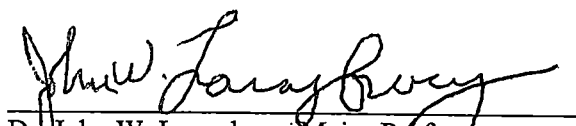
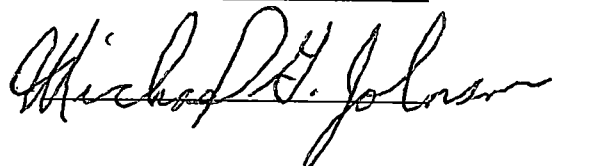


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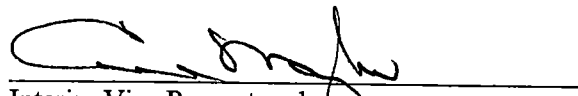
I am submitting herewith a thesis written by Vivian Danise Cook entitled, " Personality Predictors of Job Performance for Industrial Temporary Employees." I have examined the final copy of this thesis for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Arts, with a major in Psychology.


Dr. John W. Lounsbury, Major Professor

We have read this thesis
and recommend its acceptance:

Accepted for the Council:


Interim Vice Provost and
Dean of the Graduate School

PERSONALITY PREDICTORS OF JOB
PERFORMANCE FOR INDUSTRIAL
TEMPORARY EMPLOYEES

A Thesis
Presented for the
Master of Arts
Degree
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ABSTRACT

In light of recent research supporting the use of personality measures to predict job performance and in view of the paucity of research on personality predictors of success for temporary employees, the current study investigated the use of personality measures with industrial temporary employees. Through job analysis, two personality factors emerged that may serve as predictors of success for industrial temporary workers: Conscientiousness and Agreeableness. A work-contextualized personality measure, the Temporary Employee Inventory (TEI), was created to measure these personality dimensions. In a predictive validation study, the TEI was administered to 67 industrial temporary employees and was correlated with supervisor ratings of job performance. The TEI demonstrated a correlation with overall job performance ($r=.30, p<.05$). The individual scale of Conscientiousness also correlated significantly with overall job performance ($r=.32, p<.05$) and displayed significant correlations with all dimensions of job performance except "Relations With Others." While the individual scale of Agreeableness yielded non-zero correlations with overall job performance and with all dimensions of job performance, these correlations were not statistically significant at the .05 level. This study supports prior research that has found personality to be a modest predictor of job performance and has added to the current body of research by exploring the use of personality measures in the context of temporary employment. This study's findings are preliminary in nature and more research is needed in order to reach more sound conclusions with regard to the use of personality assessment to predict the job performance of industrial temporary employees.

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I. INTRODUCTION AND REVIEW OF THE LITERATURE

A. Introduction

A growing number of employers are turning to personality measures to assist in making hiring decisions (Hogan, Hogan, & Roberts, 1996). Trying to predict job performance through the use of personality measures is becoming more commonplace in many organizations. This is because employers are beginning to stress personal qualities desired for a job almost as much as the skills needed, such as: team player, responsible, self starter, motivated, or enthusiastic. Personal qualities like these help employers predict how well an individual will fit into an organization and how well he or she will fit a certain job.

This interest may likely be a result of advances in the measurement of personality. Over the past several decades, many researchers have investigated personality and have examined the use of personality measures for personnel selection purposes.

B. Personality Measurement

In the early days of personality research, Mischel (1968) reviewed the literature and concluded that there was not sufficient evidence to demonstrate that behavior was consistent enough to make any statements about one's "personality" particularly meaningful. Yet his 1968 book served as a catalyst, leading to years of careful examination by other researchers and leading others to disagree with his conclusions. Cattell (1965) resolved that personality was indeed a measurable construct. Further, he

defined personality as something that allows for the prediction of what a person is likely to do in a given situation.

Such a definition implied that personality can be used to summarize past behavior and predict future behavior. The belief that behavior can be summarized, and possibly be predicted, based upon personality has led many researchers to consider the structure of personality and to examine the extent to which it may predict various behaviors, including on-the-job behavior.

Based on the assertion that personality is a predictor of behavior, personnel researchers became interested in personality as a predictor of job behavior. Out of this interest, a multitude of personality measures have emerged with the intent of predicting future job performance through the measure of personality. Such methods include measurement through observation, situational tests (contriving situations), ratings or checklists from peers, projective tests, and self-report questionnaires or inventories. Different theories of personality favor different approaches to its measurement. For example, motive theorists favor the use of projective tests, while behaviorists may prefer behavioral measurements such as situational tests or observation. Self-report inventories are favored by many researchers, including personnel psychologists, because they are economical and time effective.

C. Self-Report Personality Measurement

Self-report questionnaires and inventories are of particular interest in the area of personnel selection because they are economical and time effective (Hogan et. al., 1996).

Personality inventories typically present statements about present or past behavior, preferences, and dispositions that an individual must respond to. Scores are then generated based on the individual's endorsement of particular items. Administration is usually fairly simple, with relatively low cost and using little time, compared to other methods. Widely used self-report measures include the California Psychological Inventory (CPI) (Gough, 1987), the Hogan Personality Inventory (Hogan & Hogan, 1995), and the NEO Personality Inventory (Costa & McCrae, 1985).

The growing popularity of the self-report personality inventory brings with it concerns about the use of this method. There are many criticisms with regard to the use of the common self-report method of personality measurement that one must address before considering the use of such an inventory for selection. One criticism raises the concern that self-report personality measures are easily faked. Faking may be outright lying or half-conscious distortion. Many researchers argue that personality items such as this item for the CPI, "I find it hard to keep my mind on a task or a job," are very transparent and individuals will fake their answers in order to present a positive, or socially acceptable, image to a potential employer

A self-report measure of personality is intended to tap into the person's self concept. It does not necessarily measure "what do you do/what have you done" but "what would you do?" It is the image the person would like to have. Individuals tell us how they want to be seen through their responses on personality measures. Thus, individuals may be motivated to present a very positive, although not entirely accurate, image. Yet, there is some evidence to suggest that self-reports are not likely to be

distorted in selection settings (Hough, Eaton, Dunnette, Kemp, & McCloy, 1990). There is also evidence that self-reports are similar to ratings given to an individual by others who know him/her (Cheek, 1982).

According to Hogan, Hogan, and Roberts (1996), the processes that govern one's responses on a personality self-report measure are similar to the processes that underlie general social interactions. When interacting with others, people try to control how they are viewed by others and try to present the image they want others to see. A personality measure is like having an interview with an anonymous interviewer. The individual will give the responses that endorse how he or she wants to be seen. These are self-presentations, not self-reports. They measure how the individual is seen by others -- their typical interpersonal style --- so faking is not really an issue. Tett, Jackson, and Rothstein (1991) also address this issue of faking by showing that, if faking were occurring, one would find that studies using job applicants would have lower validities than studies using incumbents (because incumbents would not be as motivated to fake). The opposite was found to be true. Higher validities were found for studies using recruits. Further evidence is seen in a recent study that examined the effects of self deception and impression management on the predictive validities of personality constructs. Many researchers have found that although individuals do distort their responses on personality inventories, these distortions do not affect the predictive validity (Hough et. al., 1990; Ones , Schmidt, & Viswesvaran, 1995; Christiansen, Goffin, Johnston, & Rothstein. 1994).

Further, there are many methods that have attempted to minimize the effects of faking. One method is by using a response format that is less conducive to faking such as a "forced choice" format. In order to avoid response sets of consistently agreeing or disagreeing with items, a forced choice format presents two statements for each item rather than one statement followed by a "yes/no" or "true/false" response. In most cases, the items are equally desirable. In the following example, item 1 represents a forced choice format where item 2 represents a common True/False endorsement format:

Item 1

Statement A: I enjoy spending time alone where I can reflect on my own thoughts.
Statement B: I enjoy spending time with others such as at a lively party.

Item 2:

I like to go to parties. ☐ True ☐ False

The rationale behind the forced choice format is that it generally requires more thought and forces the person to choose one of two equally flattering or unflattering options, rather than being non-committal. "Right answers" are not so obvious, and faking can possibly be minimized. An inventory that utilizes the forced choice format is the Edwards Personal Preference Inventory (EPPS) (Edwards, 1959). Edwards paired items considered equally socially desirable that assessed different needs. His test consisted of 210 pairs of items to which respondents were "forced" to choose one of two statements that were equivalent with regard to social desirability. This "forced" choice technique was used to control for respondents' attempts to fake good or fake bad. The EPPS is

interesting because of its attempt to circumvent biased responding due to social desirability -- a factor that contaminates many personality tests.

Another criticism of personality measures is that they tend to have low validities when used to predict job performance. Tett, Jackson, and Rothstein (1991) provide some possible reasons for these lower validities. Much of the validity information about personality testing comes from dissertation research or from meta-analytic studies that include dissertation research. However, lower validities are found in dissertation research than in published articles due to limited resources, limited access to organizations, and limited time. Sample sizes are also smaller resulting in less stable validities. Also, the probability of clerical and computational errors is greater, because the availability of expert advice and review is not as great for student research. Another reason personality measures may not have shown high validities in the past is because the tests used were not well suited for the purpose of selecting employees. Context-specific, job-related inventories may yield higher validities (Rosse, Miller, & Barnes, 1991).

In their favor, personality tests don't display adverse impact on minorities, a problem often found when using cognitive ability tests or other methods. Personality measures do not appear to show different score distributions for EEO protected groups (Hogan et. al., 1996).

D. Personality Testing and Personnel Selection

It seems that, regardless of the limitations cited for the use of self-report personality measures, personality testing can be a useful tool for employee selection if

constructed properly. Personnel research has seen an increase in the interest in personality testing for employment. This is due to several factors. One is a renewed confidence in personality testing in general. Many criticisms raised in the past have been addressed, and personality measurement methodology has been improved. Also, inventories have been developed that measure characteristic behavior among "normal" individuals rather than just the psychologically deviant. Guion and Gottier (1965) found that "personality measures that were developed for specific purposes were more predictive than traditional personality inventories..." (p. 433). Finally, the diminishing returns expected from continuing development of cognitive abilities tests and legal challenges due to the adverse impact demonstrated by many cognitive tests may have motivated employers to look for alternatives. Although cognitive ability tests are one of the strongest predictors of job performance for the majority of jobs (Schmidt et. al. 1985), they still leave much of the variance unaccounted for. Personality variables may help to explain additional variance in job performance. Research by Rosse, Miller, and Barnes (1991) showed that personality measures explained performance variance beyond that accounted for by cognitive ability tests. They examined a personality measure in conjunction with cognitive and perceptual ability tests to predict job performance. The ability tests explained 5% of the variance in the performance measure, while an additional 5-8% was accounted for by the personality measure.

However, because of their subjective nature, psychologists disagree on just how valid such measures actually are when used to predict job performance. Many feel that low validities and the possible problem of faking make it difficult to support personality

measures as a selection procedure (Hogan et. al., 1996). Despite the controversy surrounding the subject, recent research has supported the use of personality testing as a predictor of job performance.

There is mounting evidence that personality measures can significantly predict job performance (Borman, Hanson, & Hedge, 1997). Recent data are sufficiently clear that a well-constructed measure of personality can be a valid predictor of success on the job (Hogan et. al, 1996; Borman et. al., 1997; Barrick & Mount, 1991; Robertson, 1993; Irving, 1993; VanDenBerg, 1993; Tett, Jackson, & Rothstein, 1991; Salgado, 1997). Blake, Potter, and Slimack (1993) found that scales of the CPI predict overall performance for military academy students. Crant (1995) found that personality was a predictor for real estate sales. Barrick and Mount (1991) found that Conscientiousness is a consistent predictor of job performance across contexts with true score correlations ranging from .20 to .23. Tett, Jackson, and Rothstein (1991) found the overall relationship between personality and job performance to be .24, which they believe to be a reliable estimate.

E. Personality Dimensions as Predictors of Job Performance

Such research has effectively demonstrated that personality characteristics can be useful for predicting on-the-job behavior. According to Mount, Barrick, and Stewart (1998),

Much of the support for personality traits as performance predictors can be attributed to two recent developments. The first is the emergence and widespread acceptance of the Five Factor Model (FFM) of personality....The second development is the use of meta-analyses based on the FFM (p. 145-146).

Much of the current personality research has focused on the Five Factor Model of personality traits. Often referred to as the "Big Five," the FFM includes broad factors believed by many researchers to comprehensively describe the major facets of personality. The labels most commonly accepted are those of Costa and McCrae (1992) and include Extraversion, Neuroticism, Agreeableness, Conscientiousness, and Openness.

Neuroticism concerns the degree to which the individual is insecure, anxious, depressed, and emotional versus calm, self-confident, and cool. Extraversion concerns the extent to which individuals are gregarious, assertive, and sociable versus reserved, timid, and quiet. Openness to experience defines individuals who are creative, curious, and cultured versus practical with narrow interests. Agreeableness concerns the degree to which individuals are cooperative, warm, and agreeable versus cold, disagreeable, and antagonistic. Conscientiousness measures the extent to which individuals are hardworking, organized, dependable, and persevering versus lazy, disorganized, and unreliable. (Salgado, 1997, p. 30)

Many researchers feel that these "broadly defined traits are better in predicting job performance as well as in explaining behaviors, than narrowly defined personality traits" (Ones & Viswesvaran, 1996, p.610). These researchers have shown them to be valid predictors of job performance (Murphy & Lee, 1994).

While arguments have been made both for the use of broad traits and for the use of more specific and narrow measures based on validity, reliability, or psychometric properties, a solid argument can be made for use of the FFM in employee selection simply based upon practicality. In their 1996 discussion of the bandwidth-fidelity dilemma (whether to use narrowly defined traits or broad factors), Ones and Viswesvaran state,

In personnel selection settings, practical considerations dictate that the predictor should provide a measure of the overall desirability of job applicants for the organization - because such an index is needed to compare and make hiring

decisions about individuals. That is, even if specific personality traits are used separately in the assessment of job applicants, they must be combined in some way when decisions are made about individuals. Regardless of the number of narrower personality dimensions which are measured by the personality inventory used, the decision maker has to conceptualize each individual's standing on broader personality dimensions. Unless s/he collapses the various personality dimensions onto a global personality factor, s/he has no basis for preferring one individual over another. Thus, from a practice perspective, broader personality variables are likely to be more desirable. (p. 620)

The FFM is preferable when considering personality as a predictor of job performance from a conceptual and theory building perspective.

Further, numerous studies have correlated these broad traits with measures of job performance in a variety of job contexts (Borman et. al., 1997) . In their meta-analytic research, Mount, Barrick, and Stewart (1998) report a relationship between various big five factors and job performance. Using supervisor ratings as a measure of performance, Conscientiousness ($r = .26$), Emotional Stability ($r = .18$), and Agreeableness ($r = .21$) were related to overall performance in jobs involving interactions with others. In another meta-analysis, Hough and colleagues (1992) found a relationship between Agreeableness and performance ($r = .17$, $p < .01$) and between Dependability and performance ($r = .14$). Tett, Jackson, and Rothstein (1991) found relationships between job performance and Emotional Stability ($r = -.22$), Extraversion ($r = .15$), Openness ($r = .27$), Agreeableness ($r = .33$), and Conscientiousness ($r = .18$) in a meta-analysis looking at personality measures as predictors of job performance. Finally, in a meta-analysis based upon samples from the European community, Salgado (1997) demonstrated relationships between job performance and Conscientiousness ($r = .25$) and Emotional Stability ($r = .19$).

From these results, Conscientiousness has been shown to be a good predictor of many job performance criteria in a variety of job contexts. This is likely due to the fact that it encompasses such job relevant characteristics as dependability, reliability, responsibility, carefulness, and dutifulness that are important attributes for success in any job (Barrick & Mount, 1991; Murphy & Lee, 1994; Salgado, 1997). Murphy and Lee (1994) found that the Hogan measure of "Prudence" (similar to Conscientiousness) correlated .62 with performance and .58 with tenure ($p < .05$). In a study comparing big five personality traits to performance for service workers, Stewart and Carson (1995) found that a measure of Conscientiousness and a performance measure of dependable job behavior had a .28 correlation ($p < .01$). They also found a correlation of .32 ($p < .001$) between Conscientiousness and output and a correlation of .33 ($p < .001$) between Conscientiousness and overall performance. Their research found that Conscientiousness was the strongest predictor of job performance (of the big five traits) and that Conscientiousness was the only trait to correlate with direct outcomes or outputs. Stewart and Carson concluded that Conscientiousness affects both outcomes and work relevant behaviors. As further support, in a recent meta-analysis comparing the big five traits to job performance, Mount, Barrick, and Stewart (1998) found a correlation between Conscientiousness and overall performance in jobs involving teamwork ($r = .21$) with the criterion being supervisor ratings of performance. Barrick and Mount (1991) and Hough et. al. (1990) found that Conscientiousness is a valid predictor across all jobs. It stands to reason that individuals who display characteristics associated with Conscientiousness

such as dependability, reliability, honesty, integrity, and organization, will have higher job performance, regardless of the type of job.

Piedmont and Weinstein (1993) found Conscientiousness to correlate .19 ($p < .01$) with overall performance, .23 with interpersonal relations, .29 with task orientation, and .21 with adaptive capacity. Further, specific facets of Conscientiousness correlated more highly than others: Achievement Striving (.23) and Self-Discipline (.21) were the highest correlations found ($p < .01$).

In a meta-analysis that looked at research conducted in European countries, Salgado (1997) found Conscientiousness to be a valid predictor across all jobs. In creating a job analysis form that might help to identify personality traits that might be important to various jobs, Raymark, Schmit, and Guion (1997) had personality dimensions rated based on their importance to some 260 separate job descriptions. They found that Conscientiousness was indicated to be important for all job groups. In a study by Barrick and Mount (1996), Conscientiousness predicted both voluntary turnover ($r = -.23$) and supervisor ratings of performance ($r = .27$). In a recent study by Mount, Barrick, and Strauss (1993), Conscientiousness (described as responsible, dependable, planful, and achievement oriented) was a significant predictor of job performance ($r = .25$, $p < .01$) measured by supervisor ratings and involuntary turnover ($r = -.15$).

While Conscientiousness has demonstrated significant correlations with job performance across job contexts, the other four traits have not shown, to date, consistent results for all job contexts; they have been shown to be good predictors of job performance in some job contexts and for certain performance criteria (Barrick & Mount,

1991). Mount and colleagues (1994) found that Conscientiousness demonstrated a statistically significant correlation with supervisor ratings of job performance ($r=.18$, $p<.05$), while Agreeableness did not. In their 1991 meta-analysis, Barrick and Mount found a correlation between Conscientiousness and job proficiency of .23, but only .06 between Agreeableness and job proficiency. In his meta-analysis, Salgado (1997) found Conscientiousness to correlate .26 with performance ratings across job types. He found Emotional Stability to be a valid predictor for professionals, police, managers, and skilled labor; Extraversion to be a valid predictor for managers and police; Openness to be a valid predictor for police and skilled labor; and Agreeableness to be a valid predictor for professionals, skilled labor, and managers. Barrick and Mount (1991) found Extraversion to be a valid predictor for managers and sales. Stewart and Carson (1995) found that, in addition to Conscientiousness, Extraversion and Agreeableness were valid predictors of overall performance for service workers. Mount, Barrick, & Stewart (1998) demonstrated that, along with Conscientiousness, Agreeableness and Emotional Stability are valid predictors in jobs that involve interpersonal interaction and teamwork. According to Stewart and Carson (1995),

Because there are few published validity studies incorporating scales based specifically on factor markers of the "big five," relationships between construct valid measures of the five traits and performance have not been clearly established. It is therefore difficult to determine which of the "big five" traits holds the most promise for becoming a robust predictor of job performance. (p. 368)

It is their belief that Conscientiousness is the most robust of the big five traits, with the others adding incrementally.

If Conscientiousness alone is a good predictor of job performance in all job contexts, one might consider discounting the other FFM dimensions. However, this would be unwise. According to Hogan, Hogan, and Roberts (1996), other dimensions should be included because

...the domains of personality and occupational performance are multifaceted. Many employers want to make personnel decisions that are based on, for example, Conscientiousness scores alone. This practice is risky because most performance criteria are best predicted by a combination of scales. (p. 470)

Although Conscientiousness seems to be the most predictive factor, it is generally agreed that the others also contribute unique information since the big five traits seem to be only minimally correlated.

In order to investigate the contributions that other FFM dimensions add to Conscientiousness when predicting job performance, Stewart and Carson (1995) conducted a concurrent validity study that examined the relationship between direct measures of "big five" traits and job performance for service workers. They investigated the usefulness of the "big five" personality dimensions as employee selection tests, specifically looking at (1) the relationship between explicit measures of big five traits and performance, (2) the relationships between big five traits and two domains of performance (job relevant behaviors and work outcomes), and (3) the incremental validity of personality traits beyond the measurement of a single dimension. With regard to the relationship between explicit measures of the big five and performance, they found that Conscientiousness was the strongest predictor of overall performance ($r = .33$, $p < .001$). Extraversion was also a significant predictor of overall performance ($r = .18$,

$p < .05$), as was Agreeableness ($r = .19, p < .05$). With regard to relationships between the big five and job behaviors, they found that Conscientiousness was correlated with higher levels of dependability ($r = .28, p < .01$) and Extraversion was correlated with both citizenship ($r = -.17, p < .05$) and dependability ($r = -.22, p < .01$). When they looked at work outcomes, they found that Conscientiousness predicted higher work outcomes ($r = .32, p < .001$). Finally, when they looked at the incremental validity of personality traits beyond the measurement of a single trait dimension, Stewart and Carson found that Extraversion added incremental validity to the prediction of dependability based only on Conscientiousness.

In summary, by looking at these five broadly defined factors, researchers have been able to support their use as predictors of job performance in various contexts. However, it appears that, while Conscientiousness seems to be a valid predictor in all job contexts, the other four factors predict performance only in some contexts. It stands to reason that Conscientiousness encompasses traits that are desirable for most jobs: dependability, reliability, follow-through, commitment, honesty, and integrity. On the other hand, Agreeableness, Openness, Extraversion, and Emotional Stability may vary in how relevant or necessary they are for certain contexts. For example, jobs that involve sales or high levels of public and interpersonal contact are likely to require more extraverted personalities, while there are many other jobs that do not require a specific level of Extraversion. Agreeableness may be a necessary trait in jobs that require working closely with others, while this trait would not be as important in a job that is primarily solitary. Openness may be important to a job that is highly technical or in a field that

involves a lot of innovation and change or a good deal of travel. Openness would not be as vital to a position that was not heavily focused on change. The other four big five dimensions seem to be appropriate for some jobs, while not as necessary for others. It appears that it may be most useful to tailor personality inventories to the context in which they will be used.

It is evident that personality traits contribute to the overall success of an individual in an employment setting. The next question to be answer appears to be, "which personality dimensions predict performance for which jobs and to what degree?" To answer this question, researchers are beginning to explore the contextualization of inventories to the workplace and the use of FFM inventories in a variety of work contexts.

F. Improving Validities of Personality Measures Through Contextualization

Contextualization, both to the workplace in general and to specific jobs, appears to improve the validities of personality measures when used to predict job performance (Schmidt, Stierwalt, Ryan, & Powell, 1995; Tett, Jackson, & Rothstein, 1991). This may be because contextualization provides a common frame of reference for test takers.

One problem in the use of personality measures for personnel selection is what Schmit and colleagues (1995) call the "frame of reference" problem. Most personality inventories ask general questions about behavior, feelings, opinions, or tendencies that represent the individual across situations. However, individuals may behave differently in a work situation than in a personal situation. When individuals are completing an

inventory for job selection, they may feel that the items should be answered from a work perspective, and may adopt a specific frame of reference in answering the items. Consider an example from the CPI, "I do not like to see people carelessly dressed." One might answer this "true" when considering it as a work context question, indicating that he/she prefers to see people professionally dressed at work. However, the same individual might answer this item "false" when considering it as a general context question, indicating that he/she may not mind seeing someone dressed carelessly at the mall or on the street. According to Schmit et. al.,

One applicant may consider only work experiences when making a decision on an item response, whereas another applicant may take all aspects of his or her life into consideration. Those applicants who base their answers on work experiences may be providing information that is a better indicator of actual job performance than those applicants who use their overall life experiences as a reference...(p. 608).

Answering such items from varying frames of reference is similar to what Schmidt and colleagues (1995) call "situational tendencies." They suggest that individuals may indeed demonstrate stable and consistent patterns of behavior, but that these patterns may be subject to certain situational factors. The power to actually predict behavior may be limited to a specific range of circumstances.

The conceptual approaches and the research findings mentioned here suggest that general personality inventories may say little about how an applicant would act in an actual work situation, because there is not specific frame of reference in which the respondent considers the given behaviors (Schmidt et. al., 1995, p. 608).

What may be needed are specific instructions or item wordings that provide a frame of reference that relate more specifically to a given job and/or work setting.

One reason that separating one's everyday behavior from one's work behavior might be especially useful is because our behavior at work is often more constrained than our behavior in everyday life. This is because the workplace generally sets forth a set of clearly defined expectations for behavior that suggest appropriate behaviors and forbid inappropriate behaviors. Schmidt et. al. (1995) suggest that individuals tend to conform to the norms and rules of the workplace, where in everyday life individuals are operating by more personal guidelines and individual preferences. The lack of a proper frame of reference may cloud the predictability of a personality inventory when it is used in a hiring process. It seems that inventories specifically tailored to the work context would be beneficial. Using items that are work contextualized could reduce the chances that error will be introduced into the process because it allows individuals to connect the item with a specific work role or context. Items and instructions that specifically relate to the workplace give individuals a frame of reference by which to base their answers and may give information more applicable to future on-the-job behavior.

This is supported by recent research. In a study that compared traditional personality type items with work-specific personality items for personnel selection, Schmit et. al. (1995) found that providing an "at work" context for personality test items improved validity findings. In this study, four groups were created: (1) general context (not as applicants) with a general inventory, (2) general context (not as applicants) with a context-specific inventory, (3) applicant context (told to imagine they were applying at a university) with a general inventory, and (4) applicant context (told to imagine they were applying at a university) with a context-specific inventory. When participants were told

to imagine they were applicants but were given a general, non-context specific inventory, there were no significant correlations between personality measures and performance measures (Conscientiousness, $r = -.02$; competence, $r = -.02$; dutifulness, $r = -.08$; achievement striving, $r = -.10$, self striving, $r = .06$; and deliberation, $r = .10$). When participants were told to imagine they were applicants and were given a context-specific inventory, performance was significantly predicted by Conscientiousness ($r = .41, p < .01$), competence ($r = .38, p < .01$), dutifulness ($r = .46, p < .01$), achievement striving ($r = .44, p < .01$), self-discipline ($r = .38, p < .01$), and deliberation ($r = .35, p < .01$). By giving respondents a specific, common frame of reference, the validity of the personality measure was increased.

Further support for contextualization can be found in the "self-presentation" view of item responses. This view suggests that personality item responses are an individual's way of presenting him/herself to an anonymous interviewer and to present him/herself in the manner in which he/she wants to be seen (Hogan, 1991; Johnson, 1981). When used in employment selection, items that are more general and not work-contextualized may present error into the self-presentation process. This may be because items may be difficult to connect with a certain work role or context (Schmidt et. al., 1995). Self-presentation theory suggests that test validity could be improved through contextualization of items to the workplace. Johnson (1981) asserted that the best approach for developing a valid scale is not to make lying difficult, but to make self-presentation easy. Schmit et. al. (1995) suggest that making personality inventories work-specific will facilitate self presentation. Also, work-specific items help the person relate

their self-presentation more closely to their "at work" behavior rather than to their behavior in general.

In addition to making inventories specific to a work context, another way to improve validity when using personality measures to predict job performance is to use job analysis techniques to determine those personality dimensions most relevant to a particular job. Not only can personality measures be tailored to a work context in general, but to the specific job context in which they will be used. As discussed previously, certain personality traits may not contribute to the success of certain jobs or performance criteria. For example, Agreeableness would be more relevant to a job that requires the individual to work on a team than a job that requires that the individual work alone. Extraversion might be a desirable quality that lends itself to the success of individuals in sales professions. In their 1991 meta-analysis comparing personality traits to job performance, Tett, Jackson, and Rothstein found higher validities when job analysis techniques were used to select predictors ($r = .38$ when using job analysis ; $r = .29$ when no job analysis was used). While there is not a great deal of research in this area, these findings demonstrate the potential value of using job analysis to identify relevant performance dimensions, develop criterion measures, and select appropriate predictors.

Further, many researchers have focused on the validation of personality tests in specific job contexts. For example, Lafer (1989) found that the traits of tolerance and flexibility correlated with higher performance in hospice volunteers because this particular job requires that the individual be able to cope with the fast-paced, stressful,

and ever-changing environment. Individuals need to be able to remain calm in difficult situations and have a high degree of patience. Barrick and Mount (1991) found that Extraversion and Agreeableness were valid predictors of success for managers and sales representatives because individuals in these jobs must be able to interact well with others. Sales representatives must be able to interact well with clients that he/she may not know very well and must be self-assured and comfortable in such situations. Managers must handle employees and customers in a tactful and friendly manner.

G. Temporary Industry as a context

One context that is of potential interest to the field of personality research is that of temporary employees. Recent research indicates that the use of temporary employees in industry is on the rise (Lee & Johnson, 1991; Ross, 1991; Feldman, 1995). The temporary industry has been growing. There are now three times as many temporary employees in the U.S. as there were in the 1980's. It is a \$20 billion a year business employing over 1.5 million people. The number of temporary help agencies in the U.S. has grown by 1000% in the past 10 years (Ansberry, 1993; Tilly, 1991; Report of the U.S. Senate Committee on Labor and Human Resources, 1993; Feldman, 1995).

There are many reasons for the growing popularity of the temporary industry. The use of temporary employees is simpler for a company's administration, since the workforce is often handled through an agency that hires and maintains the workforce. The agency handles the interviewing, selection, placement, payment, and coordination of the temporary workforce, reducing the number of employees a company has to handle

directly through its own administrative offices. Its popularity can also be attributed to the fact that it is often more cost effective than hiring full-time, permanent employees.

However, temporary employees present a unique hiring context for several reasons. First, most temporary employment agencies use no real criteria for selection of employees. Virtually everyone who completes an application is sent on placement. Thus, the agency has no real indication of the individual's knowledge, skills, abilities, or other characteristics that may contribute to his/her success on the job. Also, temporary employees must be able to fill a variety of roles, work in a variety of industries, work varying schedules, and work with different people from placement to placement.

Unfortunately, many temporary agencies report that temporary employees do not seem to be as reliable or as stable as permanent, full time employees (Feldman et. al. 1995). A valid measure of personality could be one tool that temporary agencies use to gain more information about the individuals that they are sending on assignment.

The factors that make the temporary industry a unique context, the lack of hiring criteria, the changing nature of the work, and the lack of reliability in the workforce, also create a problem for personality research. Because of the changing nature of the workplace, the traits necessary for success in different temporary employment settings may vary from workplace to workplace. This makes it difficult to find personality traits that will be valid predictors across settings. This makes it important to look for more general predictors, such as those found in the FFM.

There is very little published research on the use of personality measures with temporary workers. This is an area of research where there is much opportunity.

H. The present study

Because there is little research on personality predictors of success for temporary employees, the purpose of the current research was to investigate the use of personality measures with industrial temporary employees. The study focused on personality dimensions identified through job analysis that may serve as significant predictors of success for industrial temporary workers. These dimensions were used to create a work related personality measure based on the Five Factor Model, the Temporary Employee Inventory (TEI), to be used with temporary employees. The present study sought to determine the predictive validity of the measure by correlating it with a job performance measure.

I. General Hypothesis

Among industrial temporary employees, it is expected that the TEI, a personality measure, will correlate significantly with measures of job performance. More specifically, it is predicted that the TEI will correlate significantly with measures of Reliability, Timeliness, Rule Orientation, Work Quality, Flexibility, Relationships With Others, and Team Mindedness, as well as with an overall rating of job performance.

II. METHOD

A. Research design

In a field study, personality dimensions relevant to the success of industrial temporary employees were identified. This was accomplished by conducting job analysis interviews at temporary employment agencies. Job analysis data were summarized and reviewed, revealing knowledge, skills, abilities, and other qualities that are vital to the success of industrial temporary employees. This information was used to identify personality factors that may contribute to the success of industrial temporary employees and was used to create a personality measure based on the Five Factor Model. A pilot study was done to modify the original scale and determine its internal consistency. A final questionnaire of 39 items was then distributed to applicants at three temporary employment agencies. After six weeks, performance data were collected on each individual who completed a TEI.

B. Variables

Through job analysis, two big five personality dimensions were identified that might be predictive of performance for industrial temporary employees: Conscientiousness and Agreeableness. Agreeableness was defined as the ability to get along with co-workers and supervisors, having a cooperative attitude, and a general willingness to work varying schedules, in different settings, and perform different duties

from day to day. Conscientiousness was defined as dependability and reliability with regard to following through on job commitments, being on time, following rules and policies, and putting forth a dutiful effort at work. Items were scored with 1 representing "high in this trait," 2 representing "average in this trait," and 3 representing "low in this trait."

C. Step 1: Creation of Personality Assessment Instrument

1. Participants and Setting

To solicit volunteers, 19 temporary employment agencies listed in the Knoxville, TN phone book were called and asked to participate. Of those agencies called, four temporary employment agencies agreed to participate in the study. All four agencies primarily employ industrial temporary workers, as opposed to clerical temporary workers. Three of the agencies are considered small agencies, with an average of 25 new applicants each week, and the fourth agency is a mid-sized agency, with an average of 75 new applicants each week. After the collection of personality data, the mid-sized agency discontinued participation in the research. The reason given was that their workload was too heavy to complete the performance data needed. Only the three smaller agencies completed the project.

In the first stage of the study, job analysis interviews were conducted in order to create items for the personality assessment instrument. Job analysis interviews included eight participants. Subject matter experts (SMEs) from each agency participated in job analysis interviews that focused on the jobs of temporary employees. Subject matter

experts were asked to describe the job duties associated with industrial temporary employees; were asked questions about the knowledge, skills, abilities, and other qualities (KSAOs) necessary to do the job of industrial temporary employee; were asked to relate critical incidents of excellent and poor performance; and were asked to complete a KSAO rating sheet to determine the importance of KSAOs. SMEs included those staff workers who interview, hire, place, and evaluate the temporary workers for each agency. Two SMEs from each agency participated. All SME's were female.

2. Procedure

The first step in the process of developing a context-specific personality scale for temporary employees was to identify those characteristics that represent a successful employee. This was accomplished through a comprehensive job analysis conducted at each of the four participating agencies. Two Subject Matter Experts (SME's) were thoroughly interviewed at each of the four agencies (8 total SME's) in order to establish those attributes that are most necessary to succeed as an industrial temporary employee. Subject Matter Experts were asked for critical incidents of job performance and for any individual qualities necessary for job success. SME's included those agency staff members that are directly involved in the placement and evaluation of the agency's temporary employees. Interviews were conducted in person, at each agency, and lasted approximately one hour. In addition to extensive interviews, SME's were also asked to complete a KSAO (knowledge, skills, abilities, and other traits) rating form developed by Resource Associates (Appendix A). This information was used to determine personality

traits that should be included in the personality measure. A pool of 60 personality items were written for the personality factors identified through the job analysis.

3. Measures

For the job analysis, a KSAO rating form developed by Resource Associates was used (Appendix A). The form included 15 job-related items representing knowledge, skills, abilities, or personality characteristics of employees, and required that these items be rated on how important they were to the job of temporary employee. Each item was scored on a 1 to 5 scale, with 1 representing “not important to this job” and 5 representing “very important to this job.” Two SME’s at each agency completed the form together; a total of four forms were completed.

D. Step 2: Administration of Personality Assessment Instrument to Pilot Group

1. Participants and Setting

In the second stage of the study, which involved the administration of the original personality assessment instrument items to a pilot group in order to refine the personality assessment instrument and determine its internal consistency, participants included 161 students enrolled in a General Psychology course at the University of Tennessee in Knoxville, TN. Students were given 5 points of extra credit in the course for their participation in the study. The pilot sample consisted of 56% female participants and 10% minority participants, with an average age of 21. Of the sample, 96% were employed and the average rate of pay was \$7.00/hr. Participants were informed that the personality

assessment instrument was completely confidential and that their completion of the instrument implied informed consent.

2. Procedure

Through content analysis of the information provided by each agency, two personality traits were identified, and 60 context appropriate items were written (30 items for each trait). Following the generation of the initial pool of items, the questionnaire was administered to 161 students enrolled in General Psychology courses at the University of Tennessee in Knoxville. The item pool was refined and condensed through analysis of responses from the pilot sample. This resulted in a 39-item final personality assessment instrument called the Temporary Employee Inventory (TEI).

3. Measures

The second measure used in the study was the original personality scale that was developed from the job analysis (Appendix B). The scale consisted of 60 initial items. Each item presented two opposing statements, and participants were asked to choose the statement with which they agreed more. A choice of "undecided" was also presented. An item example follows:

←This statement is more like me	Undecided or In-Between	This statement→ is more like me
I really hate to be late to an appointment.		It doesn't bother me to be a few minutes late if I can make up the work later in the day.

E. Step 3: Administration of TEI To Industrial Temporary Workers

1. Participants and Setting

The third phase involved the distribution of the final TEI to job applicants at each of the temporary employment agencies. A total of 114 applicants completed TEIs in a one week period. Forty-seven individuals completed TEIs at the agency that could not complete the project and their TEIs were not included in the final sample. The final sample consisted of 67 individuals. Of the final sample, 37% of the participants were female, 20% were minority participants, 76% of the participants were between the ages of 21 and 39, and 81% had either a high school education or some college.

2. Procedure

Packets were made that included a copy of the TEI, a consent form, and an envelope in which to place the completed TEI. These packets were distributed to each of the four agencies, and each agency was provided with a collection box. Each agency solicited volunteers for a one week period by giving out the TEI packets to all applicants. It was made clear to applicants that their participation was voluntary and in no way affected their employment efforts at the agency. Applicants were provided an envelope in which to seal the TEI and were asked to place completed TEIs into a sealed box. After one week, researchers collected the boxes from each agency.

3. Measures

A third measure used in the study was the Temporary Employee Inventory (TEI), the final personality assessment instrument created after the original instrument was modified after the pilot study (Appendix C). The final personality assessment instrument, the TEI, consisted of 39 of the original 60 items.

F. Step 4: Measurement of Performance of Industrial Temporary Workers

1. Participants and settings

The fourth and final phase involved the completion of performance appraisal rating forms for each employee. One individual from each temporary agency was responsible for this task. At this point in the research project, only three agencies remained. A total of 3 individuals, all female, completed performance data on the applicants. These participants included agency staff members who evaluated the temporary employees progress as a regular part of their jobs.

2. Procedure

After all TEIs were collected, a list was made for each agency with the names of each applicant that completed a TEI at that agency. At the end of a six week period, participants at each agency were given a performance appraisal form to complete on each applicant who filled out a TEI. After one week, performance data was collected from each agency.

3. Measures

The final measure used was a performance rating scale. The rating scale was created by Resource Associates to assess job performance in a wide range of occupations and was adapted to this setting. The form listed 9 performance dimensions (reliability, timeliness, rule orientation, quality, productivity, flexibility, relationships with others, team mindedness, and an overall rating) along with behavioral descriptors of each dimension. A 5 point rating scale was used with 1 equating to "never displays this characteristic" up to 5 which equated to "individual always displays this characteristic" (Appendix D). Employees designated as a "no show," referring to those individuals who were placed in jobs, scheduled to work, accepted the jobs, and then did not show up, were given a performance rating of "0," since this is considered the poorest level of job performance by the temporary employment agencies.

III. RESULTS

A. Job Analysis

The first step of data analysis was to summarize the information from the job analysis interviews. Qualitative data, in the form of answers to a job analysis interview from each agency, were included in the analysis. These data included information about qualities that were important to the success of an industrial temporary employee. The interview data were screened and categorized in a content analysis. With regard to the information provided by SMEs on what personal qualities are important for the success of industrial temporary employees, two categories emerged. The first centered around a need to be very amenable with regard to scheduling, willingness to work any hours, and having a generally agreeable disposition. This category is in keeping with the Big Five factor of "Agreeableness." The second centered around a need to be very dependable, reliable, and having good follow through; this category refers to the Big Five factor of "Conscientiousness." It was determined as a result of the job analysis, that the FFM dimensions of Conscientiousness and Agreeableness may serve as predictors of job performance for industrial temporary employees and that these dimensions would be used to guide the development of a contextualized personality measure. As a second form of analysis, ratings on the four KSAO rating forms were averaged. Conscientiousness received a rating of 4.78 and Agreeableness received a rating of 4.67, with 5.0 being the highest rating possible.

B. Scale Creation

After the initial scale items were written and administered to 161 undergraduate psychology students, Cronbach alpha coefficients were calculated for each dimension of the scale in order to assess the scale's internal consistency. Items that did not contribute significantly to the overall internal consistency were rejected. After the item analysis, the Agreeableness scale consisted of 24 items with an alpha coefficient of .80. The Conscientiousness scale consisted of 15 items with an alpha coefficient of .83. The final scale consisted of 39 items.

The final 39 items were administered as a complete personality assessment instrument, the TEI, to the final sample of 67 temporary employees. Alpha coefficients were calculated for the scales of the TEI in order to assess its internal consistency. The Conscientiousness scale of the TEI had an alpha coefficient of .78 and the Agreeableness scale had an alpha coefficient of .83. Inclusion of both scales improved the overall reliability of the TEI.

C. Scale Validation

After the administration of the final TEI to 67 industrial temporary employees and the collection of performance ratings on those employees, correlation coefficients were computed between the personality scales and the performance dimensions. In 11 cases, performance data were not available as these individuals were not placed in temporary positions. These cases were excluded when computing correlations between personality

scales and performance dimensions. Means and standard deviations of personality scales appear in Table 1. The results of the correlational analysis appear in Table 2.

As predicted, the TEI displayed a significant, positive correlation with overall job performance ($r=.30, p<.05$). The hypothesis was therefore supported.

The Conscientiousness scale correlated with overall job performance ($r=.32, p<.05$). Significant, positive correlations were also found between Conscientiousness and each dimension of performance with the exception of "relations with others." Correlations ranged from .27 to .39 (see Table 1). When looking at individual dimensions of performance, Conscientiousness correlated most highly with those aspects of performance most directly related to conscientious behavior: reliability, timeliness, rule orientation, quality, and productivity. A correlation of .29 ($p<.05$) was found between Conscientiousness and Agreeableness.

The Agreeableness scale demonstrated non-zero correlations with overall performance and individual performance dimensions. These correlations were not significant at the .05 level.

In order to evaluate how well the individual personality scales predicted performance, a multiple regression analysis was conducted. The predictors were Conscientiousness scores and Agreeableness scores and the criterion variable was overall job performance. The linear combination of personality measures was significantly related to overall job performance $F(2,53) = 3.28, p = .045$. The sample multiple correlation coefficient was .33, indicating that approximately 11% of the variance of the performance measure in the sample can be accounted for by the linear combination of personality dimensions (see Table 3).

Table 1

Means and Standard Deviations of Personality Scales

Personality Scale	M	SD
Conscientiousness	2.54	.33
Agreeableness	2.53	.29

Table 2

Correlations Between TEI Dimensions and Job Performance Dimensions

TEI DIMENSION	PERFORMANCE DIMENSIONS									
	Reliable	Timely	Rule Oriented	Quality Work	Productive	Willing To be Flexible	Relates to Others	Team Minded	Overall Performance	
Conscientious- ness	.3435 (56) p=.010	.3336 (56) p=.012	.3251 (56) p=.014	.3889 (56) p=.003	.3136 (56) p=.019	.2726 (56) p=.042	.2360 (56) p=.080	.2783 (56) p=.038	.3157 (56) p=.018	
Agreeableness	.1590 (56) p=.242	.2097 (56) p=.121	.2572 (56) p=.056	.2461 (56) p=.068	.2222 (56) p=.100	.2314 (56) p=.086	.2353 (56) p=.081	.2057 (56) p=.128	.1981 (56) p=.143	
Overall TEI Score	.2921 (56) p=.029	.3223 (56) p=.015	.3509 (56) p=.008	.3768 (56) p=.004	.3048 (56) p=.016	.3053 (56) p=.022	.2886 (56) p=.031	.2903 (56) p=.030	.3048 (56) p=.022	

Table 3

Results of Multiple Regression Analysis

Step	Variable	R	R ²	R ² change	Correlations between each personality score and performance measure	Correlations between each personality score and performance measure	Partial correlations between each personality score and performance measure controlling for other personality score
1	Conscientiousness	.32*	.10*	.10**	.20	.10	.43
2	Agreeableness	.33	.11	.01 (n.s.)	.32	.27	.04
		* $p < .05$	** $p < .01$				

Both bivariate correlations between personality scores and performance ratings were non-zero, positive correlations. However, only Conscientiousness demonstrated a statistically significant correlation at the .05 level. The Conscientiousness scale correlated with overall job performance ($r=.32, p<.05$). On the basis of the correlational analysis, it appears that Conscientiousness is responsible for most of the variance accounted for by the entire personality assessment instrument. It alone accounts for 10% of the variance of the measure of performance, indicating that Agreeableness only contributes an additional 1% (11% - 10%).

IV. DISCUSSION

A. Discussion of the results

The results of this study replicate previous findings with regard to the relationship between personality and job performance. Personality is a predictor of job performance. Further, these results add to the existing body of research by showing a relationship between personality and job performance for temporary employees, a job context seldom studied in personality research. Very little research exists with regard to the prediction of job performance for the temporary workforce. As anticipated, the TEI appears to be a valid predictor of the job performance of industrial temporary employees, since scores on the TEI correlated positively and significantly with overall job performance. Therefore, the hypothesis was supported. Conscientiousness scores on the TEI correlate positively and significantly with overall job performance, as well as with 7 of the 8 individual performance dimensions, although the Agreeableness scale did not display significant correlations with performance at the .05 level.

B. Conscientiousness vs. Agreeableness

1. Conscientiousness as a Predictor

When looking at the individual scales of the TEI as opposed to the scale in its entirety, Conscientiousness appears to be a significant predictor of job success for industrial temporary employees. The Conscientiousness scale correlated .32 ($p < .05$) with overall job performance, while the TEI in its entirety correlated only .30 with overall job

performance ($p < .05$). These results are consistent with past research that shows Conscientiousness to be a very robust predictor in a variety of job contexts. Results of findings such as those of Barrick and Mount (1991) and Gough (1985) lead us to anticipate that Conscientiousness will be the strongest personality predictor of performance. Both studies found that Conscientiousness is a predictor across job settings. Conscientious individuals are described by such terms as "dependable," "dutiful," "diligent," "responsible," "honest," "hardworking," "committed," and "persevering." People who are dependable, ethical, and dutiful will demonstrate such qualities in their work performance. Such characteristics are necessary for success in any job, explaining why Conscientiousness seems to be a valid predictor for all job contexts. Conscientious individuals show up for work on time, they have good attendance, they follow the rules, they do things according to proper procedures, they honor their commitments, they follow through with assignments, they have high ethical standards, and they are loyal to their employer. Such qualities are valuable in any job. Likewise, a lack of Conscientiousness results in counterproductive work behaviors such as absenteeism, tardiness, lack of commitment, or rule breaking. For employers, methods of reducing such behaviors are very desirable.

This is consistent with previous research. Other research has found measures of Conscientiousness and personality traits related to Conscientiousness (e.g., dependability, honesty, reliability) to be significantly related to measures of job performance (Murphy & Lee, 1994; Stewart & Carson, 1995; Barrick & Mount, 1991; Hough et. al., 1990; Piedmont & Weinstein, 1993; Salgado, 1997; Raymark, Schmit, and Guion, 1997;

Barrick & Mount, 1996; Barrick, Mount, and Strauss, 1993). Conscientiousness has emerged as possibly the most important trait motivation variable in the field of personnel psychology (Barrick, Mount, and Strauss, 1993; Schmidt & Hunter, 1992).

Since a very real problem with temporary employees seems to be high absenteeism, individuals accepting assignments and never showing up for them, and showing a lack of dedication to the job, Conscientiousness could be a good predictor for this job context. It makes sense that individuals high in Conscientiousness will be more dependable and reliable temporary workers.

2. Agreeableness as a Predictor

The Agreeableness scale did not display a statistically significant relationship with overall job performance at the .05 level, nor with any individual dimension of job performance. These results were unexpected. Agreeableness includes having a friendly disposition, sensitivity to the interest of others, and a cooperative and collaborative work tendency. Agreeable individuals tend to get along well with others, may be more helpful and coactive, tend to be more open to suggestions from others, usually will take instructions well, and have a tendency to go along with others. Because of the ever changing nature of temporary work, it would seem that an individual high in Agreeableness may be more successful in this job context. It was expected that Agreeableness would predict job performance, however, it did not demonstrate significant correlations with performance dimensions at the .05 level.

It is tempting, on the basis of this analysis to conclude that, while Conscientiousness is a valid predictor of the job performance of industrial temporary employees in this setting, Agreeableness is not. This conclusion would be consistent with past research that has found Conscientiousness to be a valid predictor in all job contexts, but has not found consistent results with Agreeableness (Piedmont & Weinstein, 1993; Mount et. al, 1994; Barrick & Mount, 1991). As a result of his 1997 meta-analysis that found conscientious to be a significant predictor of performance across job contexts while Agreeableness was not, Salgado concluded that while Conscientiousness was a valid predictor "across job criteria and occupational groups," that Agreeableness was "valid only for some job criteria and occupational groups." In keeping with Salgado's conclusion, in this particular work context Agreeableness does not appear to be a significant predictor, despite the fact that the job analysis yielded information that Agreeableness may be an important quality that one must possess in order to be a successful temporary employee.

A possible reason for this can be found in information contained in the job analysis interviews. Each agency interviewed in the job analysis phase was asked, "If you could know one thing about applicants before they are hired, what would it be?" The response was the same at each agency. Staff members indicated that they most want to know if individuals will show up. During the interviews, agency staff members reported that as many as 50% of their applicants turn out to be "no shows," that is, individuals who come in and complete the application process, are assigned to work, accept that assignment, and then never show. It appears that, while Agreeableness is a desirable

quality, the most important quality for an industrial temporary employee is Conscientiousness: being dependable, reliable, following through with commitments, and being timely and punctual.

It is possible that Agreeableness simply does not predict performance for industrial temporary employees. While being amenable, flexible, and easy going make it easier to place temporary employees, it is not necessarily going to be significantly related to their job success. However, such a conclusion, based on this research alone, would be imprudent. Because of the numerous limitations to this study, it would be premature to make any conclusions based on this research alone.

C. Limitations of the present study

The present research does lend support to prior efforts in the area of predicting job performance based on personality measurement. However, firm conclusions can not be drawn from this study alone, as it has several limitations that may have affected the results. Despite the demonstration of statistically significant correlations between the TEI and overall job performance for industrial temporary employees, it seems precipitate to base any final conclusions on this research. This research should be regarded as merely preliminary in nature. The current study was affected by several limitations that may have affected the results. These include the small sample size used, flaws that may have been inherent in the personality measure itself, and flaws that may have existed with regard to the measurement of performance. Each of these is described in more detail below.

1. Small sample size

The most obvious limitation is that of the small sample size. Only four agencies agreed to participate in the research and each agency was fairly small in size, yielding a small number of new applicants each week. Further, because almost 50% of the TEIs completed were unusable, due to one employment agency being unable to complete the project, the final sample was very small. For a 39 item assessment instrument, a sample size of 56 subjects simply was not large enough to properly validate the measure. A larger sample size was needed to provide stability to the analysis (Guadagnoli & Velicer, 1988). The small sample size could have accounted for the lack of validity in the Agreeableness measure.

2. Problems with the predictor

In addition to the small sample size, there could have been problems with the personality assessment instrument. First, it is possible that the items written to measure Agreeableness may not be accurately measuring that construct. For example, item 13 reads, "I do not like taking on new roles at work / I enjoy taking on new roles at work." Because of the manner in which it is worded, this item could be interpreted as a measure of Openness rather than Agreeableness. This could account for the poor validity demonstrated by that scale. Second, response bias may have affected results. Because this was a self-report measure and was administered at the time of job application, many individuals may have answered in socially desirable ways. When faced with items such as, "I get along well with other people," or "I will take on extra jobs at work if I am given

a chance to," many individuals may have answered in ways that would appear favorable to an employer, despite the assurance that their completed TEI would not be viewed by the agency. Others, because of the length of the TEI, the time involved in completing it, and the fact that they were instructed that it had no bearing on employment, may have completed the TEI in a careless or haphazard manner. All of these factors may have affected the results of this study.

3. Problems with the criterion

Another possible limitation could have been the use of a performance measure that was not appropriate for this context. The performance criterion available in this study suffered from various flaws. First, the performance rating form used in the study had not been previously used in the job context of temporary employment and may not have been content valid for temporary employee performance. Second, raters at the agency may not have had enough information about temporary employees' performance to rate them accurately. Temporary employees were rated 6 weeks after completing an application. Because temporary work is short term and infrequent in nature, as opposed to regular and full-time, many employees had only been sent on a few assignments at the end of six weeks. Agency staff members may not have had adequate time to establish a record of performance. Third, the performance measure was not completed by the direct supervisors of the employees. The agency staff members did not directly observe the on-the-job performance of the temporary employees; they received performance information via the supervisors at the placement location. They did not have first hand knowledge of

employees' performance and may not have been able to accurately assess their on-the-job behavior. Fourth, the performance measure may have also been subject to response bias. The SMEs that participated in the study made it very clear that their number one criterion for performance is dependability. It is possible that employees who were less dependable received lower ratings on all performance dimensions, regardless of their actual performance. Likewise, it is possible that individuals who were very dependable received high ratings in other performance dimensions. This "halo effect" (or "horns" effect) represents a "failure to discriminate among conceptually distinct and potentially independent aspects of a ratee's behavior" (Saal, Downey, and Lahey, 1980, p. 405) and may have influenced the results.

D. Future Research Directions

Because there is little research to look to in the personality arena that deals specifically with the context of temporary employees, further studies are needed that add to, and improve upon, the present research before any statements with regard to the prediction of the job performance of temporary employees based on personality can be made with any confidence. With modifications to the current research, Agreeableness may indeed emerge as a valid predictor of job performance for industrial temporary employees. It is also possible that other, as yet unidentified, Big Five personality dimensions may also predict performance in this context. Further research that improves upon the methods used in this study is needed. Future research can improve upon the

current research in a number of ways, including use of a larger sample size, an improved personality assessment instrument, and an improved criterion measure.

1. Larger Sample Size

The most obvious improvement would be that of larger sample sizes. Only 4 small agencies participated in this study. This limited the number of SMEs as well as the number of participants. With a larger number of agencies, more SMEs could be interviewed and more thorough job analysis information could be obtained and a more accurate picture of the personality dimensions important to the success of industrial temporary employees could be obtained. Further, more applicants could participate in the study. A larger subject pool would lend more stability to the results.

2. Improved Personality Measurement

Further improvements could be had by taking additional steps to create an improved personality measure. One step toward an improved measure has already been mentioned: improve the job analysis method so as to accurately determine what personality dimensions should be included on the personality assessment instrument.

A second way to improve the personality measure would be improve the items themselves so as to reduce response bias. This could be accomplished several ways. First, by paying closer attention to wording details such as the use of "always" or "never." An item that uses such wording can be confusing. An item that reads, "I am always dependable and reliable" may seek to measure Conscientiousness. However, a very

honest and conscientious person may not endorse it simply because of the word "always."

A second way to improve items would be to avoid wording items so that one response is preferred over another. This can be done by making each bipolar response a favorable response. For example, item 21 measuring Conscientiousness reads, "I am always perfectly dependable and reliable / I admit I am not always as dependable and reliable as I should be." This item could be replaced with, "It is more important to me to get my work done on time / It is more important to me to get my work done thoroughly." In the second set of items, both responses appear favorable and will lessen the likelihood of socially desirable responding. Another way to improve TEI items would be to include an Impression Management measure to ensure that individuals are not responding in either a socially desirable or haphazard manner. One way to do this is to include several similar pairs of bipolar items. These items can be checked to ensure that respondents are answering them in a consistent manner.

3. Improved Criterion Measurement

This study also suffered from obvious flaws with the criterion measure. The measure used had not been used previously with temporary employees and was not familiar to SMEs, it was a subjective measure that may have suffered from various types of response bias, and ratings were done by agency raters who did not have adequate time to assess the performance of employees and did not actually have first hand knowledge of on-the-job behavior. There are several things that could be done to improve the measure of job performance.

First, rather than introducing a new performance measure, a performance measure the industry is already using and familiar with could be used. A possible problem arises with this method if several agencies are participating and each uses a different form (their own performance rating form). In this case a standard form would be necessary. A new performance measure may have to be introduced. However, the new form could be selected with more care. The new form could be completed on current, long standing employees at each agency. The ratings on the new form could be compared to the ratings on the agencies own performance evaluation form to ensure that the new form is obtaining similar ratings to the established measure. This would lend more credibility to the new performance measure.

A second way to improve the measurement of job performance would be to collect objective data in addition to using subjective ratings. Such objective data could include a record of the number of employee absences, number of times tardy, or the number of times an employee leaves early. Supervisor ratings may be subject to a number of biases. A supervisor may rate an employee higher than warranted because the employee's characteristics are similar to the rater's; a supervisor may give all employees high, average, or low ratings no matter their actual performance; a supervisor may give a higher rating than deserved on a specific dimension because of the rater's overall positive impression of an employee (i.e., rating all performance dimensions high because the employee is very dependable) or may give a lower rating than deserved on a specific dimension because of the rater's overall negative impression of an employee; a supervisor may evaluate employees by comparing them to other employees instead of

comparing them to more objective standards; a supervisor may allow more recent events to color the rater's view of the whole time period under review; or a supervisor may allow the employee's personal characteristics (i.e., race, gender) to influence ratings. More objective criteria could be used to assess job performance such as a count of the number of times tardy in an allotted time period, the number of employee absences or times the employee left early, no shows, or production outputs on the job. Because objective criteria may introduce many of its own problems if used as the sole criterion, such as reporting unreliability or different standards of reporting across companies, a combination of supervisor ratings and objective criteria may lead to the most accurate measure of employee performance.

Third, if ratings are used, the ratings could be obtained directly from the on-the-job supervisor rather than the agency staff and could be collected after an appropriate amount of time has passed. Agency staff may not be able to adequately assess the on-the-job performance of temporary employees because they do not view the employees' behavior at the workplace. Rather, they receive second-hand information from the immediate supervisor at the job placement. If possible, ratings should come from the immediate supervisors located at the industry where the temporary employee is placed. This raises some other issues, particularly if the employee is placed at several different locations during the specified time frame. Such things would have to be taken into consideration and dealt with accordingly. In addition to having ratings completed by immediate supervisors rather than agency personnel, the supervisors should have an adequate time frame in which to assess the employees performance. A possible solution

would be to evaluate an employee after a certain number of days on placement (e.g., after 15 days of placement) as opposed to a certain time period with the agency. An employee may be with the agency for a month but only be sent on 4 days worth of assignments. By basing the evaluation period on a number of assignments rather than a selected time frame, researches can ensure that each employee has worked enough days to be appropriately appraised.

4. Comparison of contextualized measure to non-contextualized measure

The TEI was a contextualized measure, developed through use of job analysis techniques that identified those qualities that employers felt were most important to the success of industrial temporary employees. In the sense that the TEI was a valid predictor of job performance for this job context, the current research lends some affirmation toward the use of contextualized measures. It would be interesting to further explore the use of contextualized measures with temporary employees by administering the TEI along with a non-contextualized measure to examine whether it provides incremental validity over the non-contextualized personality measure. Such research could provide further support for the use of contextualized measures.

E. Conclusion

Very little research has been performed to date on the use of personality as a predictor of job performance for temporary employees. Because of the unique nature of the temporary workforce a valid personality measure could be particularly beneficial in

selecting employees who will be dependable and agreeable individuals who will succeed on the job. The TEI could be one such measure. Validation efforts of the TEI support previous research on the use of personality as a predictor of job performance by demonstrating that Conscientiousness scores on the TEI correlate significantly with supervisor ratings of job performance.

Certainly, these results add to the growing body of research and confirm the importance of Conscientiousness to job performance in the little explored area of temporary employment. The use of the TEI should be an improvement over the use of most temporary employment agencies' current method of selection: accepting anyone who comes through the door and hoping they will show up and perform adequately on the job.

Some deficiencies in the current study, however, make the results tentative. The small sample size, inherent flaws with the development of the personality measure, and the subjectivity that existed in the performance measure can all be improved. Despite these limitations, the current research presents a beginning toward the development of an instrument specifically aimed at the prediction of job performance of industrial temporary employees based on personality. At this point, the TEI serves as a starting point for other researchers to make improvements, refinements, and additions in order to continue the generation of a body of research that supports the use of personality for temporary employee selection.

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APPENDICES

APPENDIX A

KSAO RATING FORM

Instructions: Rate the degree to which each of the following KSAO's are important for the full and satisfactory performance of the job being discussed using the following scale:

- _____ (leave blank) if this KSAO is not required at all for this job
- | | |
|---|--|
| 1 | Slightly important for the job as a whole. |
| 2 | Moderately important for the job as a whole. |
| 3 | Important for the job as a whole. |
| 4 | Very important for the job as a whole. |
| 5 | Extremely important for the job as a whole. |

KSAO's

- _____ 1. General Reasoning
- _____ 2. Verbal Comprehension and
- _____ 3. Mathematical Computation Ability
- _____ 4. Mathematical Reasoning
- _____ 5. Spatial Visualization Ability
- _____ 6. Perceptual Speed & Accuracy
- _____ 7. Mechanical Reasoning Ability
- _____ 8. Teamwork and Group
- _____ 9. Sociability in Interpersonal Interaction
- _____ 10. Courtesy, Tact, and Diplomacy
- _____ 11. Ability to Work Under Pressure
- _____ 12. Conscientiousness
- _____ 13. Precision & Compulsivity
- _____ 14. Openness to Change

APPENDIX B

EMPLOYEE PERFORMANCE EVALUATION

Instructions: You are being asked to rate the employee whose name appears at the top of this form. Listed below are personality characteristics, which have been determined to be important to the success of an industrial temporary worker. A brief description follows each characteristic. Please rate the degree to which the individual displays each of these characteristics on the job. Use the following scale:

- 1 Individual never displays this characteristic
- 2 Individual seldom displays this characteristic
- 3 Individual sometimes displays this characteristic
- 4 Individual frequently displays this characteristic
- 5 Individual always displays this characteristic

CHARACTERISTICS

- ____ 1. Reliability: the individual follows through on commitments and shows up to assigned jobs. The individual does not make excuses to get out of work. The individual can always be counted on to be where he/she is supposed to be and to do what he/she is supposed to do.
- ____ 2. Timeliness: the individual shows up on time to assignments, interviews, or appointments. The individual calls if he/she is running late for any reason. The individual completes tasks on time.
- ____ 3. Rule Orientation/Safety Rules: the individual follows established rules and guidelines. The individual has no difficulty following safety practices and policies. The individual does things in the manner expected by the employer.
- ____ 4. Quality: the individual does high quality work. The individual takes pride in his or her job and works hard no matter how menial the task may be. The individual meets or exceeds employer's expectations.
- ____ 5. Productivity: How productive the individual is on the job.
- ____ 6. Willingness to be flexible: the individual's willingness and ability to perform a variety of tasks and to learn new tasks or job duties. The individual's ability and willingness to work whatever hours or shifts he/she is needed (ex. Weekends, half-days, night shifts), to work overtime, or to work in different places or settings. The ability or the willingness of the individual to work with new and different people and to work for varying pay scales.
- ____ 7. Relationships with others: how well the individual gets along with co-workers. How polite, courteous, or helpful he/she is to others on the job. How well he/she gets along with supervisors.
- ____ 8. Team Mindedness: how well the individual works with others. The individual's ability to work on a team or in a group. How well he/she shares and receives ideas, collaborates with others, and cooperates with co-workers.
- ____ 9. Overall rating of employee's performance: overall rating of how well this employee performs on his or her job assignments.
- ____ Cannot evaluate employee.

APPENDIX C

ORIGINAL 60 ITEMS

1. I usually arrive at work before the time I am scheduled to be there. / I usually get to work right at the time I am scheduled to be there or maybe just a minute late.
2. I will often ask my employer if he/she needs me to do extra work. / I will do extra work, but only if my employer asks me to.
3. I prefer to work with other people. / I prefer to work by myself.
4. If I say I will do something, I always follow through. / Sometimes other things interfere with my ability to do what I commit to do.
5. I always feel good about myself even if I don't do great work. / I only feel good about myself when I do great work.
6. I like doing a different task at work from one day to the next. / I prefer to learn one task and stick to it at work.
7. I get along well with other people. / I do not get along well with other people.
8. I always follow the rules at work whether I agree with them or not. / Sometimes I will bend a rule at work if I think it is needed to get the job done.
9. I do not like it when other people tell me what to do. / I do not mind having other people tell me what to do.
10. I will take on extra jobs at work if I am given a chance to. / I prefer to only do the job for which I was hired.
11. I always keep the commitments I make. / Sometimes, the commitments I make are hard to keep.
12. It is not very easy for me to learn a new task quickly. / It is very easy for me to learn a new task quickly.
13. People who know me would not describe me as friendly. / People who know me would describe me as friendly.
14. I enjoy working with new people. / I prefer to work with people I know.
15. I will try to finish a task on time, but I believe that most deadlines can be extended. / I will do whatever is necessary to finish a task on time.
16. If someone I work with makes me angry, I don't say anything about it. / If someone I work with makes me angry, I will tell him/her about it.
17. I have never made an excuse to get out of something I didn't want to do. / I have made an excuse to get out of something I didn't want to do before.
18. I will do whatever work is given to me, if I am able to do it. / I prefer to only do certain types of work that I am good at.
19. I have never said I was going to be somewhere and didn't show up. / I have sometimes agreed to be somewhere and then was not able to be there.
20. I go out of my way to be kind to other people. / I do not go out of my way to be kind to other people.
21. I enjoy taking on new roles at work. / I do not like to take on new roles at work.
22. I have to be very sick to miss a day of work. / I have missed work before when I was not very sick.
23. I will work however long it takes to get the job done. / If the job is not finished, I leave at quitting time if I know I can finish it tomorrow.
24. I have sometimes been rude to people I don't like. / I have never been rude to people I don't like.
25. I think you should only miss work if you are sick. / I think you should be able to take days off from work if you have something you need to do.
26. I enjoy a job where I get to learn new things. / I would get tired of a job where I constantly had to learn new things.
27. I am usually an easy person to get along with. / I am not usually an easy person to get along with.
28. I can easily work with people I don't know well. / It is hard for me to work with people I don't know well.
29. People would describe me as going out of my way to be polite to others. / People would not describe me as going out of my way to be polite to others.
30. If someone needed me to do something, I would make it a point to be there, even if I had to cancel other plans. / If someone needed me to do something, I would be there if I didn't have something else I had to do.
31. I prefer to always work the same schedule. / I like working a different schedule from one week to the next.
32. I really hate to be late to an appointment. / It doesn't bother me to be a few minutes late.
33. If someone says something mean to me at work, I don't say anything back. / If someone says something mean to me at work, I let him or her know how I feel.
34. I like it when things change at work. / I don't like it when things change at work.
35. When I do something for someone, I do not expect anything in return. / When I do something for someone, I think they should do something in return.
36. I am always perfectly dependable and reliable. / I admit that I am not always as dependable or reliable as I should be.
37. I don't mind when things come up at the last minute. / I mind when things come up at the last minute.
38. Sometimes, things like traffic, car trouble, or other people make it hard to be on time. / No matter what I have to do, I always find a way to be where I am supposed to be on time.
39. I would rather compete with people at my job than work with them. / I would rather work with people at my job than compete with them.
40. I have bent the truth to avoid doing unpleasant things before. / I have never bent the truth to avoid doing unpleasant things.
41. I don't mind when unexpected things happen at work. / I like things to remain constant and expected at work.
42. I find it hard to work with people I do not like. / I find it easy to work with people I don't like.
43. I prefer to work in a setting where the rules are clear. / I prefer to work in a setting where rules can be bent.
44. It takes me a while to get used to a new situation. / I get used to new situations easily.
45. At my job, I would like an opportunity to work in different departments. / At my job, I prefer to always work in the same department.
46. I think people should do extra work at their job just because their help is needed. / I think people should do extra work at their job only if they are getting something for it.
47. I don't like to work on weekends. / I do not mind working on weekends if I am needed.
48. Other things are as important to me as doing my job well. / Doing my job well is the most important thing to me.
49. I prefer having a flexible work schedule. / I prefer my work schedule to always be the same.
50. If I am running late I don't call, I just hurry to get there. / If I am going to be late, I call to tell someone.
51. My co-workers would say that I am helpful to other people. / My co-workers would not say that I am helpful to other people.
52. I will work for any reasonable pay rate. / I will only work jobs that pay me what I think I am worth.
53. I work better as part of a team. / I work better alone.
54. Rules should be followed at work to keep things running smoothly. / Rules aren't that important as long as the job gets done.
55. It takes me a while to be friendly to people I have just met. / It does not take me long to be friendly to people I have just met.
56. I would work at night if I were needed. / I prefer to only work daytime hours.
57. When working with a group of people, I can easily share my ideas. / When working with a group of people, I find it hard to share my ideas.
58. I think people at work should help each other with their jobs. / I think people at work should do their own jobs and not expect others to do it for them.
59. I always show up exactly when I am supposed to be somewhere. / I don't always show up at the exact time I am supposed to be somewhere.
60. I prefer working on tasks with other people. / I prefer to work on tasks by myself.

APPENDIX D

39 ITEMS OF THE TEI

	←This statement is more like me	Undecided or In-Between	This statement→ is more like me
1. I usually arrive at work before the time I am scheduled to be there.			I usually get to work right at the time I am scheduled to be there or maybe just a minute late.
2. I prefer to work by myself.			I prefer to work with other people.
3. If I say I will do something, I always follow through.			Sometimes other things can interfere with my ability to do what I commit to do.
4. I like doing a different task at work from one day to the next.			I prefer to learn one task and stick to it at work.
5. I get along well with other people.			I do not get along well with other people.
6. Sometimes I will bend a rule at work if I think it is needed to get the job done.			I always follow the rules at work whether I agree with them or not.
7. I will take on extra jobs at work if I am given a chance to.			I prefer to only do the job for which I was hired.
8. Sometimes, other commitments make it hard to do what I am supposed to do.			I always do what I am supposed to do.
9. It is very easy for me to learn a new task quickly.			It is not very easy for me to learn a new task quickly.
10. I enjoy working with new people.			I prefer to work with people I know.
11. I have never said I was going to be somewhere and didn't show up.			I have sometimes agreed to be somewhere and then was not able to be there.
12. I go out of my way to be kind to other people.			I do not go out of my way to be kind to other people.
13. I do not like to take on new roles at work.			I enjoy taking on new roles at work.
14. I only miss work when I am very sick.			I have missed work before for reasons other than being very sick.
15. I enjoy a job where I get to learn new things.			I would get tired of a job where I constantly had to learn new things.
16. I am usually an easy person to get along with.			I am not usually an easy person to get along with.
17. I can easily work with people I don't know well.			It is hard for me to work with people I don't know well.
18. I think you should be able to take days off from work if you have something you need to do.			I think you should only miss work if you are sick.

19. I really hate to be late to an appointment.				It doesn't bother me to be a few minutes late if I can make up the work later in the day.
20. I like it when things change at work.				I don't like it when things change at work.
21. I am always perfectly dependable and reliable.				I admit that I am not always as dependable or reliable as I should be.
22. I don't mind when things come up at the last minute.				I like to know things in advance, so that I can prepare for them.
23. No matter what I have to do, I always find a way to be where I am supposed to be on time.				Sometimes, things like traffic, car trouble, or other people make it hard to be on time.
24. I have never bent the truth to avoid doing unpleasant things.				I have bent the truth to avoid doing unpleasant things before.
25. I like things to remain constant and expected at work.				I don't mind when unexpected things happen at work.
26. I prefer to work in a setting where the rules are clear.				I prefer to work in a setting it is okay to bend the rules.
27. I get used to new situations easily.				It takes me a while to get used to a new situation.
28. At my job, I would like an opportunity to work in different departments.				At my job, I prefer to always work in the same department.
29. I prefer having a flexible work schedule.				I prefer my work schedule to always be the same.
30. If I am going to be late, I call to tell someone.				If I am running late I don't call, I just hurry to get there.
31. My co-workers would not say that I am helpful to other people.				My co-workers would say that I am helpful to other people.
32. I work better as part of a team.				I work better alone.
33. Rules should be followed at work to keep things running smoothly.				Rules aren't that important as long as the job gets done.
34. It does not take me long to be friendly to people I have just met.				It takes me a while to be friendly to people I have just met.
35. When working with a group of people, I can easily share my ideas.				When working with a group of people, I find it hard to share my ideas.
36. I think people at work should help each other with their jobs.				I think people at work should do their own jobs and not expect others to do it for them.
37. I think safety rules are necessary to keep people safe on the job.				Sometimes, safety rules make it hard to get the job done as quickly.
38. I prefer working on tasks with other people.				I prefer to work on tasks by myself.
39. People would describe me as going out of my way to be polite to others.				I am nice to others, but don't really go out of my way to be polite to others.

VITA

Vivian D. Hatfield is originally from Atlanta, GA. After attending several schools in the Fulton County area, she graduated from Milton High School in Alpharetta, GA in 1988. Upon graduation from high school, she attended Lee College in Cleveland, TN where she graduated Summa Cum Laude in 1993 with a Bachelor of Arts degree in Psychology. After working for two years, she entered the Master's program in Experimental Psychology at The University of Tennessee, Knoxville in 1995. After one year in the program, she was accepted into the PhD program in Experimental Psychology at The University of Tennessee, Knoxville. She continues to work on her doctoral degree in Experimental Psychology with a concentration in Industrial/Applied Psychology while working for the City of Knoxville.