forms that I have handed out have statements pertaining to how you feel about yourself and various situations. Read the instructions carefully before beginning. Notice that each page has a number at the bottom center of the page. Also, notice that you are instructed to stop on page five. When you have completed pages one through five, turn your forms over, blank side up, and wait for further instructions. Be sure to write your age and gender on the front page. If you have any questions, feel free to ask me. You may begin.

Now turn to page six. Read the instructions carefully before beginning. There are 101 questions on pages 6 through 15. There are also four pages of answer sheets following page 15. Do not write on pages 6 through 15. Circle your responses on the corresponding item number on the answer sheet. When you have finished answering the questions on the answer sheets, turn your forms over, blank side up, and wait for further instructions. If you have any questions, feel free to ask me. You may begin.

Now turn to page 16, which is the first page behind the answer sheets. There are 40 questions on pages 16 through 18. Read the instructions carefully before starting. Once you have finished, you can bring your forms up here and lay them on the desk next to me. If you want to know what this experiment was about, I will tell you after you have completed the testing procedure, or you can ask Dr. Murphy, whose office is in room 321 of Visser hall. Thank you for your help!

APPENDIX C

Debriefing

The purpose of the research procedures that you participated in is to compare four general self-efficacy scales, with a locus of control scale and a self-esteem scale, to determine the strength of the relationship between the scales, and to determine which scale is better at predicting performance outcomes. The performance task was similar to the address checking test used by the US Postal Service. A task specific self-efficacy (TSSE) scale was also administered after the sample performance task, to compare the scale with the general self-efficacy scales.

TSSE is a conviction that one can successfully perform a specific task. General self-efficacy is one's general confidence in one's ability to succeed, based on past performance. Self-esteem is an evaluation of self-worth. Locus of control is how one attributes events affecting one's life. Internal locus of control exists when one feels that one has control over events in one's life. External locus of control exists when one attributes uncontrollable forces to what happens in one's life.

Do not discuss the purpose of this study with anyone outside of this class, as it may affect the results of further testing. Thank you for helping me with my research.

I, Keith D. Stanley, hereby submit this thesis to Emporia State University as partial fulfillment of the requirements for an advanced degree. I agree that the Library of the University may make it available for use in accordance with its regulations governing materials of this type. I further agree that quoting, photocopying, or other reproduction of this document is allowed for private study, scholarship (including teaching) and research purposes of a nonprofit nature. No copying which involves potential financial gain will be allowed without the written permission of the author.

Keith D. Stanley
Signature of Author

2/28/95
Date

A Comparison Between General
Self-Efficacy Scales and Other
Personality Scales With Task
Performance
Title of Thesis

Doug Cooper
Signature of Graduate Office
Staff Member

2/28/95
Date Received