

Relationship of Core Self-Evaluations Traits—Self-Esteem, Generalized Self-Efficacy, Locus of Control, and Emotional Stability—With Job Satisfaction and Job Performance: A Meta-Analysis

Timothy A. Judge and Joyce E. Bono
University of Iowa

This article presents meta-analytic results of the relationship of 4 traits—self-esteem, generalized self-efficacy, locus of control, and emotional stability (low neuroticism)—with job satisfaction and job performance. With respect to job satisfaction, the estimated true score correlations were .26 for self-esteem, .45 for generalized self-efficacy, .32 for internal locus of control, and .24 for emotional stability. With respect to job performance, the correlations were .26 for self-esteem, .23 for generalized self-efficacy, .22 for internal locus of control, and .19 for emotional stability. In total, the results based on 274 correlations suggest that these traits are among the best dispositional predictors of job satisfaction and job performance. T. A. Judge, E. A. Locke, and C. C. Durham's (1997) theory of core self-evaluations is used as a framework for discussing similarities between the 4 traits and their relationships to satisfaction and performance.

Recently, Judge, Locke, and Durham (1997) proposed a higher order construct they termed *core self-evaluations* or, more simply, *positive self-concept*. According to Judge et al. (1997), this construct is a broad dispositional trait that is indicated by four more specific traits—self-esteem, generalized self-efficacy, locus of control, and emotional stability (low neuroticism). The core self-evaluations construct was originally proposed as a potential explanatory variable in the dispositional source of job satisfaction. Subsequently, Judge and colleagues also have argued that the construct should be related to work motivation and, ultimately, to job performance (Judge, Erez, & Bono, 1998). Investigations of a link between core self-evaluations and job performance, however, are lacking.

Despite a lack of studies linking the core self-evaluations factor to job satisfaction and, especially, to job performance, three of the core traits (self-esteem, locus of control, and emotional stability) appear to be the most widely studied personality traits in personality and applied psychology.¹ Yet, with the exception of emotional stability and job performance, we have found no meta-analyses of the relationship between any of these traits with either job satisfaction or job performance.² Thus, the purpose of the present study is to provide a quantitative review of the literature that examines the relationship of the four core self-evaluation traits with job satisfaction and job performance. This study determines whether general relationships exist and, if so, what the magnitudes of these relationships are. In the next section, we provide a brief review of the four traits and discuss the possible relationship of these traits with both job satisfaction and job performance.

Core Self-Evaluation Traits

Judge et al. (1997) defined core self-evaluations as basic conclusions or bottom-line evaluations that individuals hold about themselves. They argued that core self-evaluations were assessed by traits that met three criteria: (a) *evaluation-focus* (the degree to which a trait involves evaluation, as opposed to description); (b) *fundamentality* (in Cattellian [1965] personality theory, fundamental or source traits underlie surface traits); and (c) *breadth or scope* (according to Allport [1961], cardinal traits are broader in scope than secondary traits). Judge et al.'s (1997) review identified four traits that met the criteria. First, they considered self-esteem to be the most fundamental manifestation of core self-evaluations as it represents the overall value that one places on oneself as a person. Second, generalized self-efficacy—one's estimate of one's fundamental ability to cope, perform, and be successful—was viewed as an indicator of positive core evaluations. Third, internal locus of control was considered a manifestation of core evaluations because internals believe they can control a broad array of factors in their lives. Fourth and finally, emotional stability (low neuroticism), reflecting the tendency to be confident, secure, and steady, was argued to be indicative of core self-evaluations because it is a broad trait (one of the dimensions of the five-factor model of

¹ In a search of the PsycINFO database, 1967–1999, we found that 10,371 articles cited neuroticism (or emotional stability or emotional adjustment), 10,084 articles cited self-esteem, and 9,339 articles cited locus of control. By comparison, 4,957 articles cited achievement motivation, 2,492 articles cited extraversion/introversion, and only 572 articles contained a citation to the five-factor model (or Big Five). A search for other individual traits revealed no others with more than 2,500 citations.

² Hough (1992) reported an average correlation of .19 between locus of control and job performance, a report based on 11 studies. However, it did not appear that this was truly a meta-analytic estimate (i.e., the correlation was not corrected for measurement error, variability estimates were not reported).

Timothy A. Judge and Joyce E. Bono, Department of Management and Organizations, Henry B. Tippie College of Business, University of Iowa.

Correspondence concerning this article should be addressed to Timothy A. Judge, Department of Management and Organizations, Henry B. Tippie College of Business, University of Iowa, Iowa City, Iowa 52242. Electronic mail may be sent to tim-judge@uiowa.edu.

personality) that manifests one's view of one's emotional stability.³

Although research by Judge and associates has provided evidence that these four traits are sufficiently related to be grouped together as a higher order construct, it is beyond the scope of this article to test the validity of the core self-evaluations construct. Specifically, we used Judge et al.'s (1997) theory as justification to study the validity of self-esteem, generalized self-efficacy, locus of control, and emotional stability, but we do not test Judge et al.'s (1997) hypothesis that these traits indicate a higher order construct. Rather, in this meta-analytic review we consider the specific relationships of each of the four traits to job satisfaction and job performance. In the sections that follow, we hypothesize relationships between the individual traits and job satisfaction and job performance.

Relation of Self-Esteem, Locus of Control, Neuroticism, and Generalized Self-Efficacy to Job Satisfaction

Judge et al. (1997) hypothesized that core self-evaluations would be related to job satisfaction through both direct and indirect means. Testing these predictions, Judge, Locke, Durham, and Kluger (1998) found that the four traits, treated as a single latent construct, were significantly related to job satisfaction in three independent samples. This study tends to support the hypothesis that self-esteem, generalized self-efficacy, locus of control, and neuroticism are each independently significantly correlated with job satisfaction. Somewhat curiously, given the volume of research on dispositions and job satisfaction, we are aware of no meta-analysis of the relationship between any of the four traits and job satisfaction. Although the relationships of these traits to job satisfaction has been discussed in reviews of the literature with respect to self-esteem (Tharenou, 1979), locus of control (Spector, 1982), and emotional stability (Furnham & Zacherl, 1986), the exact magnitude of these relationships, and the variability in these relationships across studies, has not been established. Clearly, a quantitative review is needed.

Beyond the qualitative reviews of the empirical evidence, there are theoretical reasons to expect a positive relationship between these traits and job satisfaction. Locke, McClellan, and Knight (1996) noted, "A person with a high self-esteem will view a challenging job as a deserved opportunity which he can master and benefit from, whereas a person with low self-esteem is more likely to view it as an undeserved opportunity or a chance to fail" (p. 21). In fact, research suggests that individuals with high self-esteem maintain optimism in the face of failure, which makes future success (and thus future satisfaction) more likely (Dodgson & Wood, 1998). Another theoretical mechanism linking these traits to job satisfaction is suggested by Korman's (1970) self-consistency theory. Korman's theory predicts that individuals with high self-esteem choose occupations consistent with their interests, which would lead to greater levels of job satisfaction. As Tharenou (1979) noted, Korman's hypothesis has been generally supported with respect to occupational choice. More generally, Korman's theory predicts that high self-esteem individuals will engage in a broad array of behaviors and cognitions that reinforce their self-concept. Similarly, Spector (1982) suggested that individuals with an internal locus of control should be more job satisfied because they are less likely to stay in a dissatisfying job and are more likely

to be successful in organizations. With respect to neuroticism, McCrae and Costa (1991) noted that neuroticism is related to lower well-being because individuals who score high on neuroticism are predisposed to experience negative affects. Negative affect, in turn, is negatively related to job satisfaction (Brief, 1998; Spector, 1997). Finally, Judge et al. (1997) argued that generalized self-efficacy should affect job satisfaction through its association with practical success on the job. Because individuals with high self-efficacy deal more effectively with difficulties and persist in the face of failure (Gist & Mitchell, 1992), they are more likely to attain valued outcomes and thus derive satisfaction from their jobs. As a result of the foregoing review,

H-1a: Self-esteem is positively related to job satisfaction.

H-1b: Generalized self-efficacy is positively related to job satisfaction.

H-1c: Internal locus of control is positively related to job satisfaction.

H-1d: Emotional stability is positively related to job satisfaction.

Relation of Self-Esteem, Locus of Control, Neuroticism, and Generalized Self-Efficacy to Job Performance

Even more obscure than the relationship between the four traits and job satisfaction are these traits' relationship to job performance. In fact, this relationship was not even considered by Judge et al. (1997). Empirical data regarding the relationship between several of the traits with job performance are inconsistent. With the exception of the literature on emotional stability, where three meta-analyses have been published (Barrick & Mount, 1991; Salgado, 1997; Tett, Jackson, & Rothstein, 1991), reviews of the effect of the traits on job performance have been qualitative. In such reviews, results typically were reported in two gross categories (nonsignificant and positive significant). With respect to self-esteem, Tharenou's (1979) qualitative review suggested inconsistent results in studies relating self-esteem to job performance, with more findings suggesting a nonsignificant relationship than a positive, significant relationship. Brockner's (1979) review suggested more optimism regarding the correlation between self-esteem and job performance, though the relationship appeared to hold only in certain situations. In terms of locus of control, Spector's (1982) narrative review seemed to support the conclusion that internals perform better than externals. Because of the small number of primary studies measuring generalized self-efficacy, there have been no published reviews of the relationship between generalized self-efficacy and job performance. Although task-specific and generalized self-efficacy are distinct constructs (Stajkovic & Luthans, 1998), evidence does suggest that state or task-specific self-efficacy is related to job performance (Hysong & Quiñones, 1997; Stajkovic & Luthans, 1998) which, in turn, suggests that generalized self-efficacy may also correlate with job performance.

Finally, though the subject of three meta-analytic reviews, the literature on the relationship between emotional stability and job performance is no less inconsistent. Barrick and Mount (1991) found that the relationship between emotional stability and job

³ Because emotional stability and neuroticism are simply labels for the positive and negative poles of the same construct (Mount & Barrick, 1995), we use these labels interchangeably.

performance was indistinguishable from zero, whereas Tett et al. (1991), confining their analysis to confirmatory studies (studies where authors hypothesized a relationship between the trait and job performance), found that emotional stability displayed a non-zero correlation with job performance ($\rho = .22$). Explanations for the differences in these studies can be found in two more recent articles by the authors (Ones, Mount, Barrick, & Hunter, 1994; Tett, Jackson, Rothstein, & Reddon, 1994). In a meta-analysis of all available studies of personality and job performance in the European Economic Community (EEC), Salgado (1997) found a positive, nonzero relationship ($\rho = .19$) between emotional stability and job performance.

Though the conclusions of qualitative reviews regarding the relationship of the four traits to performance are inconsistent, there is considerable theoretical support for such relationships. Several theories of work motivation support a link between the core traits and job performance. First, self-consistency theory (Korman, 1970) hypothesizes that individuals are motivated to behave in a manner consistent with their self-image. Thus, the theory predicts, individuals with high self-esteem will perform effectively in order to maintain their positive self-image. Second, theories of learned helplessness support a link between positive self-evaluations and job performance. According to the model of learned helplessness, when faced with unfavorable circumstances, individuals with a positive, optimistic explanatory style will be less likely to display motivational deficits (i.e., lower their effort, withdraw from task-oriented behaviors), whereas those with a pessimistic explanatory style will display symptoms of helplessness (Peterson & Seligman, 1984). Finally, control theory (Lord & Hanges, 1987) predicts that when individuals perform below their expectations, they exert additional effort to obtain the performance goal, reduce their standard level (lower their aspirations), or withdraw from the task entirely. Research has shown that when individuals with an internal locus of control are faced with discrepancies between acceptable standards of performance and actual performance, they tend to increase their efforts to match their actual performance to the standards (Weiss & Sherman, 1973). Conversely, people who have low self-esteem tend to either lower their standards or completely withdraw from the task when given negative feedback (Brockner, 1988). In light of some (albeit inconsistent) evidence suggesting a relationship of the four traits to job performance and much conceptual support for such relationships, we hypothesize,

H-2a: Self-esteem is positively related to job performance.

H-2b: Generalized self-efficacy is positively related to job performance.

H-2c: Internal locus of control is positively related to job performance.

H-2d: Emotional stability is positively related to job performance.

Method

Literature Search

In an attempt to locate the population of studies containing relationships between self-esteem, locus of control, neuroticism, and generalized self-efficacy and job satisfaction and between the four traits and job performance, searches for studies that examined the relationship between each of the traits and each of the criteria (job satisfaction and job performance)

were conducted. First, a search was made of the PsychInfo database for the years 1967 to 1997. Studies that reported a relationship between any of the four traits and either job satisfaction or job performance were included. In addition to the electronic search, manual searches were conducted for the past 40 years (1957–1997) of the two journals containing the most correlations as revealed by the electronic search (*Journal of Applied Psychology* and *Personnel Psychology*). Finally, using the results of our electronic and manual searches, we identified authors of studies that reported on the relationships of interest during the past 10 years (1987–1997). Letters requesting data from in press or unpublished manuscripts were sent to each of these authors. These combined efforts resulted in the identification of 536 published studies and 224 unpublished doctoral dissertations.

In accordance with our a priori definition of the population and relationships of interest, several rules for study inclusion were established. First, the analysis was limited to those studies in which participants were employed adults. Thus, those studies that used student, unemployed, or student athlete subjects were excluded, as were studies with special populations (e.g., psychiatric patients or vocational rehabilitation clients). Second, only studies that measured generalized self-efficacy (as opposed to task-specific or state self-efficacy) were included. Following this same reasoning, we excluded studies in which locus of control was narrowly defined (e.g., the degree to which a teacher felt he or she could make decisions in the classroom). However, studies in which core self-evaluation measures were specific to the workplace but not narrow in scope (e.g., organizational-based self-esteem) were included. We also only included those studies that directly measured emotional stability (also known as emotional adjustment or neuroticism), which excluded closely related traits such as negative affectivity.

Third, we included only those studies in which the criterion was either job performance or overall job satisfaction. Thus, studies that reported on the relationship between the traits and performance on a task in the laboratory, or in a simulated organization, were not included. We also excluded studies that included only a single facet of satisfaction (e.g., satisfaction with pay). However, if a study reported correlations between one of the traits and two or more facets of job satisfaction, we calculated a composite correlation. Finally, we excluded those studies that did not report either a correlation between one of the traits and either job satisfaction or job performance or the data necessary to calculate such a correlation. Application of these inclusion rules to these studies resulted in 135 studies (169 correlations) that reported a relationship between one of the traits and job satisfaction and 81 studies (105 correlations) that reported a relationship between one of the traits and job performance.

Meta-Analysis Procedures

In conducting the meta-analysis, we followed the procedures of Hunter and Schmidt (1990). First, we calculated a sample-sized weighted mean correlation for each of the four traits with the relevant criterion (job satisfaction or job performance). Second, correlations were individually corrected for measurement error in both the predictor and the criterion. Finally, a disattenuated correlation was estimated for each of the traits with both criteria.

In the case of the personality traits, we corrected for measurement error using reliabilities reported in each study. For those studies that did not report reliabilities, we used an average of the reliabilities reported in other studies for that particular measure (e.g., Rotter, 1966, for locus of control and Rosenberg, 1965, for self-esteem). We used similar procedures for measures of job satisfaction. In the case of job performance, however, the appropriate correction for measurement error in supervisory ratings of performance is that based on interrater reliability (Viswesvaran, Ones, & Schmidt, 1996). Therefore, we used meta-analytic estimates (Viswesvaran et al., 1996) to correct for unreliability in the measurement of supervisory ratings of job performance. In the case of self-reports and objective measures of job performance, the literature is less clear about the appro-

priate method of correcting for measurement error. Therefore, for this study, we assumed perfect reliability in self-reports. However, consistent with the findings of Hunter, Schmidt, and Judiesch (1990), we estimated the reliability of objective measures of job performance on the basis of the time period over which the objective measures were aggregated. (This procedure resulted in near perfect reliabilities for most objective measures of performance.)

In addition to reporting estimates of the mean corrected correlations, it is also important in meta-analysis to describe the variability in the correlations. Accordingly, we report 95% confidence intervals and 80% credibility intervals around the corrected correlations (ρ). Confidence intervals provide an estimate of the variability of the estimated mean correlation; a 95% confidence interval excluding zero indicates that we can be 95% confident that the average disattenuated correlation is nonzero. Credibility intervals provide an estimate of the variability of individual correlations across studies; an 80% credibility interval excluding zero indicates that 10% of the individual correlations are equal to or less than zero (10% of correlations would also lie in the high end of the distribution). Thus, confidence intervals estimate variability in the mean correlation, whereas credibility intervals estimate variability in the individual correlations across the studies. Because these variability estimates tell us different things about the nature of the correlations, both are reported.

Results

Meta-Analytic Findings With Respect to Job Satisfaction

Table 1 presents the results of the meta-analyses examining the relationship between each of the traits and job satisfaction. As hypothesized (H-1a–H-1d), all four traits had a positive, nonzero relationship with job satisfaction. Uncorrected mean correlations for the four traits ranged from average $r = .20$ for emotional stability to average $r = .38$ for generalized self-efficacy. Corrected correlations were, from lowest to highest, as follows: emotional stability, $\rho = .24$; self-esteem, $\rho = .24$; internal locus of control, $\rho = .32$; generalized self-efficacy, $\rho = .45$. Ninety-five percent confidence intervals around the corrected correlations were relatively narrow and excluded zero in all cases. Further, 80% credibility intervals excluded zero for each of the four traits. However, only a small percentage of the variance (ranging from 9% for generalized self-efficacy to 31% for emotional stability) in study correlations was accounted for by study artifacts. Overall, these results support H-1a–H-1b—there is a positive relationship between each of the four traits and job satisfaction. Figure 1 provides a graphic illustration of the mean disattenuated correlation, as well as the widths of 95% confidence intervals and 80% credibility intervals.

Meta-Analytic Findings With Respect to Job Performance

Results of the job performance meta-analyses (testing H-2a–H-2d) are presented in Table 2. As with job satisfaction, we conducted a separate analysis for each of the four traits. Although the job performance results were somewhat weaker than those for job satisfaction, our findings support H-2a–H-2d. For each of the traits, we found positive, nonzero average relationships with job performance. In a slightly different pattern than was found with job satisfaction, uncorrected mean correlations between the traits and job performance range from average $r = .14$ for internal locus of control to average $r = .19$ for generalized self-efficacy. Corrected correlations, from lowest to highest, were as follows: emotional stability, $\rho = .19$; internal locus of control, $\rho = .22$; generalized self-efficacy, $\rho = .23$; self-esteem, $\rho = .26$. Ninety-five percent confidence intervals were relatively narrow and excluded zero for all traits. However, in the case of self-esteem, the 80% credibility interval was wide and included zero ($-.05$ to $.57$), indicating that there was substantial variability in the individual correlations across studies. For locus of control, generalized self-efficacy, and emotional stability, the 80% credibility intervals excluded zero. Except in the case of self-esteem, a large portion of the variability in study correlations between the specific traits and job performance was explained by sampling error and unreliability in measurement. In general, these findings lend support to our hypotheses regarding the relationship between each of the traits and job performance (H-2a–H-2d). Figure 2 provides a graphic display and comparison of the average disattenuated correlation, and the 95% confidence interval and 80% credibility interval limits for each of the four traits.

Discussion

Given their prevalence in the personality and industrial/organizational psychology literatures, it is surprising that there are no prior meta-analytic reviews of the relationship of self-esteem or locus of control with the two central criteria in applied psychology—job satisfaction and job performance. Furthermore, the other two traits included in Judge, Locke, and colleagues' model of core self-evaluations—generalized self-efficacy and emotional stability—have either not been subject to prior meta-analytic reviews or the evidence is inconsistent. Results indicated that all four of these traits displayed positive, nonzero mean correlations of similar magnitude with both job satisfaction and job performance. This, of course, is a primary benefit of meta-analysis—to help make sense

Table 1
Meta-Analysis of the Relationship Between the Core Traits and Job Satisfaction

Core trait	k	N	Mean r	SD_r	Mean ρ	SD_ρ	$SE_{M\rho}$	95% CI	80% CV	Variance explained (%)
Self-esteem	56	20,819	.20	.10	.26	.11	.02	.23, .29	.11, .40	23
Generalized self-efficacy	12	12,903	.38	.09	.45	.10	.03	.39, .51	.32, .58	9
Internal locus of control	80	18,491	.24	.12	.32	.16	.02	.28, .36	.12, .52	20
Emotional stability	21	7,658	.20	.08	.24	.09	.03	.19, .29	.12, .36	31

Note. k = number of correlations; N = total sample size for all studies combined; Mean r = average uncorrected correlation; SD_r = standard deviation of average uncorrected correlation; Mean ρ = average corrected correlation; SD_ρ = standard deviation of corrected correlation; $SE_{M\rho}$ = standard error of corrected correlation; 95% CI = lower and upper limits of 95% confidence interval; 80% CV = lower and upper limits of 80% credibility interval.

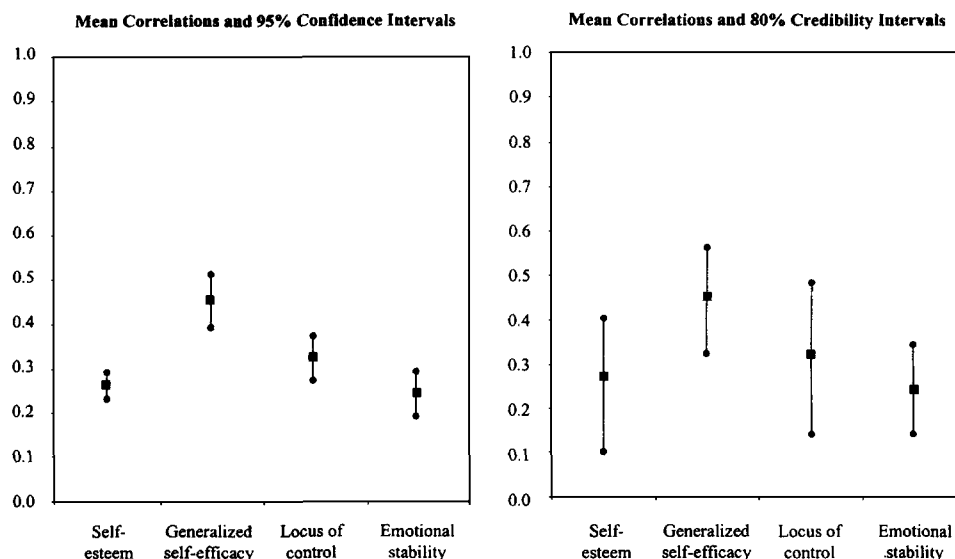


Figure 1. Mean and variability estimates of the four traits with job satisfaction. Solid boxes bisecting lines denote mean corrected correlations. Solid circles depict endpoints of 95% confidence intervals and 80% credibility intervals.

of the often inconsistent conclusions of qualitative reviews. In this analysis, all correlations between the four traits and job satisfaction were positive. However, in the case of the traits and job performance, the results for self-esteem were less clear. The 95% confidence interval for the relationship between self-esteem and job performance was narrow and excluded zero, indicating that we can be confident that the mean correlation is nonzero. However, the 80% credibility interval was wide and included zero, indicating that more than slightly 10% of the individual studies reported a negative relationship between self-esteem and job performance. Future research is needed to determine the conditions that moderate the relationship between self-esteem and job performance across studies. With this summary in mind, in the remainder of the discussion we turn our attention to the implications of the validity of the four traits for job satisfaction, job performance, and future research.

Implications for Job Satisfaction

Since the publication of two influential studies by Staw and colleagues (Staw & Ross, 1985; Shaw, Bell, & Clausen, 1986), the

dispositional source of job satisfaction has become an important research topic. One of the criticisms of this literature is that it has not provided much clarity in terms of which traits would prove most fruitful (Brief, 1998). Results of this study, by showing moderately strong correlations of the four traits with job satisfaction, suggest that these traits may be the principle dispositional correlates of job satisfaction. Furthermore, in addition to a nonzero mean true-score correlation between each of the four traits and job satisfaction, the 80% credibility intervals excluded zero, indicating that all four traits display positive relations with job satisfaction. Although qualitative reviews have reached generally optimistic conclusions regarding the relationship between these traits and job satisfaction (e.g., Judge et al., 1997; Spector, 1982, 1997; Tharenou, 1979), the results of this meta-analysis validate these reviews.

From this base of support, one logical extension of these results is to test process models that explain how the four traits are related to job satisfaction. For example, research indicates that neuroticism is related to diminished subjective well-being because neurotic individuals are more likely to choose situations in which they experience negative affect (Diener, Larsen, & Emmons, 1984;

Table 2
Meta-Analysis of the Relationship Between the Core Traits and Job Performance

Core trait	<i>k</i>	<i>N</i>	Mean <i>r</i>	<i>SD_r</i>	Mean <i>ρ</i>	<i>SD_ρ</i>	<i>SE_{Mρ}</i>	95% CI	80% CV	Variance explained (%)
Self-esteem	40	5,145	.18	.17	.26	.24	.04	.18, .34	-.05, .57	20
Generalized self-efficacy	10	1,122	.19	.10	.23	.10	.05	.13, .33	.10, .36	66
Internal locus of control	35	4,310	.14	.07	.22	.11	.03	.16, .28	.08, .36	62
Emotional stability	20	4,106	.16	.06	.19	.06	.03	.14, .24	.11, .27	69

Note. *k* = number of correlations; *N* = total sample size for all studies combined; Mean *r* = average uncorrected correlation; *SD_r* = standard deviation of average uncorrected correlation; Mean *ρ* = average corrected correlation; *SD_ρ* = standard deviation of corrected correlation; *SE_{Mρ}* = standard error of corrected correlation; 95% CI = lower and upper limits of 95% confidence interval; 80% CV = lower and upper limits of 80% credibility interval.

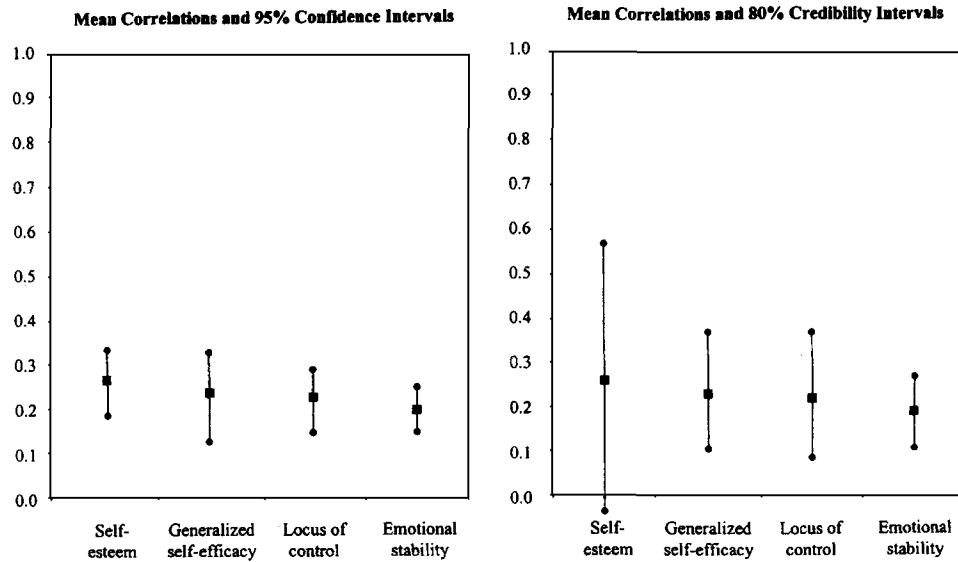


Figure 2. Mean and variability estimates of the four traits with job performance. Solid boxes bisecting lines denote mean corrected correlations. Solid circles depict endpoints of 95% confidence intervals and 80% credibility intervals.

Magnus, Diener, Fujita, & Pavot, 1993). Research also shows that individuals prone to the experience of positive emotions respond favorably to situations designed to induce positive affect, whereas individuals predisposed to experience negative emotions and negative self-appraisals are less likely to respond positively to such situations (Larsen & Ketelaar, 1991). Finally, self-concordance theory indicates that individuals who pursue goals for autonomous reasons, such as for the intrinsic pleasure produced by pursuit of the goal, exhibit better adjustment than those who pursue goals for controlled (e.g., extrinsic) reasons (Sheldon & Elliot, 1999). The fact that neuroticism is related to the pursuit of controlled goals (Elliot & Sheldon, 1998) suggests that individuals who are emotionally stable should be happier because they are more likely to pursue goals for self-concordant reasons. The generalization of these processes to the other three, related traits, and in turn to the job, would seem fairly direct. These are only some of many process models that can and should be tested.

Implications for Job Performance

Conscientiousness has been suggested as the primary dispositional predictor of job performance (Mount & Barrick, 1995). Our results suggest that the four traits display correlations very close in magnitude to the correlations between conscientiousness and job performance. Specifically, Barrick and Mount's (1991) results suggested that conscientiousness displayed a true score correlation of .23 with job performance. As can be seen in Table 2, our results show that three of the traits (self-esteem and generalized self-efficacy) display corrected correlations with job performance equal to (generalized self-efficacy, $\rho = .23$; internal locus of control, $\rho = .22$) or higher than (self-esteem, $\rho = .26$) that that of conscientiousness in Barrick and Mount's (1991) meta-analysis. This evidence suggests that at least one of the traits should be considered in selection decisions, as well as in future models of job

performance. It is noteworthy that brief, nonproprietary measures of each of these traits exist, which further contributes to the potential utility of the traits in selection decisions.

Although self-esteem displayed the highest average correlation with job performance, the correlation also was the one of the four that varied most from study to study. Specifically, even though we can be quite confident that the average self-esteem-job-performance correlation is positive and distinguishable from zero, the 80% credibility interval was wide and included zero, indicating substantial variability in the correlations across studies. It seems likely that there are factors across studies that moderate the degree to which self-esteem is relevant to job performance. This is an important area for future research. For the other traits (generalized self-efficacy, locus of control, and emotional stability), both the confidence and credibility intervals excluded zero.

Finally, we comment on the validity of neuroticism. Barrick and Mount (1991) hypothesized that emotional stability would be predictive of job performance. However, their results suggested a very weak relationship ($\rho = .08$). Results of this study, with $\rho = .19$, may have been stronger than Barrick and Mount's (1991) because in this study, only those studies that used measures specifically designed and validated to assess emotional stability were included. In contrast, Barrick and Mount (1991) post hoc classified measures of emotional stability, even if such measures were not designed or validated to measure emotional stability. Thus, the measures of emotional stability included in this study should be more construct-valid (and thus representative of the true construct). We also note that our estimate is identical to Salgado's (1997) more recent estimate of the validity of emotional stability, although his samples were collected from Europe. It is also important to note that of the four traits, emotional stability displayed the lowest correlation with both satisfaction and performance. Thus, relative to the other three traits included in this study,

measures of emotional stability do not appear to be the most valid traits in predicting job satisfaction or job performance.

Future Research

The reason we conducted a meta-analysis of the four traits included in this study—self-esteem, generalized self-efficacy, locus of control, and emotional stability—is because they were included in Judge, Locke, and colleagues' theory of core self-evaluations. Whereas the results of this study provide important support for the predictive validity of the traits in their model, this meta-analysis cannot address the validity of the core self-evaluations construct in predicting job satisfaction and job performance. Accordingly, the generalization of the results presented here is confined to the validity of the four specific traits.

However, several pieces of evidence suggest that future investigations of the validity of the core self-evaluations construct would prove profitable. First, the traits appear to be highly related. In the Appendix, we present a meta-analysis of the relationships between the four traits from 18 studies. Indeed, these traits correlate at least as strongly with each other as do multiple measures of a single construct (e.g., Ones, 1993). Second, as can be seen in Figures 1 and 2, the four traits displayed similar correlations with job satisfaction and job performance. As the figures show, there is considerable overlap in the correlations, especially for job performance. To test for statistically significant differences between the four traits, we conducted pairwise comparisons using the z test provided by Quinones, Ford, and Teachout (1995). Of the 12 possible correlations that could be significantly different, only three were. These all involved the correlation between generalized self-efficacy and job satisfaction, which was significantly higher than the correlations of job satisfaction with the three other traits. (This appeared to be largely due to an influential [$N = 9,987$] study with a strong correlation between generalized self-efficacy and job satisfaction.) Thus, in general, the four traits exhibit similar correlations with satisfaction and performance, as would be expected if the traits are simply indicators of a broad, latent construct. We wish to emphasize, however, that our results are only suggestive—we did not directly test the validity of the core self-evaluations construct.

On the basis of these results, when one is interested in predicting job satisfaction or job performance, it is not clear whether researchers should use one or more of these traits. On the one hand, the traits are highly related and thus there would appear to be limited "bang for the buck" (incremental validity) in assessing more than the most valid trait. On the other hand, if the traits are simply indicators of a broad core self-evaluations construct, it does not make sense to consider each individual trait independently. One thing does seem clear, on the basis of our results—at least one of these traits should be considered in future models of job satisfaction and job performance.

Conclusion

In summary, results of the present study indicate that self-esteem, locus of control, neuroticism, and generalized self-efficacy are significant predictors of both job satisfaction and job performance. However, there is much to be known about the exact nature

of the traits (whether or not they are indicators of the broader core self-evaluations construct) and the processes by which they affect these outcomes. In light of the similar correlations of the traits with satisfaction and performance observed here, and the high correlations among the traits, future research considering these traits together appears warranted.

References

References marked with an asterisk indicate studies included in the meta-analyses.

- *Adams, D. B. (1991). *A model of organizational commitment in staff nurses*. Unpublished doctoral dissertation, University of San Diego, CA.
- Allport, G. W. (1961). *Pattern and growth in personality*. New York: Holt, Rinehart, & Winston.
- *Anand, S. P. (1977). School teachers: Job satisfaction vs. extraversion and neuroticism. *Indian Educational Review*, 12, 68–78.
- *Anderson, M. R. (1977). *A study of the relationship between life satisfaction and self concept, locus of control, satisfaction with primary relationships, and work satisfaction*. Unpublished doctoral dissertation, Michigan State University, East Lansing.
- *Atteberry, M. G. (1976). *The relationship between emotional stability and job satisfaction of elementary school principals*. Unpublished doctoral dissertation, Arizona State University, Tempe.
- *Bagozzi, R. P. (1978). Salesforce performance and satisfaction as a function of individual difference, interpersonal, and situational factors. *Journal of Marketing Research*, 15, 517–531.
- *Band, S. R. (1984). *Characteristic self-esteem, competence, and coping efficacy in relation to police officer performance*. Unpublished doctoral dissertation, Fordham University, Bronx, NY.
- Barrick, M. R., & Mount, M. K. (1991). The big five personality dimensions and job performance: A meta-analysis. *Personnel Psychology*, 44, 1–26.
- *Barrick, M. R., & Mount, M. K. (1993). Autonomy as a moderator of the relationships between the big five personality dimensions and job performance. *Journal of Applied Psychology*, 78, 111–118.
- *Barrick, M. R., & Mount, M. K. (1996). Effects of impression management and self-deception on the predictive validity of personality constructs. *Journal of Applied Psychology*, 81, 261–272.
- *Batlis, N. C. (1980). Job involvement and locus of control as moderators of role-perception/individual-outcome relationships. *Psychological Reports*, 46, 111–119.
- *Beatty, R. W. (1975). A two-year study of hard-core unemployed clerical workers: Effects of scholastic achievement, clerical skill, and self-esteem on job success. *Personnel Psychology*, 28, 165–173.
- *Bechtold, S. E. (1975). *The effects of job characteristics on job satisfaction and performance: A focus on causality*. Unpublished doctoral dissertation, Indiana University, Bloomington.
- *Berhman, D. N., & Perreault, W. D. (1984). A role stress model of the performance and satisfaction of industrial salespersons. *Journal of Marketing*, 48, 9–21.
- *Bhagat, R. S., & Allie, S. M. (1989). Organizational stress, personal life stress, and symptoms of life strains: An examination of the moderating role of sense of competence. *Journal of Vocational Behavior*, 35, 231–253.
- *Bigoness, W. J., Keef, K. M., & duBose, P. B. (1988). Perceived goal-difficulty, locus of control, and performance ratings. *Psychological Reports*, 88, 475–482.
- *Binnie, D. G. (1985). *The relationship of expectancy work motivation, selected situational variables and locus of control to teacher job satisfaction*. Unpublished doctoral dissertation, University of Florida, Gainesville.
- *Blak, R. A. (1974). *Extraversion-introversion and neuroticism and their*

- relationship to managers' and self ratings of work performance. Unpublished doctoral dissertation, Wayne State University, Detroit, MI.
- *Blau, G. (1987). Locus of control as a potential moderator of the turnover process. *Journal of Occupational Psychology*, 60, 21-29.
- *Blau, G. (1993). Testing the relationship of locus of control to different performance dimensions. *Journal of Occupational and Organizational Psychology*, 66, 125-138.
- *Borucki, Z. (1987). Perceived organizational stress, emotions, and negative consequences of stress: A global self esteem and sense of interpersonal competence as moderator variables. *Polish Psychological Bulletin*, 18, 139-148.
- *Boswell, W. R., Boudreau, J. W., & Judge, T. A. (in press). Personality, cognitive ability, and executive career success. *Journal of Vocational Behavior*.
- *Brenden, N. R. (1990). *Self-esteem in the training and performance of village health workers*. Unpublished doctoral dissertation, Yeshiva University, New York, NY.
- Brief, A. P. (1998). *Attitudes in and around organizations*. Thousand Oaks, CA: Sage.
- Brockner, J. (1979). The effects of self-esteem, success-failure, and self-consciousness on task performance. *Journal of Personality and Social Psychology*, 37, 1732-1741.
- Brockner, J. (1988). *Self-esteem at work*. Lexington, MA: Lexington Books.
- *Broedling, L. A. (1973). *The internal-external control scale as a predictor of work motivation and performance in a valence-instrumentality-expectancy model of motivation*. Unpublished doctoral dissertation, George Washington University, Washington, DC.
- *Brookings, J. B., Bolton, B., Brown, C. E., & McEvoy, A. (1985). Self-reported job burnout among female human service professionals. *Journal of Occupational Behaviour*, 6, 143-150.
- *Brown, J., Cooper, G., & Kirkcaldy, B. (1996). Occupational stress among senior police officers. *British Journal of Psychology*, 78, 31-41.
- *Bruhn, J. G., Bunce, H. L., & Flody, C. S. (1980). Correlates of job satisfaction among pediatric nurse practitioners. *Psychological Reports*, 46, 807-814.
- *Bush, J. P. (1983). *The relationship of locus of control, powerlessness, and job satisfaction as perceived by nurses in their professional practice*. Unpublished doctoral dissertation, University of San Francisco, CA.
- *Callahan, S. D., & Kidd, A. H. (1986). Relationship between job satisfaction and self-esteem in women. *Psychological Reports*, 59, 663-668.
- *Carr, A. M. (1989). *Locus of control, leadership effectiveness, and principals: A correlational study*. Unpublished doctoral dissertation, University of Alabama, Tuscaloosa.
- *Carter, S. D. (1982). *The self-esteem and job satisfaction of black male professional level college graduates as related to their racial identity*. Unpublished doctoral dissertation, Rutgers: The State University of New Jersey, New Brunswick.
- Cattell, R. B. (1965). *The scientific analysis of personality*. Baltimore, MD: Penguin.
- *Cellar, D. F., Miller, M. J., Doverspike, D. D., & Klawnsky, J. D. (1996). Comparison of factor structures and criterion-related validity coefficients for two measures of personality based on the five factor model. *Journal of Applied Psychology*, 81, 694-703.
- *Cheston, J. E. (1991). *Processes of participation in decision making variables and performance-outcome instrumentalities as mediating variables*. Unpublished doctoral dissertation, Windsor University, Windsor, Ontario, Canada.
- *Christie, M. A. (1981). *A study of the relationship of locus of control and job satisfaction to leadership skill among supervisors in a federal agency*. Unpublished doctoral dissertation, University of Maryland, College Park.
- *Connelly, M. E. (1988). *An analysis of the relationship of selected variables to job satisfaction of school psychologists in Ohio*. Unpublished doctoral dissertation, Kent State University, Kent, OH.
- *Cooper, C. L., & Williams, J. (1991). A validation of the OSI on a blue-collar sample. *Stress Medicine*, 7, 109-112.
- *Cooper, R. K. (1986). *Occupational stress in police work*. Unpublished doctoral dissertation, University of Minnesota, Minneapolis.
- *Cortina, J. M., Doherty, M. L., Schmitt, N., Kaufman, G., & Smith, R. (1992). The "Big Five" personality factors in the IPI and MMPI: Predictors of police performance. *Personnel Psychology*, 45, 119-140.
- *Crant, J. M. (1995). The Proactive Personality Scale and objective job performance among real estate agents. *Journal of Applied Psychology*, 80, 532-537.
- *Dailey, R. C. (1979). Locus of control, task attributes, and job performance. *Perceptual and Motor Skills*, 49, 489-490.
- *Dean, G. B. (1989). *Factors that contribute to two year technical faculty job satisfaction with emphasis on self efficacy*. Unpublished doctoral dissertation, The Ohio State University, Columbus.
- *Derakhshani, M. (1976). *Internal versus external locus of control and job satisfaction in Iran*. Unpublished doctoral dissertation, University of Utah, Salt Lake City.
- Diener, E., Larsen, R. J., & Emmons, R. A. (1984). Person \times situation interactions: Choice of situations and congruence response models. *Journal of Personality and Social Psychology*, 47, 580-592.
- *DiMatteo, M. R., Shugars, D. A., & Hays, R. D. (1993). Occupational stress, life stress and mental health among dentists. *Journal of Occupational and Organizational Psychology*, 66, 153-162.
- *Dipboye, R. L., & Zultowski, W. H. (1978). Self-esteem as a moderator of the relationship between scientific interests and the job satisfaction of physicists and engineers. *Journal of Applied Psychology*, 63, 289-294.
- *Dipboye, R. L., Zultowski, W. H., DeWhirst, H. D., & Arvey, R. D. (1979). Self-esteem as a moderator of performance-satisfaction relationships. *Journal of Vocational Behavior*, 15, 193-206.
- Dodgson, P. G., & Wood, J. V. (1998). Self-esteem and the cognitive accessibility of strengths and weaknesses after failure. *Journal of Personality and Social Psychology*, 75, 178-197.
- *Duffy, P. J., Shiflett, S., & Downey, R. G. (1977). Locus of control: Dimensionality and predictability using Likert scales. *Journal of Applied Psychology*, 62, 214-219.
- *Eastwood, K. (1980). *Career anchors, job satisfaction and self-esteem*. Unpublished doctoral dissertation, University of Utah, Salt Lake City.
- *Edison, E. L. (1992). *Career assistant principals: Job satisfaction, self efficacy, and perceptions of task structure*. Unpublished doctoral dissertation, Wayne State University, Detroit, MI.
- *Edwards, S. S. (1983). *Intraindividual correlates of assembly productivity: A field study in an electronics industry*. Unpublished doctoral dissertation, Arizona State University, Tempe.
- Elliot, A. J., & Sheldon, K. M. (1998). Avoidance personal goals and the personality-illness relationship. *Journal of Personality and Social Psychology*, 75, 1282-1299.
- *Feinstein, D. (1982). *Teacher burnout: An investigation of the relationship among locus of control, job satisfaction, self esteem and depression of teachers of the emotionally disturbed*. Unpublished doctoral dissertation, Loyola University, Chicago, IL.
- *Ferris, G. R., Youngblood, S. A., & Yates, V. L. (1985). Personality, training performance, and withdrawal: A test of the person-group fit hypothesis for organizational newcomers. *Journal of Vocational Behavior*, 27, 377-388.
- *Frost, T. F., & Wilson, H. G. (1983). Effects of locus of control and A-B personality type on job satisfaction within the health care field. *Psychological Reports*, 53, 399-405.
- *Furnham, A., & Zacherl, M. (1986). Personality and job satisfaction. *Personality and Individual Differences*, 7, 453-459.
- *Gable, M., & Dangello, F. (1994). Locus of control, machiavellianism,

- and managerial job performance. *The Journal of Psychology*, 128, 599–608.
- *Garske, G. G. (1996). The relationship of self-esteem to levels of job satisfaction of vocational rehabilitation professionals. *Journal of Applied Rehabilitation Counseling*, 27, 19–22.
- *Gemmell, G. R., & Heisler, W. J. (1972). Fatalism as a factor in managerial job satisfaction, job strain, and mobility. *Personnel Psychology*, 25, 241–250.
- *Ghiselli, E. E. (1969). Prediction of success of stockbrokers. *Personnel Psychology*, 22, 125–130.
- Gist, M. E., & Mitchell, T. R. (1992). Self-efficacy: A theoretical analysis of its determinants and malleability. *Academy of Management Review*, 17, 183–211.
- *Glitzer, B. M. (1979). *Job satisfaction and its relation to sources of self-esteem in working women*. Unpublished doctoral dissertation, Rutgers: The State University of New Jersey, New Brunswick.
- *Goh, S. C., & Mealiea, L. W. (1984). Fear of success and its relationship to the job performance, tenure, and desired job outcomes of women. *Canadian Journal of Behavioural Science*, 16, 65–75.
- *Gorini, H. M. (1991). *An individual's correspondence preference as related to work related complaints, neuroticism and job satisfaction*. Unpublished doctoral dissertation, University of Illinois, Urbana.
- *Greenberger, D. B., Strasser, S., Cummings, L. L., & Dunham, R. B. (1989). The impact of personal control on performance and satisfaction. *Organizational Behavior and Human Decision Processes*, 43, 29–51.
- *Griffith, R. W., & Hom, P. W. (1988). Locus of control and delay of gratification as moderators of employee turnover. *Journal of Applied Social Psychology*, 18, 1318–1333.
- *Gupta, N. (1980). Performance-contingent rewards and satisfaction: An initial analysis. *Human Relations*, 33, 813–829.
- *Hajnal, V. (1991). *The pay satisfaction and efficacy of educators: A multivariate analysis*. Unpublished doctoral dissertation, University of Saskatchewan, Saskatoon, Saskatchewan, Canada.
- *Hampilos, J. P. (1988). *A four component self-esteem construct: Its measurement and construct validity*. Unpublished doctoral dissertation, Columbia University, New York, NY.
- *Hannan, R. L. (1978). *Work performance as a function of the ability, work values and the perceived work environment*. Unpublished doctoral dissertation, University of Maryland, College Park.
- *Hartley, M. P. (1975). *The relationship of locus of control and need achievement to job satisfaction*. Unpublished doctoral dissertation, Rutgers: The State University of New Jersey, New Brunswick.
- *Hassell, B. L. (1991). *The effects of ageism and age discrimination on older workers: A field study*. Unpublished doctoral dissertation, Florida State University, Tallahassee.
- *Hauser, P. (1981). *The self-esteem of regular and special education elementary teachers as related to job satisfaction*. Unpublished doctoral dissertation, University of Kansas, Lawrence.
- *Hayes, T. L., Roehm, H. A., & Castellano, J. P. (1994). Personality correlates of success in total quality manufacturing. *Journal of Business and Psychology*, 8, 397–411.
- *Hays, D. W. (1992). *A study of the relationship between internal locus of control and intrinsic job satisfaction*. Unpublished doctoral dissertation, Nova University, Fort Lauderdale, FL.
- *Herdman, E. V. (1980). *The relationship of leadership style, subordinate locus of control, and task structure to productivity and satisfaction*. Unpublished doctoral dissertation, Washington University, St. Louis, MO.
- *Hogan, R. (1971). Personality characteristics of highly rated policemen. *Personnel Psychology*, 24, 679–686.
- Hough, L. M. (1992). The "Big Five" personality variables—construct confusion: Description versus prediction. *Human Performance*, 5, 139–155.
- Hunter, J. E., & Schmidt, F. L. (1990). *Methods of meta-analysis*. Newbury Park, CA: Sage.
- Hunter, J. E., Schmidt, F. L., & Judiesch, M. K. (1990). Individual differences in output variability as a function of job complexity. *Journal of Applied Psychology*, 75, 28–42.
- Hysong, S. J., & Quiñones, M. A. (1997, April). *The relationship between self-efficacy and performance: A meta-analysis*. Paper presentation at the 12th annual conference of the Society for Industrial and Organizational Psychology, St. Louis, MO.
- *Ideas, K. (1992). *A study of locus of control, job satisfaction and a number of demographic variables*. Unpublished doctoral dissertation, Boston University, MA.
- *Jackson, D. W. (1973). *An investigation into the performance and feedback monitoring abilities of salesmen using selected interaction variables*. Unpublished doctoral dissertation, Michigan State University, East Lansing.
- *Jacobs, R., & Solomon, T. (1977). Strategies for enhancing the prediction of job performance from job satisfaction. *Journal of Applied Psychology*, 62, 417–421.
- *Jain, V. K., Lall, R., McLaughlin, D. G., & Johnson, W. (1996). Effects of locus of control, occupational stress, and psychological distress on job satisfaction among nurses. *Psychological Reports*, 78, 1256–1285.
- *Janman, K., Jones, J. G., Payne, R. L., & Rick, J. T. (1988). Clustering individuals as a way of dealing with multiple predictors in occupational stress research. *Behavioral Medicine*, 14, 17–29.
- *Jarvis, B. A. (1993). *A study of the relationship between teacher hardiness and job satisfaction at selected elementary schools*. Unpublished doctoral dissertation, University of Central Florida, Orlando.
- *Jayaratne, S., Vinokur-Kaplan, D., & Chess, W. A. (1995). The importance of personal control: A comparison of social workers in private practice and public agency settings. *The Journal of Applied Social Sciences*, 19, 47–59.
- *Johnson, A. L., Luthans, F., & Hennessey, H. W. (1984). The role of locus of control in leader influence behavior. *Personnel Psychology*, 37, 61–75.
- *Jones, G. R. (1986). Socialization tactics, self-efficacy, and newcomers' adjustments to organizations. *Academy of Management Journal*, 29, 262–304.
- *Judge, T. A., & Bauer, T. N. (1997, August). *Personality and work role affect*. Paper presented at the Academy of Management Annual Meeting, Boston, MA.
- *Judge, T. A., Bono, J. E., & Locke, E. A. (2000). Personality and job satisfaction: The mediating role of job characteristics. *Journal of Applied Psychology*, 85, 751–765.
- Judge, T. A., Erez, A., & Bono, J. E. (1998). The power of being positive: The relationship between positive self-concept and job performance. *Human Performance*, 11, 167–187.
- Judge, T. A., Locke, E. A., & Durham, C. C. (1997). The dispositional causes of job satisfaction: A core evaluations approach. *Research in Organizational Behavior*, 19, 151–188.
- Judge, T. A., Locke, E. A., Durham, C. C., & Kluger, A. N. (1998). Dispositional effects on job and life satisfaction: The role of core evaluations. *Journal of Applied Psychology*, 83, 17–34.
- *Judge, T. A., Thoresen, C. J., & Pucik, V. (1996, August). *Managerial coping with organizational change: A dispositional perspective*. Paper presented at the Academy of Management Annual Meeting, Cincinnati, OH.
- *Kaldenberg, D. O. (1991). Test of the Korman hypothesis: Performance, self-esteem, and job satisfaction among dentists. *Psychological Reports*, 69, 201–202.
- *Kasperson, C. J. (1982). Locus of control and job dissatisfaction. *Psychological Reports*, 50, 823–826.
- *Keenan, A., & McBain, G. D. (1979). Effects of Type A behaviour, intolerance of ambiguity, and locus of control on the relationship be-

- tween role stress and work-related outcomes. *Journal of Occupational Psychology*, 52, 277-285.
- *Keinan, G., Friedland, N. J., Yitzhaky, J., & Moran, A. (1981). Biographical, physiological, and personality variables as predictors of performance under sickness-inducing motion. *Journal of Applied Psychology*, 66, 233-241.
- *Keller, R. T. (1983). Predicting absenteeism from prior absenteeism, attitudinal factors, and non-attitudinal factors. *Journal of Applied Psychology*, 68, 536-540.
- *Keller, R. T. (1987). Cross cultural influences on work and nonwork contributors to quality of life. *Group and Organization Studies*, 12, 304-318.
- *Kemmerer, B. E. (1990). *The moderating effect of personality differences on job stress: A longitudinal investigation*. Unpublished doctoral dissertation, University of Nebraska, Lincoln.
- *Kerr Inkson, J. H. (1978). Self-esteem as a moderator of the relationship between job performance and job satisfaction. *Journal of Applied Psychology*, 63, 243-247.
- *Kimmons, G., & Greenhaus, J. H. (1976). Relationship between locus of control and reactions of employees to work characteristics. *Psychological Reports*, 39, 815-820.
- *Kircaldy, B., Thome, E., & Thomas, W. (1989). Job satisfaction amongst psychosocial workers. *Personality and Individual Differences*, 10, 191-196.
- *Kircaldy, B. D., & Cooper, C. L. (1992). Cross cultural differences in occupational stress among British and German managers. *Work and Stress*, 6, 177-190.
- *Knold, J. A. (1981). *The relationship between industrial education teachers' voluntary in-service participation and their personality characteristics, job satisfaction, and locus of control*. Unpublished doctoral dissertation, University of Washington, Seattle.
- *Knoop, R. (1981). Locus of control as moderator between job characteristics and job attitudes. *Psychological Reports*, 48, 519-525.
- *Koeske, G. F., & Kelly, T. (1995). The impact of overinvolvement on burnout and job satisfaction. *American Journal of Orthopsychiatry*, 65, 282-292.
- *Koeske, G. F., & Kirk, S. A. (1995). Direct and buffering effects of internal locus of control among mental health professionals. *Journal of Social Service Research*, 20, 1-28.
- Korman, A. K. (1970). Toward an hypothesis of work behavior. *Journal of Applied Psychology*, 54, 31-41.
- *Kulkari, A. V. (1983). Relationships between internal vs. external locus of control and job satisfaction. *Journal of Psychological Researches*, 27, 57-60.
- *Landsbergis, P. A., Schnall, P. L., Deitz, D., Friedman, R., & Pickering, T. (1992). The patterning of psychological attributes and distress by "job strain" and social support in a sample of working men. *Journal of Behavioral Medicine*, 15, 379-405.
- *LaRocco, J. M., & Jones, A. P. (1978). Co-worker and leader support as moderators of stress-strain relationships in work situations. *Journal of Applied Psychology*, 63, 629-634.
- Larsen, R. J., & Ketelaar, T. (1991). Personality and susceptibility to positive and negative emotional states. *Journal of Personality and Social Psychology*, 61, 132-140.
- *Lau, M. S. (1980). *The prediction of American exempt employees' intent to stay with a U.S. Japanese subsidiary based on job factors and personal factors*. Unpublished doctoral dissertation, New York University, New York.
- *Laughlin, B. W. (1984). *The relationship of locus of control variables to the rating of job performance of extension home economics agents in Mississippi*. Unpublished doctoral dissertation, Mississippi State University, Starkville.
- *Lehman, E. K., & Simpson, D. D. (1992). Employee substance use and on-the-job behaviors. *Journal of Applied Psychology*, 77, 309-321.
- *Lennon, P. A. (1992). *An investigation of teacher locus of control, principal leadership and job satisfaction*. Unpublished doctoral dissertation, Seton Hall University, South Orange, NJ.
- *Lester, D. (1982). Job satisfaction, cynicism, education and belief in an internal locus of control in police. *Psychological Reports*, 50, 1214.
- *Lichtman, C. M. (1970). Some intrapersonal response correlates of organizational rank. *Journal of Applied Psychology*, 54, 77-80.
- Locke, E. A., McClellan, K., & Knight, D. (1996). Self-esteem and work. *International Review of Industrial/Organizational Psychology*, 11, 1-32.
- *Lopez, E. M. (1982). A test of the self-consistency theory of the job performance-job satisfaction relationship. *Academy of Management Journal*, 25, 335-348.
- Lord, R. G., & Hanges, P. J. (1987). A control systems model of organizational motivation: Theoretical development and applied implications. *Behavioral Science*, 32, 161-178.
- *Lusch, R. F., & Serpencic, R. R. (1990). Personal differences, job tension, job outcomes, and store performance: A study of retail store managers. *Journal of Marketing*, 54, 85-101.
- Magnus, K., Diener, E., Fujita, F., & Pavot, W. (1993). Extraversion and neuroticism as predictors of objective life events: A longitudinal analysis. *Journal of Personality and Social Psychology*, 65, 1046-1053.
- *Majumder, R. K., MacDonald, A. P., & Grever, K. B. (1977). A study of rehabilitation counselors: Locus of control and attitudes toward the poor. *Journal of Counseling Psychology*, 24, 137-141.
- *Mallinckrodt, B. (1990). Satisfaction with a new job after unemployment: Consequences of job loss for older professionals. *Journal of Counseling Psychology*, 37, 149-152.
- *Margolin, E. (1990). *The effect of role conflict, role ambiguity and locus of control on the perceptions of job performance*. Unpublished doctoral dissertation, New York University, New York.
- *McCall, G. J. (1978). *The self-concept as a correlate to teacher performance: An empirical study of the relationship between teacher self-concept as measured by the principal's assessment of a teacher instrument of 119 middle school teachers in Clay County, Florida*. Unpublished doctoral dissertation, Austin Peay State University, Clarks-ville, TN.
- McCrae, R. R., & Costa, P. T., Jr. (1991). Adding *Liebe und Arbeit*: The full five-factor model and well-being. *Personality and Social Psychology Bulletin*, 17, 227-232.
- *McKinley, E. (1985). *The interaction of organization type, locus of control, motivation and role conflict on the job satisfaction and job stress of selected middle managers*. Unpublished doctoral dissertation, University of Connecticut, Storrs.
- *Meir, E. I., Melamed, S., & Abu-Freha, A. (1990). Vocational, avocational, and skill utilization congruences and their relationships with well-being in two cultures. *Journal of Vocational Behavior*, 36, 153-165.
- *Meltzer, H., & Ludwig, D. (1971). Positive mental health of workers as related to memory optimism, work competency and personified values. *Psychological Reports*, 28, 223-229.
- *Miller, J. C. (1984). *Locus of control, job enrichment, demographic and situational variables as predictors of job performance and job satisfaction*. Unpublished doctoral dissertation, Boston University, MA.
- *Mohan, J., & Bali, S. (1988). A study of job-satisfaction of doctors in relation to their personality, values and self-esteem. *Journal of Personality and Clinical Studies*, 4, 63-68.
- *Morse, J. J. (1976). Sense of competence and individual managerial performance. *Psychological Reports*, 38, 1195-1198.
- *Mossholder, K. W., & Bedeian, A. G. (1982). Group process-work outcome relationships: A note on the moderating impact of self-esteem. *Academy of Management Journal*, 25, 575-585.
- *Mossholder, K. W., Bedeian, A. G., & Armenakis, A. A. (1981). Role perceptions, satisfaction, and performance: Moderating effects of self-

- esteem and organizational level. *Organizational Behavior and Human Performance*, 28, 224–234.
- Mount, M. K., & Barrick, M. R. (1995). The Big Five personality dimensions: Implications for research and practice in human resources management. *Research in Personnel and Human Resources Management*, 13, 153–200.
- *Mount, M. K., Barrick, M. R., & Stewart, G. L. (1998). Five-factor model of personality and performance in jobs involving interpersonal interactions. *Human Performance*, 11, 145–165.
- *Mount, M. K., Barrick, M. R., & Strauss, J. P. (1994). Validity of observer ratings of the Big Five personality factors. *Journal of Applied Psychology*, 79, 272–280.
- *Nagarathnamma, B. (1988). Job satisfaction as a function of locus of control and neuroticism. *Journal of the Indian Academy of Applied Psychology*, 14, 12–15.
- *Nelson, A., Cooper, G. L., & Jackson, P. R. (1995). Uncertainty amidst change: The impact of privatization on employee job satisfaction and well-being. *Journal of Occupational and Organizational Psychology*, 68, 57–71.
- *Norris, D. R., & Niebuhr, R. E. (1984). Attributional influences on the job performance–job satisfaction relationship. *Academy of Management Journal*, 27, 424–431.
- *O'Hanlon-Nichols, T. (1989). *The relationship between locus of control and perceived head nurse leadership behavior on job satisfaction of registered nurses*. Unpublished doctoral dissertation, State University of New York at Albany.
- Ones, D. S. (1993). *The construct validity of integrity tests*. Unpublished doctoral dissertation, University of Iowa, Iowa City.
- Ones, D. S., Mount, M. K., Barrick, M. R., & Hunter, J. E. (1994). Personality and job performance: A critique of the Tett, Jackson, and Rothstein (1991) meta-analysis. *Personnel Psychology*, 47, 147–156.
- *Oppenheimer, R. J. (1981). *Testing threeway interactions among leader behaviors, task structure and personal characteristics of subordinates as indicated by the path-goal theory of leadership*. Unpublished doctoral dissertation, University of Toronto, Ontario, Canada.
- *Organ, D. W., & Greene, C. N. (1974). Role ambiguity, locus of control, and work satisfaction. *Journal of Applied Psychology*, 59, 101–102.
- *Orpen, C. (1983). Peer ratings as predictors of managerial performance. *Psychological Studies*, 28, 78–80.
- *Orpen, C. (1995). Self-efficacy beliefs and job performance among black managers in South Africa. *Psychological Reports*, 76, 649–650.
- *Papper, E. M. (1983). *Individual and organizational effects of perceived work load*. Unpublished doctoral dissertation, Bowling Green State University, OH.
- *Parasuraman, S., & Alutto, J. (1984). Sources and outcomes of stress in organizational settings: Toward the development of a structural model. *Academy of Management Journal*, 27, 330–350.
- *Perkins, D. N. (1977). *Causal forces in the creation of a new setting*. Unpublished doctoral dissertation, University of Michigan, Ann Arbor.
- *Perone, M., DeWaard, R. J., & Baron, A. (1979). Satisfaction with real and simulated jobs in relation to personality variables and drug use. *Journal of Applied Psychology*, 64, 660–668.
- Peterson, C., & Seligman, M. E. P. (1984). Causal explanations as a risk factor for depression: Theory and evidence. *Psychological Review*, 91, 347–374.
- *Pettersen, N. (1985). Specific versus generalized locus of control scales related to job satisfaction. *Psychological Reports*, 56, 60–62.
- *Piedmont, R. L., & Weinstein, H. P. (1994). Predicting supervisor ratings of job performance using the NEO personality inventory. *The Journal of Psychology*, 128, 255–265.
- *Pierce, J. L., Gardner, D. G., Cummings, L. L., & Dunham, R. B. (1989). Organization-based self-esteem: Construct definition, measurement, and validation. *Academy of Management Journal*, 32, 622–648.
- *Pierce, J. L., Gardner, D. G., Dunham, R. B., & Cummings, L. L. (1993). Moderation by organization: Self-esteem of role condition-response relationship. *Academy of Management Journal*, 36, 271–288.
- *Porac, J. F., Ferris, G. R., & Fedor, P. D. (1983). Causal attributions, affect and expectations for a day's work performance. *Academy of Management Journal*, 26, 285–296.
- *Porwol, N. K., & Sharma, S. C. (1985). Job satisfaction and emotional stability. *Indian Psychological Review*, 28, 1–4.
- *Poulin, J. E., & Walter, C. A. (1992). Retention plans and job satisfaction of gerontological social workers. *Journal of Gerontological Social Work*, 19, 99–114.
- *Prien, E. P. (1970). Measuring performance criteria of bank tellers. *Journal of Industrial Psychology*, 5, 29–36.
- Quiñones, M. A., Ford, J. K., & Teachout, M. S. (1995). The relationship between work experience and job performance: A conceptual and meta-analytic review. *Personnel Psychology*, 48, 887–910.
- *Randall, M., & Scott, W. (1988). Burnout, job satisfaction, and job performance. *Australian Psychologist*, 23, 335–347.
- *Reddish, M. (1983). *The relationship of selected Mississippi public school teachers' locus of control to their perceptions of job satisfaction*. Unpublished doctoral dissertation, Mississippi State University, Starkville.
- *Renn, R. W., & Prien, K. O. (1995). Employee responses to performance feedback from the task. *Group and Organization Management*, 20, 337–354.
- *Richford, M. L. (1981). *A study of the Machiavellian orientation, locus of control, and job satisfaction of a selected sample of Virginia public schools secondary level principals*. Unpublished doctoral dissertation, Virginia Polytechnic Institute and State University, Blacksburg.
- *Richford, M. L., & Fortune, J. C. (1984). The secondary principal's job satisfaction in relation to two personality constructs. *Education*, 105, 17–19.
- *Ricotta, P. F. (1984). *Perceived stress in nursing: Relationship to job satisfaction, locus of control, occupational prestige, achievement, and capacity for status*. Unpublished doctoral dissertation, California School of Professional Psychology, San Francisco.
- *Riggs, M. L., & Knight, P. A. (1994). The impact of perceived group success-failure on motivational beliefs and attitudes: A causal model. *Journal of Applied Psychology*, 79, 755–766.
- *Rose, R. M., Fogg, L. F., Helmreich, T. L., & McFadden, T. J. (1994). Psychological predictors of astronaut effectiveness. *Aviation, Space, and Environmental Medicine*, 65, 910–915.
- Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton, NJ: Princeton University Press.
- *Rosman, P., & Burke, R. J. (1980). Job satisfaction, self-esteem, and the fit between perceived self and job on valued competencies. *The Journal of Psychology*, 105, 259–269.
- Rotter, J. B. (1966). Generalized expectancies for internal versus external control of reinforcement. *Psychological Monographs*, 80 (1, Whole No. 609).
- *Sadowski, C. J., & Blackwell, M. (1985). Locus of control and student teacher performance. *Education*, 105, 391–393.
- *Saks, A. M., & Ashforth, B. E. (1997). A longitudinal investigation of the relationships between job information sources, applicant perceptions of fit, and work outcomes. *Personnel Psychology*, 50, 395–426.
- *Sales, C. A. (1977). *Subordinate personality, nature of supervision and task complexity in leadership effectiveness*. Unpublished doctoral dissertation, University of Waterloo, Waterloo, Ontario, Canada.
- Salgado, J. F. (1997). The five factor model of personality and job performance in the European Community. *Journal of Applied Psychology*, 82, 30–43.
- *Santangelo, S., & Lester, D. (1985). Correlates of job satisfaction of public school teachers: Moonlighting, locus of control, and stress. *Psychological Reports*, 56, 130.
- *Schau, E. J. (1974). *The development of forced choice instruments to*

- evaluate work performance of firefighters and paramedics, and an examination of correlates of those instruments. Unpublished doctoral dissertation, University of Washington, Seattle.
- *Schmitt, N., & Bedeian, A. G. (1982). A comparison of LISREL and two-stage least squares analysis of a hypothesized life-job satisfaction reciprocal relationship. *Journal of Applied Psychology*, 67, 806–817.
- *Schoun, S. (1981). *A comparative investigation of selected attitudes of dual career couples in which the wife earns more/less than the husband*. Unpublished doctoral dissertation, University of Tennessee, Knoxville.
- *Schuerger, J. M., Kochevar, K. F., & Reinwald, J. E. (1982). Male and female corrections officers: Personality and rated performance. *Psychological Reports*, 51, 223–228.
- *Schwoerer, C. E., & May, D. R. (1996). Age and work outcomes: The moderating effects of self-efficacy and tool design effectiveness. *Journal of Organizational Behavior*, 17, 469–487.
- *Seay, R. M. (1985). *The situational interaction of role ambiguity, managerial level, and locus of control as determinants of work satisfaction*. Unpublished doctoral dissertation, Louisiana Technical University, Ruston.
- *Shahani, C., Dipboye, R. L., & Phillips, A. P. (1990). Global self-esteem as a correlate of work-related attitudes: A question of dimensionality. *Journal of Personality Assessment*, 54, 276–288.
- *Sharma, U., & Chaudhary, P. N. (1980). Locus of control and job satisfaction among engineers. *Psychological Studies*, 25, 126–128.
- Sheldon, K. M., & Elliot, A. J. (1999). Goal striving, need satisfaction, and longitudinal well-being: The self-concordance model. *Journal of Personality and Social Psychology*, 76, 482–497.
- *Singer, A. (1978). *Therapists' job satisfaction and involvement as related to locus of control, patient change and goal attainment*. Unpublished doctoral dissertation, Hofstra University, Hempstead, NY.
- *Sinha, J. (1973). Study of self-concept, job factors and psychological factors of job satisfaction. *Behaviormetric*, 3, 1–4.
- *Small, R. J., & Rosenberg, L. J. (1977). Determining job performance in the industrial sales force. *Industrial Marketing Management*, 6, 99–102.
- *Smilansky, J. (1984). External and internal correlates of teachers' satisfaction and willingness to report stress. *British Journal of Educational Psychology*, 54, 84–92.
- *Smith, C. A., Organ, D. W., & Near, J. P. (1983). Organizational citizenship behavior: Its nature and antecedents. *Journal of Applied Psychology*, 68, 653–663.
- *Smith, K. D. (1985). *Locus of control and perceived performance of urban and suburban public high school principals*. Unpublished doctoral dissertation, University of Northern Colorado, Greeley.
- Spector, P. E. (1982). Behavior in organizations as a function of employee's locus of control. *Psychological Bulletin*, 91, 482–497.
- Spector, P. E. (1997). *Job satisfaction: Application, assessment, causes, and consequences*. Thousand Oaks, CA: Sage.
- *Spector, P. E., & Michaels, C. E. (1986). Personality and employee withdrawal: Effects of locus of control on turnover. *Psychological Reports*, 59, 63–66.
- *Srivastava, S. (1986). To measure the level of job satisfaction in technical and non-technical employees with special reference to different personality characteristics in public sectors. *Indian Journal of Applied Psychology*, 23, 1–5.
- Stajkovic, A. D., & Luthans, F. (1998). Self-efficacy and work related performance: A meta-analysis. *Psychological Bulletin*, 124, 240–261.
- Staw, B. M., Bell, N. E., & Clausen, J. A. (1986). The dispositional approach to job attitudes: A lifetime longitudinal test. *Administrative Science Quarterly*, 31, 56–77.
- Staw, B. M., & Ross, J. (1985). Stability in the midst of change: A dispositional approach to job attitudes. *Journal of Applied Psychology*, 70, 469–480.
- *Steele, L. (1984). *The adult development of Protestant male clergy: An investigation of attitudinal change in the adult years*. Unpublished doctoral dissertation, Claremont Graduate School, Claremont, CA.
- *Sterns, L., Alexander, R. A., Barrett, G. V., & Dambrot, F. H. (1983). The relationship of extraversion and neuroticism with job preferences and job satisfaction for clerical employees. *Journal of Occupational Psychology*, 56, 145–153.
- *Stone, J. A. (1982). *The relationship between perceived stress and job satisfaction, locus of control, and length of teaching experience*. Unpublished doctoral dissertation, University of Houston, TX.
- *Stroud, S. D. (1987). *The relationship of locus of control, powerlessness, and job satisfaction as perceived by nursing faculty*. Unpublished doctoral dissertation, Auburn University, AL.
- *Stumpf, S. A., Brief, A. P., & Hartman, K. (1987). Self-efficacy expectations and coping with career-related events. *Journal of Vocational Behavior*, 31, 91–108.
- *Sujan, H., Weitz, B. A., & Jumar, N. (1994). Learning orientation, working smart, and effective selling. *Journal of Marketing*, 58, 39–52.
- *Szilagyi, A. D., Sims, H. P., & Keller, R. T. (1976). Role dynamics, locus of control, and employee attitudes and behavior. *Academy of Management Journal*, 19, 259–276.
- *Tabatabai, H. A. (1980). *A comparative study of job satisfaction and internal-external locus of control in private and public organizations*. Unpublished doctoral dissertation, U.S. International University, San Diego, CA.
- *Tai, C. (1989). *Personal and environmental variables affecting public school teacher-counselor job satisfaction in Southern Taiwan*. Unpublished doctoral dissertation, University of Northern Colorado, Greeley.
- *Taylor, D. L., & Tashakkori, A. (1995). Decision participation and school climate as predictors of job satisfaction and teachers' sense of efficacy. *Journal of Experimental Education*, 63, 217–230.
- *Terry, D. J., Nielsen, M., & Perchard, L. (1993). Effects of work stress on psychological well-being and job satisfaction: The stress-buffering role of social support. *Australian Journal of Psychology*, 45, 168–175.
- Tett, R. P., Jackson, D. N., & Rothstein, M. (1991). Personality measures as predictors of job performance: A meta-analytic review. *Personnel Psychology*, 44, 703–742.
- Tett, R. P., Jackson, D. N., Rothstein, M., & Reddon, J. R. (1994). Meta-analysis of personality-job performance relations: A reply to Ones, Mount, Barrick, and Hunter (1994). *Personnel Psychology*, 47, 157–172.
- Tharenou, P. (1979). Employee self-esteem: A review of the literature. *Journal of Vocational Behavior*, 15, 316–346.
- *Tharenou, P., & Harker, P. (1984). Moderating influence of self-esteem on relationships between job complexity, performance, and satisfaction. *Journal of Applied Psychology*, 69, 623–632.
- *Titus, H. E. (1969). Prediction of supervisory success by use of standard psychological tests. *The Journal of Psychology*, 72, 35–40.
- *Tokar, D. M., & Subich, L. M. (1997). Relative contributions of congruence and personality dimensions to job satisfaction. *Journal of Vocational Behavior*, 50, 482–491.
- *Tseng, M. S. (1970). Locus of control as a determinant of job proficiency, employability, and training satisfaction of vocational rehabilitation clients. *Journal of Counseling Psychology*, 17, 487–491.
- *Ursprung, A. W. (1986). Incidence and correlates of burnout in residential service settings. *Rehabilitation Counseling Bulletin*, 29, 225–239.
- *Vanetizian, E. V. (1988). *Performance appraisal and perception of inner directed control*. Unpublished doctoral dissertation, University of Michigan, East Lansing.
- *Vasil, L. (1992). Self-efficacy expectations and causal attributions for achievement among male and female university faculty. *Journal of Vocational Behavior*, 41, 259–269.
- Viswesvaran, C., Ones, D. S., & Schmidt, F. L. (1996). Comparative analysis of the reliability of job performance ratings. *Journal of Applied Psychology*, 81, 557–574.
- Weiss, H., & Sherman, J. (1973). Internal-external control as a predictor of

- task effort and satisfaction subsequent to failure. *Journal of Applied Psychology*, 57, 132–136.
- *Whatley, R. S. (1974). *The relationship between the self-concept of selected curriculum directors within Georgia and their effectiveness in three areas of job performance as perceived by their teachers and themselves*. Unpublished doctoral dissertation, University of Georgia, Athens.
- *White, A. T., & Spector, P. E. (1987). An investigation of age-related factors in the age-job satisfaction relationship. *Psychology and Aging*, 2, 261–265.
- *Wiener, Y., Muczyk, J. P., & Martin, H. J. (1992). Self-esteem and job involvement as moderators of the relationship between work satisfaction and well-being. *Journal of Social Behavior and Personality*, 7, 539–554.
- *Wiggins, J. D., & Weslander, D. L. (1986). Effectiveness related to personality and demographic characteristics of secondary school counselors. *Counselor Education and Supervision*, 26, 26–35.
- *Williams, J. L. (1981). *Self-concept, confidence in instructional competency, and teacher effectiveness at the pre-service level*. Unpublished doctoral dissertation, University of Michigan, East Lansing.
- *Wilson, G. D., Tunstall, O. A., & Eysenck, H. J. (1972). Measurement of motivation in predicting industrial performance. *Occupational Psychology*, 46, 15–24.
- *Witt, L. A. (1988). Locus of control and success as a professional money collector. *The Journal of Social Psychology*, 128, 703–704.
- *Wu, V., & Short, P. M. (1996). The relationship of empowerment to teacher job commitment and job satisfaction. *Journal of Instructional Psychology*, 23, 85–89.

Appendix

Meta-Analysis of Relationships Among Self-Esteem, Generalized Self-Efficacy, Locus of Control, and Emotional Stability

Core trait	Self-esteem	Generalized self-efficacy	Internal locus of control
Generalized self-efficacy			
ρ	.85		
k	14		
N	1,894		
Internal locus of control			
ρ	.59	.63	
k	16	14	
N	2,175	1,888	
Emotional stability			
ρ	.66	.59	.51
k	18	14	16
N	2,297	1,888	2,175

Note. The 80% credibility intervals and 95% confidence intervals of all correlations exclude zero. ρ = correlation corrected for measurement error; k = number of correlations; N = total sample size.

Received December 11, 1998
 Revision received February 5, 2000
 Accepted February 10, 2000 ■