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Base rates of counterproductive work behaviors

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BASE RATES OF COUNTERPRODUCTIVE WORK BEHAVIORS

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Candace Atamanik-Dunphy

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To: Dean Kenneth Furton
      College of Arts and Sciences

This thesis, written by Candace Atamanik-Dunphy, and entitled Base Rates of Counterproductive Work Behaviors, having been approved in respect to style and intellectual content, is referred to you for judgment.

We have read this thesis and recommend that it be approved.

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Date of Defense: March 23, 2009

The thesis of Candace Atamanik-Dunphy is approved.

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ABSTRACT OF THE THESIS

BASE RATES OF COUNTERPRODUCTIVE WORK BEHAVIORS

by

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This study provides a comprehensive assessment of base rates for counterproductive work behaviors (CWB) and examines their relationship with personality and demographic variables. The Randomized-Response Technique (RRT) was employed in order to reduce the effects of social desirability. Base rates were calculated for 66 behaviors for a student and nationwide sample. Results revealed 15 significant behaviors for the student sample and 7 for the nationwide sample. In addition, low neuroticism was found to relate to higher reporting of counterproductive behavior for both groups. Also, low conscientiousness was related to higher reports of CWB in the student sample. Finally, CWB was found to differ based on ethnicity for the student sample such that Caucasians reported higher rates of CWB than Hispanics.

TABLE OF CONTENTS

LIST OF TABLES

CHAPTER I: INTRODUCTION

The purpose of this thesis is to examine the frequency of counterproductive work behaviors (CWB) as well as their relationship to personality and demographics using a technique designed to reduce social desirability. Specifically, this project establishes base rates for sixty-six behaviors grouped into eleven different dimensions and compares them across ten different demographics and three personality characteristics. The goal of this research is to contribute to the growing body of knowledge concerning counterproductive work behaviors and their antecedents.

Recently there has been an increase in attention to counterproductive work behaviors and an attempt to explain their antecedents and outcomes. Several issues have been identified in the area of CWB research that are inhibiting the development of a more comprehensive picture of these behaviors. First, CWBs are often studied individually or in small groups of related behaviors. Second, traditional self-report methods have led to low admission rates. Third, individual or group differences have not been established across behaviors (Sackett, 2002).

Before presenting the details of the current project, it is necessary to first review the pertinent theories and research concerning this topic. For that purpose, the current thesis will be organized as follows: First, I will discuss the conceptualization of counterproductive work behaviors and the importance of establishing base rates for CWBs. Then I will discuss the different dimensions of counterproductive behavior and the specific behaviors I will be examining. In the second chapter, I will present a review of the research findings related to base rates of counterproductive behaviors, the theoretical basis of CWB and the issue of social desirability. Following this, in the third

chapter I will present the methodology for the data collection and subsequent analyses. Additionally, appendices will include all measures and project materials. The results are summarized in the fourth chapter followed by a discussion of the implications of the results in the fifth chapter. I conclude the fifth chapter with a discussion of the limitations of the current study and by presenting directions for future research.

Conceptualization of Counterproductive Work Behaviors

Counterproductive Work Behavior (CWB) refers to any intentional behavior on the part of an organizational member viewed by the organization as contrary to its legitimate interests (Sackett, 2002). Related terms include antisocial workplace behavior which is "any behavior that brings harm, or is intended to bring harm, to an organization, its employees, or stakeholders" (Giacalone & Greenberg, 1997) or workplace deviance, which is "voluntary behavior that violates significant organizational norms and, in so doing, threatens the well-being of the organization or its members, or both" (Robinson & Bennett, 1995).

Although CWB has been divided into many sub-dimensions, generally it is acknowledged that there are counterproductive behaviors focused either on the organization (organizational deviance) or its members (interpersonal deviance). Organizational deviance can include dragging out work in order to get overtime, littering your work environment or neglecting to follow your bosses' instructions. Interpersonal deviance may include cursing, acting rudely or making fun of a coworker. In addition to this focus on target, these behaviors can range in severity from minor forms of deviance, such as coming in late for work to more serious offences such as discussing confidential company information with an unauthorized person (Bennett & Robinson, 2000). This

thesis will include organizational deviance and interpersonal deviance as well as behaviors that range in severity from minor to severe.

Another factor to consider when conceptualizing CWB is the intentionality associated with the behavior. Most conceptualizations only consider intentionally deviant behavior in their definitions of CWB. This conceptualization may not always be appropriate though because an employee may not intentionally be engaging in CWB, but their actions may still be detrimental to the organization. This behavior can be seen in employees who may have negative personality traits that influence their comportment at work. Someone who is unreliable may often show up late to work or leave early, but may not be intentionally trying to harm the organization, but affecting productivity nonetheless. Similarly, an employee who is insensitive or uncouth may make comments that are offensive to coworkers without intending to do so (Moberg, 2000). This thesis will include both intentional and unintentional deviant behaviors.

The consequence of a behavior should also be considered when conceptualizing CWB. Most conceptualizations only focus on behaviors that cause harm or have the capacity to cause harm. But there are some CWBs that may have beneficial or productive consequences. These would be acts such as defrauding customers or suspicious accounting that may benefit the organization but ultimately harms stakeholders (Vardi & Wiener, 1996). On the contrary, there are also those acts which are considered counterproductive for the organization but are seen as beneficial to the general public. Whistle-blowing is one such behavior that is currently receiving significant attention due to the proliferation of corporate scandals in the United States. The act of informing on one's organization for unethical business practices may be considered counterproductive

by the organization but it is an appropriate and justifiable behavior from the perspective of the individuals being taken advantage of by the organization (Near & Miceli, 1995). This thesis will examine both behaviors that are harmful and behaviors that are sometimes potentially beneficial to the organization.

Since counterproductive behavior can be conceptualized in a variety of ways, it is important to assess as many different types of behavior as possible. More importantly, we need to assess the base rates of the different behaviors in the extant population. Next, I will discuss why establishing base rates for CWB is crucial for organizational effectiveness.

The Importance of Establishing Base Rates for CWBs

The study of CWB is important because counterproductive employees have a substantial impact on organizational effectiveness (Hakstian, Farrell & Tweed, 2002). Counterproductive work behavior is a pervasive and costly problem in organizations. Counterproductive behavior has costs associated with profit, inventory, morale, and image (Slora, 1989). Deviant and delinquent employee behaviors have been associated with annual organizational loss estimates of anywhere from $6 to $200 billion (Murphy, 1993).

The 2002 National Retail Security Survey produced by the University of Florida reported that retailers attribute approximately half of their inventory shrinkage to employee theft. The report estimated that with a total shrinkage dollar amount of approximately $ 31.3 billion, this translates into an annual employee theft cost of greater than $15 billion. Additionally, the report concluded that employee theft is the cause of one out of every three business failures in the US (Furnham & Taylor, 2004).

These behaviors constitute a persistent and detrimental problem for organizations. Therefore, the purpose of this study is to identify the most frequently occurring behaviors. For organizations seeking to increase efficiency and profitability, identifying the most frequent behaviors is an important first step.

This study will establish base rates for a comprehensive list of counterproductive work behaviors. Base rates are the percentage of individuals in the population that have engaged in a particular behavior. Base rates provide aggregated information regarding the occurrence of counterproductive behaviors which allows us to more easily make generalizations about the population. Establishing a comprehensive list of base rates for CWBs will increase our understanding of the frequency of counterproductive behavior.

Establishing base rates focuses employers' attention on the most important or prevalent behaviors and allows them to disregard those of lesser importance. Commonly used measures of CWB base rates, such as self-reports, may not accurately reflect the true incidence of employee counterproductivity due to false reporting caused by socially desirable responding. What is needed is a means of determining employee deviance base rates that includes all forms of deviance without the confounding effects of socially desirable responding. My study hopes to address this as well as the other issues previously discussed that are facing CWB researchers today. Before I present the specific methods that will be employed to address these issues, I will first review the different theoretical dimensions proposed by CWB researchers and the one that I believe is most appropriate for the current study.

One of the tasks of CWB researchers has been to identify and categorize all of the behaviors that would be considered counterproductive. In order to develop a list of applicable behaviors, Hollinger and Clark (1983) collected self-report data on CWBs using large employee samples from three different industries. Based on their results they proposed that counterproductive behaviors could be divided into two general categories. The first category, Property Deviance, involves the misuse of company assets. Behaviors include theft, property damage, and misuse of employee privileges. The second category, Production Deviance, involves violating organizational norms. Violation of organizational norms includes not being on the job as scheduled (absence, tardiness, leaving early) and behaviors that compromise production (intentional slow or sloppy work). Empirical work by Hollinger and Clark (1983) has supported the distinction between property and production deviance.

Robinson and Bennett (1995) observed that Hollinger and Clark did not include interpersonal counterproductive behaviors, such as verbal abuse, in their categories. Therefore they attempted to expand upon the Hollinger and Clark framework to include a broader list of behaviors. First, they generated a list of critical incidents of CWBs, then they acquired similarity ratings for pairs of behaviors, and then finally, they used multidimensional scaling techniques to obtain a two-dimensional configuration. One dimension distinguishes between behaviors directed toward the organization (theft, absence, tardiness) and interpersonal behaviors directed toward other organizational members (harassment, verbal abuse). The other dimension reflects the range of seriousness of the behaviors, from minor to more serious acts. Robinson and Bennett

labeled the resulting four categories: production deviance (i.e., leaving early), property deviance (i.e., sabotage), personal aggression (i.e., threatening coworkers), and political deviance (i.e., gossiping about coworkers). More recently, Bennett and Robinson (2000) have developed a measure of workplace deviance and presented construct validity evidence for their interpersonal/organizational deviance dimensions.

Spector et al. (2006) argued that a two-dimensional perspective of CWB is too broad and might obscure relationships of potential antecedents with more specific forms of behaviors. Therefore they suggested that there are five dimensions of CWB: abuse toward others, production deviance, sabotage, theft, and withdrawal. Abuse towards others consists of harmful behaviors directed toward coworkers that harm either physically or psychologically such as making threats, malicious comments, or undermining the person's ability to work effectively.

Production deviance is described as the purposeful failure to perform job tasks the way they are supposed to be performed such as intentionally producing poor work. Sabotage is defined as the defacement or destruction of physical property belonging to the employer. Theft is taking property belonging to the employer without permission. Withdrawal consists of behaviors that restrict the amount of time working to less than is required by the organization such as arriving late or leaving early.

Spector and colleagues compiled data from three prior studies by having SMEs place specific behaviors into the five categories for which they computed subscale scores. Correlations were compared among the subscales on several potential antecedents including job stressors, justice, job satisfaction and negative emotion. Results provided

evidence for differential relationships among the five dimensions with potential antecedents therefore supporting a multi-dimensional perspective of CWB.

Gruys and Sackett (2003) went beyond previous researchers by establishing a comprehensive list of 66 behaviors divided into 11 different dimensions (See Appendix A). The authors compiled the behaviors from relevant literature in the fields of psychology, sociology, business, and management. Items were obtained from 15 different articles and after removing redundant items from an initial list of 250 behaviors, 66 behaviors were included in the final list. The behavior list was then sorted into 11 separate categories based on similarity of content. The initial sort of the behaviors was done by Gruys. Then a group of eight doctoral students familiar with the research project independently sorted the items into the categories. There were virtually no discrepancies between judges thus no changes were made to the initial item sort.

Gruys and Sackett (2003) first used confirmatory factor analysis to test the proposed 11 factor model against a one factor model. Next, exploratory factor analysis was used at the category level to examine the dimensionality of the 11 behavior categories. The results of the confirmatory factor analysis supported the use of the 11 factor model. The exploratory factor analysis showed a strong relationship between all the categories, as all the categories loaded highly on a single factor. Thus, the results suggest a common underlying factor of general counterproductive behavior. This would also suggest that as the likelihood of an individual engaging in a specific CWB increases, the likelihood of that individual engaging in other types of CWB also increases.

Gruys and Sackett (2003) argued that the key for understanding interrelationships among CWBs is to focus on the covariance of occurrence among these behaviors.

Therefore the authors included a second study that examined the rates of co-occurrence among the 11 dimensions. Participants were asked to rate the likelihood of co-occurrence for each pair of categories for a total of 55 comparisons. The results of the multidimensional scaling analysis revealed a two dimensional solution. The first dimension included either interpersonally or organizationally focused behaviors, whereas the second dimension included either task relevant or non-task relevant behaviors. These findings support the theory of general factors underlying counterproductive behaviors. The results of the second study were similar to Robinson and Bennett's (1995) Interpersonal-Organizational dimension but unlike previous studies, Gruys and Sackett focused on the co-occurrence of behaviors. Both of Gruys and Sackett's studies operationalized the similarity of behaviors as co-occurrence. The first study used the correlations between self-reports and the second study used direct judgments of co-occurrence. Establishing rates of co-occurrence is important for understanding whether individuals who engage in one form of CWB are more likely to engage in certain other types of CWB. Gruys and Sackett's focus is different than the Robinson and Bennett (1995) or Hollinger and Clark (1983) typologies which grouped behaviors based solely on ratings of similarity along their dimensions.

The current study will employ the Gruys and Sackett (2003) dimensions because they provide the most comprehensive list of behaviors. Gruys and Sackett provide 11 dimensions comprised of 66 behaviors as opposed to the other models that provide a very limited number of dimensions. I agree with Spector et al (2006) that too few dimensions may obscure the relationships between behaviors and antecedents. The Gruys and Sackett dimensions allow for clear differentiation between behavioral categories. Finally, Gruys

and Sackett include behaviors in their list that previous researchers had not (i.e. internet usage) which helps to establish base rates for as many counterproductive behaviors as possible.

In summary, the purpose of this study is to establish base rates for a comprehensive list of counterproductive work behaviors. Determining the prevalence of CWBs is important for several reasons. First, in the current literature, there is an array of CWBs being studied without a clear indication of the frequency or importance of such behaviors. The establishment of base rates for CWBs allows researchers and practitioners to focus on the most frequently occurring behaviors when conducting research or establishing workplace guidelines. My study will further the integration of CWB research by examining all the dimensions of CWB as opposed to focusing on a limited number of behaviors.

Second, although CWBs are typically studied separately, there is value in studying them together because research has shown some evidence of common antecedents for several CWBs (Martinko, Gundlach, & Douglas, 2002). Establishing a comprehensive list of CWBs and investigating which behaviors have similar rates of occurrence will provide information as to which behaviors are likely to occur together.

Third, since CWBs are a sensitive subject, many people have difficulty responding honestly to a self-report measure. This social desirability effect can result in lower base rates. Therefore, I will employ a measurement technique specifically designed to reduce the effects of social desirability typical of self-reports. I will use the randomized response technique (RRT) as opposed to self-reports which has been found to reduce social desirability effects in respondents as well as feelings of repercussions thus

10

providing more accurate base rates (Wimbush & Dalton, 1997). I will discuss this method in greater detail in later sections.

In this chapter I have discussed the conceptualization of CWB, the importance of establishing base rates for CWBs, and the dimensions of CWB. In the next section I will review the relevant literature on counterproductive behavior, the theoretical basis of CWB, and the issue of social desirability.

CHAPTER II: LITERATURE REVIEW

Base Rates of Counterproductive Work Behavior

Researchers in the area of counterproductive work behavior have primarily focused on studying the prevalence of individual behaviors or a limited number of similar behaviors. Theft, fraud, deception, and sabotage have all been studied independently and have their own streams of research. In the following section, I will provide a summary of the relevant research pertaining to these behaviors.

According to Furnham and Taylor (2004) it is difficult to get accurate and reliable statistics on employee theft because estimates vary as a function of the research and the business domains. It is also difficult to define theft as it can range from stealing office supplies to large sums of money. There is also a distinction between production theft (poor output) and material theft (property/money). Essentially, theft can be defined as the unlawful taking, transfer or control of another's property with the aim of benefiting the thief who is not entitled to that property. Despite the challenges of studying theft, it must be investigated because it is estimated that 95% of all businesses experience employee theft and management is often not aware of the actual extent of losses or even the

existence of theft (Furnham and Taylor, 2004). Industrial/Organizational psychologists are charged with improving the productivity of the workplace, and counterproductive behaviors such as theft are a major contributor to the inefficiency of organizations. Several researchers have focused on theft and related behaviors and I have included some of their most relevant findings.

Hollinger and Clark (1983) used an anonymous survey method to obtain estimates of theft and production deviance across several industries. Production deviance is defined as the purposeful failure to perform job tasks effectively the way they are supposed to be performed. They found a 28% theft rate for manufacturing (N=1,497), 33% for hospitals (N=4,111) and 35% for retail (N=3,567). These same industries had production deviance rates of 65%, 69%, and 82%, respectively.

Slora (1989) also used an anonymous self-report survey to determine employee deviance base rates in both the fast food and supermarket industries. For the fast food industry (N=872), 84% of respondents admitted to engaging in counterproductivity (arguing, alcohol and drug use), 78% admitted to some form of time theft (tardiness, unexcused absences), 62% admitted to cash/property theft (taking merchandise, eating food), 52% admitted to theft support (discounts for friends, not reporting theft by other), and 35% admitted engaging in other deviant behaviors such as not reporting wasted company materials. For the supermarket industry (N=504), 77% admitted to time theft, 75% reported engaging in counterproductivity, 43% admitted to cash/property theft, 39% were involved in theft support, and 29% engaged in other deviant behaviors. Respondents were also asked to indicate theft in average dollar amounts. Both fast food and supermarket employees indicated that the "average employee" stole significantly more

than they did with the most frequent response being 24% more for others than for themselves. Overestimation of other's theft and underestimation of their own theft is likely the result of respondent's feelings of social desirability as well as fear of potential repercussions from employers. Social desirability is a common limitation in CWB research which will be addressed in this study with the use of the previously mentioned RRT method.

Employing similar methods as Slora (1989), Boye and Slora (1993) examined the prevalence of severe counterproductivity using the admissions of a supermarket employee sample (N=511). Subject Matter Expert ratings were used to derive severity indices for a variety of counterproductive employee behaviors. Those behaviors that were rated as most severe were taking cash, merchandise or equipment from the employer without permission and engaging in drug use on the job. Results showed that 35% of supermarket employees admitted to engaging in some form of severe counterproductivity within the previous six months. Just as some researchers focus on theft, other researchers choose to focus on fraud in the workplace. Next, I will review the relevant fraud literature.

The difference between employee theft and fraud can be considered a matter of quantity. Fraud is defined as all those activities involving dishonesty and deception that can drain value from a business, directly or indirectly, whether or not there is a personal benefit to the fraudulent employee (Giacalone & Greenberg, 1997). There is also a distinction regarding position in the company. Theft is usually perpetrated by blue-collar or low-level employees while fraud is committed by white-collar or senior-level employees (Furnham & Taylor, 2004). In the current business climate, fraud is an

increasingly relevant issue and of particular importance is establishing workplace regulations.

PricewaterhouseCoopers produces an Economic Crime Survey that in 2003 found that 37% of respondent companies worldwide said they had suffered from one or more serious frauds during the previous two years. While the frequency and amount of organizational loss may differ greatly, the reasons why employees steal are much the same. Resentment, greed, and opportunity are the main causes of both fraud and theft. They are also prevented by similar means, which reinforces the fact that they result from similar causes (Furnham & Taylor, 2004).

Giacalone and Greenberg (1997) suggest that fraud and theft can be managed using the same techniques. First, an organization needs to be clear about their ethics, values, standards and what is and is not acceptable behavior. Second, managers need to be trained on recognizing the causes and manifestations of fraud and theft. Third, employees should be encouraged to report fraud and theft without fear of repercussions. Finally, selection systems need to be developed for accurate screening of potentially deviant employees. These methods must be implemented throughout an organization and enforced at every level of management.

Along with fraud, deception can be detrimental to the reputation of an organization. The problem with deception is that it can be difficult to detect and sometimes even harder to prove. Deception is particularly relevant to researchers and academics. The falsification of information to enhance one's reputation may occur when success depends on innovation. Many cases of data falsification have been uncovered over the years in the scientific and medical fields. Lock and Wells (1996) documented 71

cases in four different countries that included data creation, concealment or alteration. Estimating the cost of this kind of behavior is difficult as it may not always have direct monetary consequences. But the adverse effects are quite detrimental to the field of science. It reduces the credibility of scientific discovery as well as the empirical process.

Sabotage can also undermine the functioning of an organization. Often sabotage can carry an extreme connotation but can have a variety of manifestations ranging from severe to mild. Sabotage usually has two components: the intention to damage company property and/or subvert company operations. It is defined as "work-related behavior specifically designed to damage, disrupt, or subvert the organization's operations for the personal purpose of the saboteur by creating unfavorable publicity, embarrassment, delays in production, damage to property, the destruction of working relationships, or the harming of employees or customers" (Crino, 1994, p.312).

Crino (1994) has identified several motives for sabotage including revenge, frustration, boredom, and to protect one's job. He also determined several methods of reducing sabotage such as encouraging employee feedback, monitoring communications, offering job enlargement opportunities, and employing strict security measures for sensitive data.

Some of Crino's (1994) recommendations for reducing sabotage are similar to those suggested for other counterproductive behaviors. He proposes methods such as using integrity testing to assess job applicants' likelihood of counterproductivity; training to increase employee feelings of importance; creating an atmosphere of fairness, justice and trust; well-designed and implemented security measures; and stressing employee accountability. According to Crino, researchers generally suggest that CWBs can be

reduced through improved selection methods, better management practices, and closer monitoring of employees' activities. Crino stresses that CWBs are predictable and preventable if we understand their underlying causes and consequences.

One way to increase our understanding of these behaviors is by establishing base rates. Currently, only limited base rate information is available for the preceding counterproductive behaviors. Establishing base rates for all these behaviors would enable researchers to understand where their focus should be. Although the preceding research addresses a variety of CWBs, currently there has been no research examining base rates for all 11 dimensions of CWB proposed by Gruys and Sackett (2003). This suggests a need to more comprehensively measure CWB base rates in order to develop a better understanding of their relative frequency.

There are several benefits to establishing a comprehensive assessment of CWB base rates. An accurate estimation of the base rate of these behaviors is fundamental for the design of appropriate interventions. For behaviors with low base rates it's not as important to develop preventative measures. But high frequency behaviors such as theft require pre-emptive policies and procedures. More precisely estimating the base rates of counterproductive work behaviors provides critical information by which subsequent intervention strategies can be designed and implemented. In conjunction with base rates, a greater understanding of how CWBs relate to each other as well as other variables will assist researchers in understanding the framework of the counterproductive behavior process. Therefore, I will discuss several theoretical models of both antecedents and outcomes of counterproductive work behavior.

Theoretical Basis of Counterproductive Work Behavior

The factors that influence individual CWBs have been widely researched and recently there has been a focus on studying CWBs collectively as evidence has suggested a general construct and shared antecedents to the different dimensions (Martinko, Gundlach, & Douglas, 2002). This type of research has led to integrated theoretical explanations for counterproductive work behaviors. The following theoretical models are examples of the current research attempting to integrate the idiosyncratic perspectives on counterproductive work behaviors.

Robinson and Bennett (1997) developed a causal model of the path to deviance that attempts to predict which type of deviance will occur. They argue that organizational provocations such as financial or social pressures, inequities, unfair treatment, poor work conditions or organizational changes can lead to employees' feelings of disparity or outrage. If the employee has an instrumental motivation (focused on problem-solving) they will attempt to resolve feelings of disparity with the most legitimate/least deviant action that is available, effective, and unconstrained. The employee will be more likely to engage in more serious deviant acts to the extent that more minor deviant acts are unavailable, ineffective, or constrained. If the employee has an expressive motivation (focused on emotions) they will direct their actions at the perceived source of the provocation with the most legitimate/least deviant action that is available, satisfying and unconstrained. The employee will be more likely to engage in a more serious deviant act to the extent that more minor deviant acts are unavailable, unsatisfying, and unconstrained. The model focuses on organizational provocations and constraints as well as the individual's motivation in order to predict deviant behavior. Subsequent

researchers developed causal models that include alternative situational and individual factors.

Martinko, Gundlach and Douglas (2002) developed a causal reasoning model in an attempt to integrate the various theoretical perspectives into a paradigmatic framework with particular attention to individual difference factors. Their goal was to demonstrate the similarities between CWBs and the theories used to explain them. The researchers reviewed all the current theoretical perspectives on CWB as well as three general behavioral paradigms in psychology. Generally, the resulting paradigm indicates that counterproductive behavior is the result of an interaction between the person and the environment in which the individual's causal reasoning about the environment and expected outcomes drive the individual's behavior. Specifically, it is the attributions for the cause of the outcomes that will be most predictive of the nature and form of counterproductive behavior. According to this model, individual differences are important antecedents to CWBs for their influence on attributions. Gender, locus of control, core self-evaluations, integrity, and negative affectivity can all contribute to perceived attributions and subsequently CWBs.

Lau, Au and Ho (2003) conducted both a qualitative and quantitative review of the antecedents of counterproductive behaviors. The qualitative review identified four categories of antecedents: personal, organizational, work, and contextual factors. The quantitative review consisted of a meta-analysis of 40 published studies with a combined sample size of 42,359. The results indicated that the strongest predictors of CWBs were age, gender and job satisfaction. Specifically for absenteeism, the strongest predictors were age, income level, job satisfaction, and perceptions of a stronger absence norm. In

addition, Gruys and Sackett (2003) found most demographic variables to be uncorrelated with the 11 categories of CWB with the exception of age and work experience which were significantly negatively related to six of the 11 dimensions. This indicates that older, more experienced workers may be less likely to engage in counterproductive behaviors. Although more research needs to be done to clarify the relationships between CWBs, these models suggest that counterproductive behaviors should be studied collectively with antecedents such as personality and demographics in order to determine which variables most contribute to counterproductive behavior.

The preceding theoretical models provide some evidence that personality variables as well as demographics may influence the occurrence of CWBs. Martinko, Gundlach and Douglas (2002) suggested that negative affect contributes to counterproductive behavior. Lau, Au and Ho (2003) argued that personality variables such as the Big Five may influence CWBs. In addition, the following studies have directly examined the relationship between personality and deviant behavior.

Colbert et al., (2004) examined the interactive effects of personality and perceptions of the work situation on workplace deviance. Results revealed that both conscientiousness and emotional stability (neuroticism) moderated the relationship between positive perceptions of the work environment and deviance. Specifically, the relationship between perceptions of the developmental environment and organizational deviance was stronger for employees low in conscientiousness or emotional stability.

Mount, Ilies and Johnson (2006) used path analysis to test a model that posits that personality traits will have both direct relationships with counterproductive work behaviors and indirect relationships to CWBs through the mediating effects of job

satisfaction. Results revealed that conscientiousness had a direct relationship with organizational counterproductive work behaviors and job satisfaction had a direct relationship to CWB. Overall, results showed that personality traits differentially predict CWBs and that employees' attitudes about their jobs explain, in part, these personality–behavior associations.

In addition to these findings, personality variables have been shown to relate to job performance, with conscientiousness being the most consistent predictor of work performance (Barrick & Mount, 1991). Conscientious individuals are hardworking, dependable and careful. These traits have been shown to result in higher work performance across occupations (Colbert, Mount, Harter, Witt, and Barrick, 2004). Based on the current CWB research, I will examine how the personality variables of negative affect, neuroticism, and conscientiousness relate to the supported prevalence of the 66 counterproductive work behaviors proposed by Gruys and Sackett (2003).

My hypothesis on personality and reported counterproductive behaviors can be summarized as follows.

Hypothesis 1: Individuals scoring high on neuroticism will report less counterproductive behaviors

Hypothesis 2: Individuals scoring high on conscientiousness will report less counterproductive behaviors

Hypothesis 3: Individuals scoring high on negative affect will report less counterproductive behaviors

Furthermore, I will explore the relationship between counterproductive work behaviors and demographic variables such as age, gender, work experience, tenure and

industry. Several studies have found demographic variables to be strong predictors of counterproductive behavior (Lau, Au and Ho, 2003; Gruys & Sackett, 2003). I will expand on these studies by comparing the prevalence of 66 different behaviors with the 10 demographic variables. This may provide new insight into the relationship between demographics and CWBs as previous studies have not included such a large number of CWBs when examining this relationship.

Social Desirability

Research relying on respondents' admissions of wrongdoing requires particular attention to the chosen method of measurement. Potential inaccuracy in self-reported information is especially apparent when the data of interest are sensitive. It has been suggested that the accuracy of sensitive research conducted by conventional self-report surveys can be compromised as respondent answers are likely to be inaccurate due to untruthful and evasive answers (Wimbush & Dalton, 1997). Although such surveys are often accompanied by guarantees of anonymity, a participant would need an inordinate amount of confidence in the researcher to admit complicity in some stigmatizing or illegal act under these circumstances. Because of the sensitive nature of CWBs they are difficult to measure with self-reports because respondents have a social desirability bias causing them to answer untruthfully, especially in reporting matters that may be illegal.

Social desirability refers to a tendency to respond to self-report items in a manner that makes the respondent look good rather than to respond in an accurate and truthful manner (Holtgraves, 2004). For example, people tend to over-report engaging in socially desirable behaviors, such as attending religious services and voting but underreport engaging in socially undesirable behaviors, such as substance abuse, declaring

bankruptcy and so on. Research has documented the occurrence of this bias for self-report measures of personality traits, attitudes, behaviors, and psychopathology (Holtgraves, 2004). As a result of this persistent problem, alternate measures need to be employed in order to obtain more accurate assessments of the prevalence of CWB.

Accordingly, I employ the randomized response technique which provides absolute participant anonymity as it is not possible to divulge individual responses to third parties. Also, the RRT provides complete disclosure to participants with no deception and provides a more accurate estimate of sensitive behaviors (Wimbush & Dalton, 1997). The RRT offers a face valid measure designed to reduce false reporting of CWB. Wimbush and Dalton used the RRT to establish base rates for employee theft. They found significantly higher base rates of theft using the RRT compared with a conventional self-report measure (59.2% compared with 28.2%).

Other research studies have employed the RRT for equally sensitive topics such as self-esteem and self-monitoring (Bégin & Savard, 1979; Bellerose, Bégin, Frenette & de Montigny, 1980). Similarly, the RRT can be used to establish base rates for the 11 dimensions of CWB in this study. Accurate base rates are important for understanding the magnitude and variability of the behaviors as well as developing interventions. There has been no research to date examining base rates for all 11 dimensions of CWB using the RRT. Employing the RRT to establish base rates is beneficial not only to provide a more integrated conceptualization of CWB but also to provide more accurate base rates by reducing the effects of social desirability. Therefore this study will establish base rates for all 11 categories of CWB using the RRT.

In summary, the purpose of this study is to continue the process of integrating the literature on CWB by providing a comprehensive assessment of the base rates for the various CWBs. Currently researchers have focused on a select group of individual behaviors in establishing base rates therefore current findings on CWB base rates are incomplete and not integrated. There is a separate research literature on these topics: theft, fraud, deceit, and sabotage. But research has shown that these CWBs have similar characteristics. In addition, there has been evidence of common antecedents among counterproductive behaviors, particularly personality and demographic variables. Although individual differences and environment may account for someone exhibiting a particular CWB, the motivations for counterproductivity may be the same (Furnham & Taylor, 2004).

My study will add to the current research by providing a comprehensive assessment of the base rates for all 11 CWB dimensions using a method of data collection designed to reduce the effects of social desirability as well as examining the relationship between the 66 different behaviors and personality and demographic variables.

CHAPTER III: METHOD

Participants

Two different samples were used in this study. The first sample consisted of 492 undergraduate students attending Florida International University. Students were enrolled in psychology classes and participated in order to fulfill credit requirements. Students received 1 hour of credit for participation in this study. Seventy-six percent of participants were female and 65% were between the ages of 18 and 20. Sixty-five percent of participants identified themselves as Hispanic, 16% as Caucasian, 10% as African

American, 3% as Asian and 6% identified themselves as "Other." Participants were required to have work experience in order to participate in the study. Fifty-five percent of participants had 1 to 5 years of total work experience while 21% reported having more than 5 years of total work experience. Seventy-two percent of participants were currently employed, 30% of whom had been employed in their current position for 1 to 5 years. The majority of participants were employed in either the retail industry (29%) or the service industry (22%) and 88% received wages based on hourly pay. Student participants were informed about the study via the FIU participant pool system at http://fiu.sona-systems.com. This study was conducted over the web. Participants who logged into the FIU participant pool website signed up to participate in this study, and were given the URL to the page that contains the study materials.

The second sample is a national sample of 149 individuals (see below). Fifty-eight percent of participants were female and 34% were 45 years or older. Seventy-seven percent of participants identified themselves as Caucasian, 15% as Asian, 4% as African American, and 4% identified themselves as "Other". None of the participants identified themselves as Hispanic. The majority of participants (37%) indicated high school as the highest level of education they had completed. Seventy-nine percent of participants had more than 10 years of total work experience. Ninety-two percent of participants were currently employed, 40% of whom had been employed in their current position for 1 to 5 years. The majority of participants were employed in either the clerical industry (20%) or the manufacturing industry (16%) and 58% received their wages by salary.

These participants were recruited through the online participant pool maintained by the Study Response Project (SRP), whose principal place of operation is Syracuse

University in Syracuse, NY. The Study Response Project maintains a database of over 62,000 participants who have consented to being contacted by SRP to be informed of Web-based research projects. A licensing fee is paid by researchers for a specified number of solicitations, and then SRP e-mails a solicitation to the e-mail addresses randomly selected from its database. From this licensing fee, funds are devoted to compensating participants through gift certificates to Amazon.com. For this study, participants from SRP were asked to enter their Study Response ID number on the first web page of the study. A list of the numbers entered was sent to SRP when data collection was complete, and SRP conducted a drawing to award compensation. The drawing for awards is conducted by the Study Response Project in satisfaction of the legal requirements as specified in Section 849.0935(3) of Florida Statutes. For this study, two $60 gift certificates were awarded.

Use of both a student sample and the study response sample allows for the surveying of both employed adults and students of various demographic groups in order to have a sample that is more representative of the general population than just a student sample alone. A comparison of the two samples in terms of demographic characteristics is provided in Table 3.

Measures

Counterproductive work behaviors. A survey employing the Randomized-Response Technique (Wimbush & Dalton, 1997) was administered to participants. The RRT offers absolute participant anonymity as it is not possible to reveal individual responses to third parties. Also, it provides complete disclosure to participants with no

deception. Moreover, it provides a more accurate estimate of sensitive behaviors than standard self-reports (Dalton, Wimbush & Daily, 1996).

The survey items were based on Gruys and Sackett's (2003) 11 dimensions of CWB. These behaviors are: theft and related behavior (giving away of goods or services; misuse of employee discount), destruction of property (deface, damage, or destroy property; sabotage production), misuse of information, (reveal confidential information; falsify records), misuse of time and resources (waste time, conduct personal business during work time), unsafe behavior (failure to follow or learn safety procedures), poor attendance (unexcused absence or tardiness), poor quality work (intentionally slow or sloppy work), alcohol use (alcohol use on the job; coming to work under the influence of alcohol), drug use (possess, use, or sell drugs at work), inappropriate verbal actions (argue with customers; verbally harass coworkers), and inappropriate physical actions (physically attack coworkers; physical sexual advances toward coworkers).

These 11 dimensions consist of 66 behaviors that comprise the survey for the current study. Participants flip a coin for each question and if the coin lands on heads or if they would engage in the stated behavior, they mark the box accompanying each question.

A sample question is the following:

If your coin flip is a head OR if you would take cash or property belonging to the company, please mark the box to the right. Otherwise, do not mark the box; just go to the next question.

Demographics. Participants completed a demographic questionnaire that included information such as gender, age, education, ethnicity, work experience, tenure and

industry. Each participant group was administered a different demographic questionnaire because of the discrepancies in age and work experience between the two groups (Appendices B and C).

Personality. Both Neuroticism and Conscientiousness were assessed using scales from the International Personality Item Pool (2001) found online at http://ipip.ori.org (Appendices D and E). Each scale consisted of 10 questions, 5 of which were positively keyed and 5 which were negatively keyed. Participants indicated how accurately each statement described them. Responses were given on a 5 point scale ranging from 1 (Very Inaccurate) to 5 (Very Accurate). Reliabilities for each of the scales were as follows, for the student and StudyResponse samples respectively, Neuroticism $\alpha = .75, .85$; Conscientiousness $\alpha = .84, .84$.

Negative Affect was assessed using the PANAS scale (Watson, Clark, & Tellegen, 1987) (Appendix F). The scale consisted of 10 words that described negative emotions. Participants indicated to what extent they had felt this emotion during the past few weeks. Responses were given on a 5-point scale ranging from 1 (Not at all) to 5 (Extremely). Reliabilities were as follows for the student and StudyResponse samples respectively, $\alpha = .85, .92$.

Procedure and Data Analysis

An RRT-based survey was used to assess base rates of CWBs. The survey was set up online through www.surveymonkey.com for both the student and national sample. Participants were required to fill out the CWB survey, the personality questionnaires and the demographic information and then submit them anonymously online. It took participants approximately 30 minutes to complete the study.

Base rates were calculated for each category of behaviors using the RRT method. All RRT approaches require a randomizing device therefore for this study I used the flip of a coin. For each of the questions, after which a blank box appears, the respondents are asked to flip a coin and to note whether it landed heads or tails. If the coin lands on heads or the individual engages in the behavior described in the question, he or she would put an X in the box; otherwise, the individual would leave the box blank. From this it is possible to estimate the base rates of CWBs. Marking an X could indicate that the respondent admits to some CWB or it could indicate that the individual got a head on the coin toss. For any individual respondent, the researcher cannot discriminate the meaning of a marked X. In the aggregate however the base rate for this group can be determined.

Suppose that 120 of 200 people marked the box for a particular question. The expected value of the number of heads is .5; therefore it is anticipated that one half (100) of the respondents got a head on their coin toss by chance. Accordingly, these people would have marked the box irrespective of their theft behavior. It is known, however, that 20 additional people marked the box. It is reasonable to conclude that 20 people who got a tail on the coin toss were involved in the specified theft behavior. Therefore it can be estimated that the incidence of theft was 20%. This analysis was conducted for each behavior.

Reliability analyses were performed for the personality measures. Next, both samples were compared on all variables of interest. T-tests were used to compare the means of low versus high ratings of each personality variable for counterproductive behaviors. ANOVAs were used to compare the means of each demographic variable with each of the 66 CWBs. Finally, hierarchical regression analysis was used to determine the

amount of variance in counterproductive work behaviors accounted for by demographics and personality.

CHAPTER IV: RESULTS

For the student and StudyResponse samples, reliabilities for the personality variables were appropriate when all the original items were included, thus no items were deleted. Tables 1 and 2 provide the intercorrelations among the personality variables for both samples.

To determine whether data from both samples should be analyzed together or separately, I conducted independent-samples t-tests comparing both samples across all the variables of interest. Results revealed that the StudyResponse and student samples significantly differed by gender, ethnicity, tenure, wage, labor, industry, and levels of negative affect. However, the two samples did not differ in levels of conscientiousness or neuroticism. The variables of age, experience, and education were excluded from the analysis because they were measured on different scales. Because the majority of the variables had statistically significant differences, I conducted all subsequent analyses on the student and StudyResponse samples separately. Table 3 presents the results for the t-test analyses comparing both samples.

To determine if there are demographic differences in the occurrence of counterproductive work behaviours, mean CWB ratings were compared across all demographic groups for both samples. Tables 4 and 5 provide the mean CWB ratings for each demographic group. For the student sample, ethnicity was the only demographic variable to significantly differ based on ratings of CWBs. The mean CWB rating of Caucasians, African-Americans, Hispanics, Asians, and "Others" were compared. Results

were statistically significant at the .10 level, $F(4, 491) = 2.094$, $p<.10$. Post hoc analysis revealed that Caucasians ($M = 30.66$, $SD = 8.9$) differed significantly from Hispanics ($M = 27.25$, $SD = 11.69$) such that Caucasians reported higher occurrences of CWB than Hispanics. The mean difference was significant at the .05 level. For the StudyResponse sample, there were no significant demographic differences in CWBs.

Independent-samples t-tests were performed to determine if there are personality differences in the occurrence of counterproductive work behaviors. These results are summarized in Tables 6-8. Results revealed that for both samples, participants who rated themselves low on neuroticism had more occurrences of counterproductive work behaviors than participants who rated themselves high on neuroticism (student sample $t(491) = -3.397$, $p < .001$; StudyResponse sample $t(148) = -2.058$, $p < .05$). Thus Hypothesis 1 was supported.

For the student sample, participants who rated themselves low on conscientiousness had more occurrences of counterproductive work behaviors compared to participants who rated themselves high on conscientiousness, $t(491) = -2.570$, $p < .01$. For the StudyResponse sample, the occurrence of CWBs did not differ between participants with ratings of high or low conscientiousness, $t(148) = -.429$, ns. Thus there was mixed support for hypothesis 2.

For both samples, results revealed no differences in the occurrence of CWBs for participants with either low or high ratings of negative affect (student sample, $t(491) = -.450$, ns, StudyResponse sample, $t(148) = -.224$, ns). Thus hypothesis 3 was not supported.

Hierarchical regression analysis was used to determine the amount of variability in counterproductive work behaviors accounted for by demographics and personality (See Table 9). For both samples, individual CWB ratings were the dependent variables and the demographics and personality were independent variables. The demographic variables were entered first as a covariate, followed by the personality variables. For the student sample, demographics explained 3% of the variance in counterproductive behavior, whereas personality explained an additional 3% of the variance in counterproductive behaviors after controlling for demographics. For the StudyResponse sample, demographics accounted for 11% of the variance in counterproductive behavior, whereas personality explained an additional 4% of the variance when controlling for demographics. Specifically, for the student sample, both neuroticism and conscientiousness negatively predicted counterproductive behavior, whereas negative affect had no relationship with CWB. For the study response sample, only neuroticism was significantly negatively related to CWB, whereas the other two personality variables had no relationship with CWB.

Next, base rates were calculated for both the student sample and the StudyResponse sample separately. Table 10 presents the base rates for the student sample and Table 11 presents the base rates for the StudyResponse sample. Only base rates greater than zero were included in the tables. Out of 66 total base rates measured, the student sample had 15 base rates greater than zero. The most frequently occurring behaviors were "Spend time on the internet for reasons not related to work" and "Make personal photocopies at work" which both had base rates of .34. This signifies that 34% of the student sample indicated they would engage in these behaviors.

The StudyResponse sample had 7 base rates greater than zero. Similarly to the student sample, the most frequently occurring behaviors were "Make personal photocopies at work" and "Spend time on the internet for reasons not related to work" which had base rates of .41 and .40 respectively. This signifies that 41% of the StudyResponse sample would make personal photocopies at work and that 40% would spend time on the internet for reasons not related to work.

Both samples indicated that they would use email for personal purposes (student sample = .33, StudyResponse sample = .25), conduct personal business during work time (student sample = .20, StudyResponse sample = .37), give away goods or services for free (student sample = .25, StudyResponse sample = .17), take a long lunch or coffee break without approval (student sample = .07, StudyResponse sample = .14) and use sick leave when not really sick (student sample = .31. StudyResponse sample = .02).

As a result of the low number of positive base rates found when analyzing each behavior separately, I chose to combine the behaviors to examine them based on dimensions. Factor analysis was not possible because of the method used to compute the base rates. Therefore the behaviors were grouped based on the 11 theoretical dimensions proposed by Gruys and Sackett (2003). For each dimension, the individual reported behaviors were combined for a total score of reported behaviors for that dimension. Then, the total possible score for each dimension was calculated by multiplying the total possible score for each individual behavior by the total number of behaviors in each dimension. To account for the RRT technique this possible total score was then divided by two. Finally, this new total was subtracted from the reported totals for each combined dimension and then divided by the same possible total to get a percentage. For example,

for the first dimension of Theft and Related Behaviors, the combined reported behavior total was 2260, the total possible score for that dimension was 4920 (492x10). The final possible total was 2460 (4920/2). Then the final base rate calculation was (2260-2460)/2460.

For the student sample, results revealed only one of the 11 dimensions had a base rate greater than zero. "Misuse of Time and Resources" had a base rate of .05, indicating 5% of the student sample reported that they would engage in the 13 behaviors related to misuse of time and resources, a result consistent with the individual behavior base rate calculations. The most frequently occurring behaviors in the student sample "Spend time on the internet for reasons not related to work" and "Make personal photocopies at work" were both from this dimension. For the studyresponse sample, none of the 11 dimensions had base rates greater than zero.

Finally, the 11 dimensions of counterproductive work behavior were each compared to the three personality variables using t-tests to determine if there were any differences in the occurrence of the CWB dimensions for high vs. low personality characteristics. T-tests were done for both the student sample and the StudyResponse sample.

For the student sample, participants who rated themselves low on conscientiousness had more occurrences of theft, $t(490) = -2.726$, $p < .01$, destruction of property $t(490) = -2.058$, $p < .05$, misuse of information $t(490) = -2.899$, $p < .01$, misuse of time and resources $t(490) = -2.593$, $p < .05$, and poor attendance, $t(490) = -2.764$, $p < .01$, compared to participants who rated themselves high on conscientiousness. For both

neuroticism and negative affect there were no significant differences on any of the CWB dimensions.

For the StudyResponse sample, participants who rated themselves low on conscientiousness had higher occurrences of poor attendance, t (147), = -2.094, p<.05, than those who rated high on conscientiousness. For both neuroticism and negative affect there were no significant differences on the CWB dimensions. Table 9 shows the mean CWB ratings of each of the 11 dimensions comparing participants who rated themselves low on conscientiousness to those who rated themselves high on conscientiousness.

In the next chapter, I will summarize the results of the current study as well as offer potential explanations for the findings. Limitations of the research study and ideas for future research will also be discussed.

CHAPTER V: DISCUSSION

This thesis was designed to extend previous research on counterproductive work behavior by examining the frequency and interrelationships among these behaviors. The results provided insight into the dynamic of CWBs as well as several related variables. The goal of this study was to provide a comprehensive assessment of the base rates for counterproductive work behaviors as well as to examine the relationship between CWBs and personality and demographic variables. This study addresses some of the gaps in the CWB literature and provides fruitful avenues for future research. Specifically, this study attempted to address several issues that have been identified as inhibiting the development of a more comprehensive picture of these behaviors. First, since CWBs are often studied individually or in small groups of related behaviors, I included 66 different behaviors, some of which there is little or no current base rate information for. Second,

because traditional self-report methods have led to low admission rates, I employed the RRT technique to reduce the effects of social desirability. Third, since individual or group differences have not been established across behaviors, I compared the CWBs across three different personality variables and ten demographic characteristics.

In order to assess the results of my study, first the relationship between counterproductive work behaviors and demographic characteristics was examined. For the StudyResponse sample, there were no significant demographic differences in ratings of CWB. For the student sample, ethnicity was the only demographic variable to significantly differ based on ratings of CWBs. Results showed that Caucasians reported significantly higher occurrences of counterproductive behavior than Hispanics. These results were surprising because previous CWB studies have not reported similar findings. These results may be due in part to the fact that 65% of the student sample was Hispanic and 16% were Caucasian. This distribution is not representative of the general population of the United States. In fact, for the nationwide sample none of the participants identified themselves as Hispanic. Further research should be done to determine if this finding is indicative of the greater population.

The lack of variability of CWB ratings between demographic groups was surprising since several previous studies have found evidence of various demographics as antecedents to CWB (Lau, Au and Ho, 2003; Gruys & Sackett, 2003). In the current, study, ten different demographic variables were examined and only one differed significantly based on ratings of CWB. A possible explanation for this is the large amount of variability in CWB ratings within each group. This variability can be seen by examining the mean CWB ratings and the accompanying standard deviations for the

various demographics presented in Tables 4 and 5. For the student sample, the average standard deviation is approximately 11 with an average CWB score of 27. For the StudyResponse sample, the average standard deviation is 12, with an average CWB score of 21. This discrepancy indicates a great amount of variability in ratings within groups therefore reducing the amount of variability between groups. This variability may explain why only one demographic variable was found to differ based on ratings of CWB.

Personality has been linked to counterproductive work behaviors as part of several theoretical models (Martinko, Gundlach, & Douglas, 2002; Lau, Au and Ho, 2003) as well as a few experimental studies (Colbert, Mount, Harter, Witt, and Barrick, 2004; Mount, Ilies, & Johnson, 2006). Based on these studies, I examined the personality variables of neuroticism, conscientiousness, and negative affect in relation to the 66 different counterproductive behaviors. For the personality variable of neuroticism, results revealed that for both samples, participants who rated themselves low on neuroticism had more occurrences of counterproductive work behaviors than participants who rated themselves high on neuroticism. For the student sample, participants who rated themselves low on conscientiousness had more occurrences of counterproductive work behaviors compared to participants who rated themselves high on conscientiousness. For the StudyResponse sample, the occurrence of CWBs did not differ between participants with ratings of high or low conscientiousness. For both samples, results revealed no differences in the occurrence of CWBs for participants with either low or high ratings of negative affect.

These findings suggest that there is a relationship between conscientiousness, neuroticism and counterproductive work behaviors. Specifically, those with low

neuroticism may be more likely to engage in counterproductive behaviors. Although this result is counterintuitive to most, it is similar to the results found by Colbert, Mount, Harter, Witt and Barrick (2004). They found that individuals high in neuroticism who held positive perceptions of the developmental environment exhibited lower levels of withholding effort compared to those low in neuroticism. These results indicate that there may be other variables such as positive work environment or job satisfaction that can counteract the generally negative effects of high neuroticism. Although we were not able to examine additional variables in the present study, this is a possible explanation for our findings. Clearly neuroticism has a complicated relationship with counterproductive behavior and therefore further research should be done to clarify how neuroticism affects the occurrence of CWB and how other variables may play a role in altering this relationship.

For the student sample, individuals low on conscientiousness had more occurrences of counterproductive work behavior than those high in conscientiousness. Previous researchers have had similar results. Mount, Ilies, & Johnson (2006) and Colbert, Mount, Harter, Witt, and Barrick (2004) both found that low conscientiousness was positively related to the occurrence of CWBs.

Although previous studies have found a strong relationship between conscientiousness and negative workplace behaviors, I did not obtain the same results in both of my samples. For the study response sample, there was no difference in ratings of CWBs for those with low vs. high levels of conscientiousness. This result could be due to the low admission rates for both groups in the study response sample. The study response sample reported less overall CWBs than the student sample, although the two samples did

not differ in their average conscientiousness scores. For the study response group, whether or not the participants reported low levels of conscientiousness, they were either not willing to admit to counterproductive behavior or perhaps were not engaging in such behavior.

In addition to performing t-tests for personality variables, hierarchical regression analysis was performed on both samples to examine the amount of variability in counterproductive work behavior that is due to personality and demographics. For the student sample, demographics explained 3% of the variance in counterproductive behavior, whereas personality explained an additional 3% of the variance after controlling for demographics. For the StudyResponse sample, demographics accounted for 11% of the variance in counterproductive behavior, whereas personality explained an additional 4% of the variance when controlling for demographics.

More specifically, for the student sample, both neuroticism and conscientiousness negatively predicted counterproductive behavior, whereas negative affect had no relationship with CWB. For the study response sample, only neuroticism was significantly negatively related to CWB, whereas the other two personality variables had no relationship with CWB. This is congruent with the results of the t-tests that demonstrated a similar pattern of results. For this study, neuroticism has been consistently negatively related to CWB and appears to be a good predictor of CWB for both samples. Conscientiousness has been negatively related to CWB and is predictive of CWB, but only for the student sample.

After exploring the antecedents of CWB, I assessed the base rates of 66 different behaviors for both a student sample and a nationwide sample of working adults. There

were 15 base rates greater than zero for the student sample and 7 base rates greater than zero for the nationwide sample. Surprisingly, 34% of the students and 41% of the nationwide sample indicated they would spend time on the internet for reasons not related to work. In addition, 33% of the students and 25% of the nationwide sample admitted they would use email for personal purposes.

These results underscore our growing dependence on technology and specifically the internet. For both students and working adults, the use of the internet and email in the workplace is a common activity. The widespread use of the internet is likely due to the rapidly increasing use of technology in the workplace and our reliance on email as a primary form of communication. The internet can easily be abused in the workplace and many companies are trying to tackle this issue with increased security measures and by putting limitations on the accessibility of certain websites. The findings of this study highlight the need to monitor internet use in the workplace to insure that it is work appropriate.

Previous researchers have found that theft is a frequently occurring deviant behavior. The results of this study provide some support for these previous findings. Hollinger and Clark (1983) found a 28% theft rate for the manufacturing industry, a 33% theft rate for hospitals and a 35% theft rate for the retail industry.

Slora (1989) found that 62% of respondents in the fast food industry admitted to cash/property theft and 52% admitted to theft support. In addition, for the supermarket industry, 43% admitted to cash/property theft, and 39% were involved in theft support.

Comparatively, for the current study, 25% of the student sample admitted that they would give away goods or services for free, and 15% admitted that they would take

office supplies from the company. For the studyresponse sample, 17% admitted that they would give away goods or services for free. Although the theft base rates for this study were not as high as some previously found, they still indicate that theft is a frequently occurring problem. This discrepancy may be due to the fact that previous theft researchers have targeted specific industries believed to be prone to high levels of theft. For the current study, behaviors were examined across a wide variety of industries; this may explain why the base rates were not as high as some previously reported.

Although previous researchers have focused a lot of attention on fraud, deception, and sabotage, these behaviors were not among the most frequently occurring behaviors in this study. The most frequently occurring behaviors for both samples were those that wasted company resources, such as making personal photocopies at work, and those that wasted company time, such as conducting personal business during work time.

Slora (1989) found similar results for both the fast food and supermarket industries. For the fast food industry, 78% of respondents admitted to some form of time theft such as tardiness or unexcused absences and 35% admitted to engaging in other deviant behaviors such as not reporting wasted company materials. For the supermarket industry, 77% admitted to time theft and 29% reported engaging in other deviant behaviors. These results in addition to those of the current study demonstrate that wasting company time and wasting company resources are two common problems in organizations that should be given the necessary attention.

After examining the behaviors individually, I combined the behaviors so they could be examined at the dimension level. This resulted in only one of the dimensions, "Misuse of Time and Resources" having a positive base rate for the student sample. This

finding complimented the individual results, as this dimension comprised the most highly rated behaviors.

Lastly, the 11 dimensions of counterproductive work behavior were each compared to the three personality variables to determine if there were any differences in the occurrence of the CWB dimensions for high vs. low personality characteristics. This was done for both the student sample and the StudyResponse sample.

For the student sample, participants who rated themselves low on conscientiousness had more occurrences of theft, destruction of property, misuse of information, misuse of time and resources, and poor attendance compared to participants who rated themselves high on conscientiousness. For both neuroticism and negative affect there were no significant differences on any of the CWB dimensions.

For the StudyResponse sample, participants who rated themselves low on conscientiousness had higher occurrences of poor attendance than those who rated high on conscientiousness. For both neuroticism and negative affect there were no significant differences on the CWB dimensions.

These results are interesting in that they provide a different perspective of the relationship between personality and CWB than when I compared the total CWB rating to the different personality variables. This indicates that there is a difference in the relationship between personality variables and CWB depending on how you are measuring the behaviors. The behaviors when measured as one construct had stronger relationships with neuroticism than conscientiousness. But when compared separately by dimension, conscientiousness had a stronger relationship with CWB. This indicates that not only how you choose to measure CWB will make a difference in your results but the

particular behaviors you choose to measure will affect your results as well. This suggests that researchers should be using not only a global measure of CWB but as many individual facets as possible.

In general, these results provide insight into the frequency of counterproductive behaviors as well as their relationship to personality variables and demographics. They suggest that employers need to monitor internet usage as well as those employees that exhibit low conscientiousness and neuroticism. Measures of personality are an invaluable tool for employers to assess the quality of their potential employees and can be used as indicators of future potentially deviant behaviors. Moreover, continued research into the frequency and possible antecedents of counterproductive behavior will be advantageous to both researchers and organizations. Although the majority of organizations are affected by counterproductive behavior, many are not aware of the magnitude or causes of these behaviors. With organizations becoming increasingly decentralized, employees are required to be more autonomous. But a consequence of this growing autonomy is an ability to take advantage of the resources of an organization. Employers need to better understand the frequency of counterproductive behaviors in order to effectively monitor their occurrence.

Limitations

This study has a few limitations that should be addressed. First, the study was done online for both samples. This may have affected the number of people responding accurately. Responding to a survey online reduces the participants' accountability, which could in turn have resulted in lower base rates. In addition, both groups were assured

complete anonymity. This was designed to reduce socially desirable responding, but it could also lead individuals to be less attentive in their responding.

Secondly, although the RRT method has been shown to produce higher admission rates than a traditional self-report, it is not without its flaws. Most people are unfamiliar with the technique and its purpose. Every effort was made to clearly explain the technique but individuals may have been unclear on the necessity of tossing the coin and marking the box regardless of their actual behavior. Future researchers should employ both the RRT and the traditional self-report method in the same study in order to compare the results of both methods.

Conclusion

In summary, the results of this study provide fruitful avenues for future research in the area of counterproductive work behavior. Future research should examine the relationship between neuroticism, conscientiousness and counterproductive behaviors to clearly establish how one may influence the other and what other variables might be involved. Employers and researchers can only benefit from further insight into the antecedents of deviant behaviors. In addition, researchers should continue to establish a comprehensive framework of the base rates of CWBs. Again, this will help both researchers and employers to better understand this wide array of behaviors. This study adds new insight into the area of CWB and proposes some new questions to investigate. Through continued research, we can develop a more complete picture of these behaviors.

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Appendix A

Dimensions of Counterproductive Work Behavior (Gruys and Sackett, 2003)

Theft and Related Behavior

1. Help another person or advise them how to take company property or merchandise

2. Take cash or property belonging to the company

3. Misuse business expense account

4. Take cash or property belonging to a coworker

5. Take office supplies from the company

6. Take petty cash from the company

7. Take cash or property belonging to a customer

8. Give away goods or services for free

9. Provide goods or services at less than the price established by the company

10. Misuse employee discount privileges

Destruction of Property

11. Deface, damage, or destroy property belonging to a coworker

12. Deface, damage, or destroy property belonging to a customer

13. Deface, damage, or destroy property, or equipment belonging to the company

14. Deliberately sabotage the production of products in the company

Misuse of Information

15. Destroy or falsify company records or documents

16. Discuss confidential matters with unauthorized persons in or outside of the company.

17. Intentionally fail to give a supervisor or coworker necessary information

18. Provide a company with false information to obtain a job (i.e. education/experience)

19. Lie to employer or supervisor to cover up a mistake

Misuse of Time and Resources

20. Conduct personal business during work time

21. Spend time on the internet for reasons not related to work

22. Take a long lunch or coffee break without approval

23. Waste time on the job

24. Waste company resources

25. Use company resources you aren't authorized to use

26. Make personal long distance calls at work

27. Mail personal packages at work

28. Make personal photocopies at work

29. Use email for personal purposes

30. Play computer games during work time

31. Alter time card to get paid for more hours than you worked

32. Work unnecessary overtime

Unsafe Behavior

33. Endanger yourself by not following safety procedures

34. Endanger coworkers by not following safety procedures

35. Endanger customers by not following safety procedures

36. Fail to read the manual outlining safety procedures

Poor Attendance

37. Be absent from work without a legitimate excuse

38. Intentionally come to work late

39. Use sick leave when not really sick

40. Leave work early without permission

41. Miss work without calling in

Poor Quality Work

42. Intentionally perform your job below acceptable standards

43. Intentionally do work poorly or incorrectly

44. Intentionally do slow or sloppy work

Alcohol Use

45. Come to work under the influence of alcohol

46. Have your performance affected due to a hangover from alcohol

47. Engage in alcohol consumption on the job

Drug Use

48. Engage in drug use on the job

49. Come to work under the influence of drugs

50. Possess or sell drugs on company property

51. Have your performance affected due to a hangover from drugs

Inappropriate Verbal Actions

52. Argue or fight with a coworker

53. Yell or shout on the job

54. Verbally abuse a customer

55. Verbally abuse a coworker

56. Verbally abuse a supervisor

57. Use sexually explicit language in the workplace

58. Argue or fight with a supervisor

59. Argue or fight with a customer

Inappropriate Physical Actions

60. Physically attack (i.e. pushing. shoving, hitting) a coworker

61. Physically attack (i.e. pushing, shoving, hitting) a customer

62. Physically attack (i.e. pushing, shoving, hitting) a supervisor

63. Make unwanted sexual advances toward a subordinate

64. Make unwanted sexual advances toward a supervisor

65. Make unwanted sexual advances toward a coworker

66. Make unwanted sexual advances toward a customer

Demographics Questionnaire for Student Sample

Please indicate the appropriate answer:

1. Age:

   18-20:___ 21-23:___ 24-26:___ 26+:___

2. Gender:

   Male: ____   Female: ____

3. Ethnicity:

   Caucasian: ____African American: ____ Hispanic: ____ Asian: ____Other: ____

4. How many years of total work experience do you have?

   Less than 6 months: __ Less than 1 year: ___ Less than 5 years: __

   More than 5 years: __

5. How long have you been employed in your current job:

   Not currently employed___ Less than 6 months: ___Less than 1 year: __

   Less than 5 years: __ More than 5 years: __

6. If not currently employed, how long were you employed at your last job:

   Less than 6 months: __ Less than 1 year: __ Less than 5 years: __

   More than 5 years: ___

7. In general, how do you receive your wages?

   Hourly: ____ Salary: ____

8. In general, does your job require manual labor?

   Yes: ____ No: ____

9. In which industry are you currently employed?

Retail (stores, malls) _____

Service (restaurants, bars, customer service) _____

Hospitality (hotels, tourism) _____

Sales (products, telephone sales) _____

Healthcare (nurse, administrator, technician) _____

Manufacturing (production, distribution) _____

Clerical (administration, support) _____

Education (teacher, administrator) _____

Other ____ please specify _____

10. What is your current level of education?

Undergraduate:

1st year ____

2nd year____

3rd year ____

4th year ____

More than 4 years____

Other: _____ please specify _____

Demographics Questionnaire for StudyResponse Sample

Please indicate the appropriate answer:

1. Age:

   18-26:___ 27-35:___ 36-44:___ 45+:___

2. Gender:

   Male: ____   Female: ____

3. Ethnicity:

   Caucasian: ____African American: ____ Hispanic: ____ Asian: ____Other: ____

4. How many years of total work experience do you have?

   Less than 1 year: __ Less than 5 years: ___ More than 5 years: __

   More than 10 years: __

5. How long have you been employed in your current job:

   Not currently employed___ Less than 6 months: ___Less than 1 year: __

   Less than 5 years: __ More than 5 years: __

6. If not currently employed, how long were you employed at your last job:

   Less than 6 months: __ Less than 1 year: __ Less than 5 years: __

   More than 5 years: ___

7. In general, how do you receive your wages?

   Hourly: ____ Salary: ____

8. In general, does your job require manual labor?

   Yes: ____ No: ____

9. In which industry are you currently employed?

Retail (stores, malls) _____

Service (restaurants, bars, customer service) _____

Hospitality (hotels, tourism) _____

Sales (products, telephone sales) _____

Healthcare (nurse, administrator, technician) _____

Manufacturing (production, distribution) _____

Clerical (administrator, support) _____

Education (teacher, administrator) _____

Other ____ please specify _____

10. What is the highest level of education that you have completed?

High School: _____

Associates: _____

Bachelors: ____

Masters: ____

Doctorate: ____

Appendix D

Neuroticism Scale

Instructions: Please use the rating scale below to indicate how accurately each statement describes you. Circle the number that corresponds with your rating.

Very Accurate =1
Moderately Accurate =2
Neither Inaccurate nor Accurate =3
Moderately Inaccurate =4
Very Inaccurate =5

I often feel blue	1	2	3	4	5
I rarely get irritated	1	2	3	4	5
I dislike myself	1	2	3	4	5
I seldom feel blue	1	2	3	4	5
I am often down in the dumps	1	2	3	4	5
I feel comfortable with myself	1	2	3	4	5
I have frequent mood swings	1	2	3	4	5
I am not easily bothered by things	1	2	3	4	5
I panic easily	1	2	3	4	5
I am very pleased with myself	1	2	3	4	5

Appendix E

Conscientiousness Scale

Instructions: Please use the rating scale below to indicate how accurately each statement describes you. Circle the number that corresponds with your rating.

Very Accurate =1
Moderately Accurate =2
Neither Inaccurate nor Accurate =3
Moderately Inaccurate =4
Very Inaccurate =5

I am always prepared	1	2	3	4	5
I waste my time	1	2	3	4	5
I pay attention to details	1	2	3	4	5
I find it difficult to get down to work	1	2	3	4	5
I get chores done right away	1	2	3	4	5
I do just enough to get by	1	2	3	4	5
I carry out my plans	1	2	3	4	5
I don't see things through	1	2	3	4	5
I make plans and stick to them	1	2	3	4	5
I avoid my duties	1	2	3	4	5

Negative Affect

Instructions: This questionnaire consists of a number of words that describe different emotions. Read each item and then indicate to what extent you have felt this way during the past few weeks.

Not at all = 1
A Little = 2
Moderately = 3
Quite a bit = 4
Extremely = 5

Distressed	1	2	3	4	5
Upset	1	2	3	4	5
Guilty	1	2	3	4	5
Scared	1	2	3	4	5
Hostile	1	2	3	4	5
Irritable	1	2	3	4	5
Ashamed	1	2	3	4	5
Nervous	1	2	3	4	5
Jittery	1	2	3	4	5
Afraid	1	2	3	4	5

Table 1
Means, Standard Deviations, and Intercorrelations for Student Sample

Variable	Mean	SD	1	2	3	4
1. Neuroticism	23.12	5.94	1.00			
2. Conscientiousness	37.20	6.57	-.396**	1.00		
3. Negative Affect	19.19	6.56	.601**	-.319**	1.00	
4. CWB person total	27.85	11.29	-.066	-.132**	-.037	1.00

* Correlation is significant at the .05 level (2-tailed).
** Correlation is significant at the .01 level (2-tailed).

Table 2
Means, Standard Deviations, and Intercorrelations for StudyResponse Sample

Variable	Mean	SD	1	2	3	4
1. Neuroticism	24.05	7.62	1.00			
2. Conscientiousness	37.83	6.65	-.333**	1.00		
3. Negative Affect	17.78	7.33	.646**	-.375**	1.00	
4. CWB person total	21.48	12.01	-.158*	.075	.005	1.00

* Correlation is significant at the .05 level (2-tailed).
** Correlation is significant at the .01 level (2-tailed).

Table 3
T-test Comparisons for Both Samples for all Relevant Independent Variables

Variable	Student Sample (N=492) Mean/SD	StudyResponse Sample (N=149) Mean/SD	t-value	d
Age	1.49 (.79)	2.77 (1.1)		
Gender	1.76 (.43)	1.58 (.50)	4.02**	.39
Ethnicity	2.73 (.97)	1.64 (1.3)	9.60**	.95
Experience	2.88 (.84)	3.64 (.77)		
Tenure	2.64 (1.3)	3.81 (1.2)	-10.25**	-.94
Old Job	.97 (1.2)	1.19 (1.6)	-1.52	
Wage	1.12 (.33)	1.58 (.50)	-10.54**	-1.09
Labor	1.58 (.49)	1.69 (.46)	-2.45*	-.23
Industry	3.70 (2.7)	4.93 (2.3)	-5.51**	-.49
Education	2.21 (1.2)	2.30 (1.2)		
Conscientiousness	37.20 (6.6)	37.83 (6.7)	-1.02	
Neuroticism	23.12 (5.9)	24.05 (7.6)	-1.36	
Negative Affect	19.19 (6.6)	17.78 (7.3)	2.23*	.20

* t significant at p < .05, ** t significant at p < .001

Table 4

Mean CWB Ratings across Demographic Characteristics for Student Sample

Variable		N	%	Mean CWB Rating	SD
Age	18-20	319	64.8	28.05	11.1
	21-23	128	26.0	28.20	11.2
	24-26	22	4.5	25.95	11.9
	26+	23	4.7	24.87	13.5
Gender	Male	119	24.2	29.42	11.2
	Female	373	75.8	27.35	11.3
Ethnicity	Caucasian	79	16.1	30.66	8.9
	African American	49	10.0	25.86	12.7
	Hispanic	321	65.2	27.25	11.7
	Asian	14	2.8	28.71	11.6
	Other	29	5.9	29.82	8.9
Experience	less than 6 months	44	8.9	28.46	10.9
	less than 1 year	74	15.0	27.16	11.9
	less than 5 years	271	55.1	27.52	11.5
	more than 5 years	103	20.9	28.95	10.5
Tenure	not employed	140	28.5	27.47	11.7
	less than 6 months	84	17.1	28.19	10.9
	less than 1 year	103	20.9	28.77	9.7
	less than 5 years	145	29.5	27.86	12.0
	more than 5 years	20	4.1	24.25	12.9
Old Job	currently employed	255	51.8	28.52	11.2
	less than 6 months	87	17.7	27.15	11.5
	less than 1 year	64	13.0	27.02	12.1
	less than 5 years	82	16.7	27.35	10.7
	more than 5 years	4	.8	24.00	13.4
Wage	Hourly	432	87.8	27.72	11.5
	Salary	60	12.2	28.82	9.8
Labour	Yes	205	41.7	28.43	11.2
	No	287	58.3	27.44	11.3
Industry	Retail	141	28.7	28.69	10.1
	service	108	22.0	29.36	10.6
	hospitality	16	3.3	20.13	13.1
	sales	50	10.2	27.02	12.6
	healthcare	48	9.8	27.29	12.1
	manufacturing	22	4.5	27.36	9.5
	clerical	41	8.3	25.56	12.5
	education	40	8.1	26.88	13.2
	other	26	5.3	29.92	9.7
Education	1st year	184	37.4	27.92	10.8
	2nd year	113	23.0	27.70	11.9
	3rd year	118	24.0	26.64	11.9
	4th year	61	12.4	28.62	10.9
	more than 4 years	16	3.3	34.06	5.5

Table 5

Mean CWB Ratings across Demographic Characteristics for StudyResponse Sample

Variable		N	%	Mean CWB Rating	SD
Age	18-26	21	14.1	21.43	11.2
	27-35	43	28.9	23.09	10.9
	36-44	35	23.5	21.03	12.9
	45+	50	33.6	20.44	12.7
Gender	Male	63	42.3	22.38	12.3
	Female	86	57.7	20.82	11.8
Ethnicity	Caucasian	115	77.2	22.23	11.9
	African American	6	4.0	18.17	11.9
	Hispanic	0	0	--	--
	Asian	22	14.8	19.23	12.7
	Other	6	4.0	18.67	11.9
Experience	less than 1 year	5	3.4	20.80	11.2
	less than 5 yrs	12	8.1	22.50	10.9
	more than 5 yrs	15	10.1	21.53	11.8
	more than 10 yrs	117	78.5	21.40	12.3
Tenure	not employed	12	8.1	12.83	7.2
	less than 6 months	12	8.1	20.17	10.9
	less than 1 year	17	11.4	21.76	9.5
	less than 5 years	59	39.6	22.24	11.7
	more than 5 years	49	32.9	22.92	13.7
Old Job	currently employed	93	62.4	23.44	12.2
	less than 6 months	5	3.4	18.80	10.8
	less than 1 year	3	2.0	20.00	3.0
	less than 5 years	26	17.4	18.81	12.5
	more than 5 years	22	14.8	17.18	10.5
Wage	Hourly	63	42.3	20.46	10.7
	Salary	86	57.7	22.23	12.8
Labour	Yes	46	30.9	18.67	10.3
	No	103	69.1	22.73	12.5
Industry	Retail	16	10.7	22.19	9.7
	service	19	12.8	19.53	12.3
	hospitality	9	6.0	23.00	15.8
	sales	11	7.4	22.09	14.3
	healthcare	22	14.8	23.00	10.9
	manufacturing	24	16.1	26.58	12.6
	clerical	29	19.5	18.76	10.9
	education	19	12.8	17.74	11.3
	other	0	0	--	--
Education	high school	55	36.9	20.52	12.1
	associates	25	16.8	22.84	11.9
	bachelors	44	29.5	23.04	12.2
	masters	20	13.4	19.00	11.3
	doctorate	5	3.4	21.40	14.0

Table 6
T-test Comparisons for Low Neuroticism and High Neuroticism on CWB

Sample	Low Neuroticism Mean/SD	High Neuroticism Mean/SD	t-value	d
Student	30.36 (9.77) N = 140	26.85 (11.71) N = 352	-3.397**	.325
StudyResponse	24.63 (12.39) N = 43	20.21 (11.67) N = 106	-2.058*	.367

* t significant at p < .05
** t significant at p < .001

Table 7
T-test Comparisons for Low and High Conscientiousness on CWB

Sample	Low Conscientiousness Mean/SD	High Conscientiousness Mean/SD	t-value	d
Student	29.56 (10.25) N = 171	26.94 (11.72) N = 321	-2.570*	.237
StudyResponse	22.14 (12.69) N = 44	21.21 (11.76) N = 105	-.429	

* t significant at p < .01

Table 8
T-test Comparisons for Low Negative Affect and High Negative Affect on CWB

Sample	Low Negative Affect Mean/SD	High Negative Affect Mean/SD	t-value
Student	28.04 (10.62) N = 292	27.57 (12.22) N = 200	-.450
StudyResponse	21.63 (11.90) N = 103	21.15 (12.37) N = 46	-.224

Table 9

Hierarchical Regression Analyses for Variables Predicting CWB in Both Samples

Variable	Student Sample		StudyResponse	
	Step 1 β	Step 2 β	Step 1 β	Step 2 β
Age	-.13*	-.10	-.09	-.14
Gender	-.08	-.05	-.10	-.08
Ethnicity	-.03	-.04	-.14	-.14
Experience	.06	.05	-.01	-.02
Tenure	-.06	-.05	.14	.11
Old Job	-.08	-.07	-.14	-.13
Wage	.04	.03	.05	.03
Labour	-.03	-.03	.14	.14
Industry	-.04	-.03	-.08	-.09
Education	.11	.12*	-.03	-.03
Neuroticism		-.12*		-.24*
Conscientiousness		-.18**		.07
Negative Affect		-.02		.15
R^2	.03	.06	.11	.15
F-Test		2.19**		1.84*
ΔR^2		.03		.04

Student sample: N = 492, StudyResponse sample: N= 149, * $p < .05$, ** $p < .01$

Table 10

Base Rates for Student Sample

Behavior (N=492)	# of Admissions (n=246)	Base Rate (# of admissions-246)/246
Spend time on the internet for reasons not related to work	330	.34
Make personal photocopies at work	330	.34
Use email for personal purposes	328	.33
Use sick leave when not really sick	322	.31
Give away goods or services for free	308	.25
Conduct personal business during work time	294	.20
Take office supplies from the company	283	.15
Waste time on the job	267	.09
Play computer games during work time	267	.09
Work unnecessary overtime	266	.08
Misuse employee discount privileges	264	.07
Take a long lunch or coffee break without approval	264	.07
Be absent from work without a legitimate excuse	264	.07
Provide goods or services at less than the price established by the company	257	.04
Lie to employer or supervisor to cover up a mistake	249	.01

(Only base rates greater than 0 are included in table)