Integrity, Personality, and Grit: Can Written Tests Predict Behavior?

by
Erika Marcrum

A thesis presented to the Honors College of Middle Tennessee State University in partial fulfillment of the requirements for graduation from the University Honors College

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Thesis Committee:

Dr. Mark Frame, Thesis Director

Dr. Rebekka King, Thesis Committee Chair

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APPROVED:

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Dr. Mark Frame, Thesis Director
Professor, Psychology

_____

Dr. Rebekka King, Thesis Committee Chair
Professor, Philosophy and Religious Studies

Acknowledgements

I would like to acknowledge and thank my thesis director, Dr. Mark Frame, who made this work possible. Thank you for your faith in me and patience throughout this process. This project would not have been possible without your extensive help. I would also like to thank all the I-O faculty for being so supportive and harboring a learning environment that encouraged exploring my interests. Lastly, I would like to thank Dr. James Houston for encouraging me to pursue research in I-O and helping me gain the skills I needed to succeed in this experience. My experiences at MTSU in the Honors College has pushed me to further my skills not only as a student, but also as a critical thinker, and for that I am forever grateful.

Abstract

This study measured the predictive validity of Goldberg's Integrity and Emotional Immaturity words, the HEXACO Personality Inventory, and Angela Duckworth's Grit Scale on participants changing responses on a trivia quiz that was pre-filled out by a "previous participant," to assess overall integrity with online test taking. The study's hypotheses were that the integrity, grit, and personality measures would predict how many of the answers would be changed by the participant, and that there would be correlations between the HEXACO Personality Inventory Scores and Goldberg's Integrity and Emotional Immaturity word scores. Analyses found that HEXACO personality measures (Honesty-Humility & Openness) were statistically significant predictors of changing items on the trivia test, while other measures were not significant. Analyses also found that higher scores on certain factors of the HEXACO were correlated with better scores on the integrity measure.

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Introduction

Integrity, Personality, and Grit: Can Written Tests Predict Behavior?

Psychological tests have been utilized for decades to aid in the selection process for employees. A subset of these tests, integrity tests (also called "honesty" tests), measure an employee's response to questions regarding workplace behaviors. The tests, used to detect employees thought to be "high-risk" to the organization for economic and productivity losses (Alliger, Lilienfeld, & Mitchell, 1996), seek to deter untrustworthy and dishonest applicants from moving further in the application process. The practice of conducting integrity testing has been a prominent part of pre-employment screening for entry-level positions across various industries (Scholarios & Lockyer, 1999) for the past 35 years. Before the Employee Polygraph Protection Act (EPPA) of 1988, many employers utilized polygraph testing to disqualify "dishonest" prospective employees from the applicant pool (Karren & Zacharias, 2007).

As integrity testing has developed, two sub-types of testing have been developed by researchers and organizations–overt and personality based. Overt integrity testing allows applicants to respond to how they would behave regarding undesirable workplace behaviors directly (such as absenteeism, theft, vandalism, and workplace aggression), without attempts to conceal the content from the test taker. In contrast, personality-based integrity tests seek to predict integrity through common personality measures that may indicate future behaviors (such as conscientiousness and neuroticism) (Ones et al., 1993). The commonality of these two tests is their reliance on self-report measures from applicants, which has generated discussion regarding their accuracy. This issue is

particularly relevant for overt testing, where applicants can perceive what the organization is desiring as a response.

For this study, I will be focusing on how these tests, in addition to grit and personality measures, can predict cheating in an online testing environment. Focusing on personality-based integrity items will allow the comparison of results between subjects by type of test, participant response, and demographic information. Additionally, while previous meta-analyses have found that integrity tests can be expected to be correlated at .41 when predicting job performance, however, job performance (or lack thereof) is not the same thing as integrity.

The History of Integrity Testing in the United States

At the turn of the 20th century, personality and cognitive ability tests were used by the military to recruit and assign soldiers, a process that became widespread within the private sector shortly after (United States Congress, 1990). These tests originated during recruitment for World War I and focused on the emotional stability of the soldiers, and measured general mental ability as a key predictor of job performance (Schmidt & Hunter, 2004). Using these tests within the private industry was more common during the 1930s and 40s, but decreased as polygraph testing became more widely available (Gibby & Zickar, 2008). This transition to polygraph testing was eventually seen to be problematic as challenges arose regarding the reliability and validity of polygraph testing.

The frequency of the method of integrity testing potential employees was intensified in the United States following the ban of polygraph testing for employment in most non-government occupations (Employee Polygraph Protection Act, 1988). This method was more commonly known as a "lie detector" test, a measure of a prospective

applicants' physiological responses to answering questions about their personal histories with criminal behavior, alcohol use, financial information, and employment background. According to the American Psychological Association (2004), there is no evidence physiological reactions can be uniquely identified as exclusive to being dishonest. This issue becomes particularly relevant when honest people have elevated levels of anxiety, while dishonest people may be calm in giving their responses.

The Employee Polygraph Protection act (EPPA) excluded occupations in the public sector, national security, and defense positions, and for positions related to the manufacturing or distributing of controlled substances. However, independent organizations are unable to polygraph employees except for in exceptional circumstances, such as permissions for private sector employers to use polygraph testing as part of an "on-going investigation," though not to evaluate employees prior to employment or incidents (Sensing, 1989). The fine to the employer for asking an employee who is not excluded under EPPA is high, ranging up to $25,597 (Department of Labor, 2024).

With these hefty fines in place, employers needed to combat the issue utilizing another source for testing employees' anticipated integrity in the workplace, and thus, integrity testing further developed and returned to industry. In this resurgence, personality tests such as the Big Five and HEXACO emerged and became more common for employers, in addition to overt integrity measures (Gibby & Zickar, 2008). While these tests can occur for those in professional positions, in my experience, I have found these tests to be most common for entry-level positions in retail, food service, and entertainment. In these positions, employers rely heavily on pre-employment measures in place of lived experience to determine which applicants are qualified.

History of Research on Integrity Testing

The research on integrity testing was at its height during the late 1980s and 90s, and few significant developments have occurred in the time since. One of the major questions regarding integrity testing is how time has impacted the reliability of integrity tests. The issues within integrity testing continue to get more nuanced as internet-based tests allow cheating to increase in all areas of testing (academic, workplace, and psychological). Meta-analyses have shown that in this time, the studies conducted on integrity tests found them to be mostly reliable and valid measures of integrity (Ones, et. al., 1993).

However, a recent meta-analysis (Van Iddeking, et al., 2012) discussed the concerns of lack of consistency in methodologies in the previous decades. By analyzing 104 studies, the researchers found that the mean validity for integrity tests at predicting job performance were .12, and .32 for counterproductive work behavior (theft, absenteeism, etc.). The researchers also found that the studies authored by integrity test publishers found much higher correlations with job performance (task- and contextual-performance) (.27) compared to independent researchers (.12). This implies that while researchers have found a small correlation with job performance, a large portion of the abnormally high validity correlations may be susceptible to biased researchers utilizing unethical analytical or methodological techniques to falsify results.

More recently, studies have begun to focus on relationships between integrity and personality traits, as opposed to using integrity tests alone. One of these methods is the five-factor model of personality, also called the OCEAN model, which seeks to measure personality factors of openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism. While the five-factor model is most commonly used to

measure personality traits, the HEXACO Six Factor model utilized the previous "Big Five" as well as introducing a new factor-Honesty-Humility. Previous research has found this facet to be more correlated with counterproductive workplace behavior compared to traits in the Big Five (Lee, et al., 2005; Marcus, et al., 2007), but also that the agreeableness factor in the Big Five encompasses attributes of the Honesty-Humility factor in HEXACO.

Issues in Integrity Testing

While integrity testing has been utilized for decades in a multitude of occupations, strong criticism has emerged from skeptics. Numerous articles and meta-analyses have been published in regard to the possibility of integrity tests lacking construct and content validity (Alliger & Dwight, 2000; Ones, et al., 1993; Mumford, et al., 2001). Yet, a majority of studies have not sought to measure these issues when compared to a practical application.

A large portion of this criticism comes from the assumption that respondents are "faking good" in their answers. This results in people receiving higher scores than their true integrity due to understanding the question and manipulating their response to be more socially desirable. Studies measuring "faking good" have found that subjects instructed to answer questions "as if you were applying for a job" had an 8% more favorable response on attitudes towards theft (they were more opposed to theft). One study that attempted to explain the phenomenon found that strong cognitive abilities predict the ability to fake, but higher levels of conscientiousness can predict negative attitudes towards faking (Yu, 2009). Thus, implying using covert measures that do not

directly ask questions regarding ethical behavior could indirectly help measure "faking good" qualities on overt measures.

The second common issue in integrity testing is "coaching." Coaching in the context of testing is defined as being given instructions prior to the test to allow for an advantage during the test (Alliger, et al., 1996). A simple Google search can generate dozens of webpages designed to help someone pass an integrity test. However, coached responses to earlier polygraph tests also existed (Honts, Raskin, & Kircher, 1994; Lykken, 1981). Thus, this issue is prevalent in more than just pen-and-paper integrity tests.

Another issue in integrity testing is the idea that personality measures, such as the Big Five, are often utilized for integrity testing without merit. While integrity tests have been found to correlate with certain aspects of the Big Five (Ones et al., 1993), they may not be as resistant to faking as the personality measures themselves. This question was explored in Alliger and Dwight (2000), where they found that when respondents were asked to "fake good" on personality measures, they were able to increase their scores by up to half a standard deviation, implying that personality-based integrity tests may not be immune to "faking good" after all.

The last issue in integrity testing pertains to adverse impact of screenings against minority group members, as well as the ethical concept that it is unfair to avoid hiring someone for something they have not yet done. Test publishers use their own research as arguments that adverse impact does not occur (United States Congress, 1990). In these studies, integrity tests do not violate the "four-fifths" rule, which requires minorities, on average, to be hired (or to pass the test) at a rate that is at least 80% of the rate for the

majority. However, due to the conflicts of interests in the parties conducting these studies, the certainty of impact on minority groups from these tests are unknown.

Academic Integrity in Online Coursework

Academic integrity has been an issue long before the COVID-19 pandemic, yet as more courses moved to a permanently online formatting, new issues emerged in the field of distance education. Online courses are defined as courses where "most or all of the content is delivered online" (Allen & Seaman, 2015).

One study found that undergraduate students believe academic misconduct is less serious when compared to faculty member's perceptions, yet only 18% of faculty members who suspected students of cheating reported it on campus (Williams, et al., 2012). One of the proposed solutions by Williams was to implement an academic integrity module within a university first-year experience course. However, academic cheating in the virtual environment has not been a topic of frequent research. In analyzing the online testing environment with integrity measures, I hope to see if integrity tests can potentially be used to assess students at higher risk of cheating.

Thesis Statement

This project seeks to begin to answer the question: Can integrity tests truly predict unethical and dishonest behavior in an academic setting? Utilizing a varied subject pool as well as self-report measures will allow us to gain insight into how people respond to integrity tests and academic quizzes while they are not being directly observed. By predicting potential issues in pre-employment screenings, employers can reduce workplace turnover, legal issues, and overall workplace dissatisfaction (Bernadin & Cooke, 1993; Ones, et al., 1993). Likewise, being able to measure these traits in academic settings could result in reduced cheating, misconduct, and increased retention for universities. By using the responses to the trivia test as a dependent variable, in contrast to previous longitudinal studies, we will compare the current actions of those with higher and lower integrity scores to determine if the integrity measure can predict integrity during the trivia testing scenario. Additionally, comparing integrity test scores with scores on other measures should replicate the validity for these variables found in previous studies. This approach to determining construct validity and criterion related validity will lay a framework for future research into integrity testing.

H_1: There is a negative relationship between integrity, personality, and grit test scores and cheating on the trivia test (as integrity increases, the likelihood of cheating will decrease).

H_2: There is a positive relationship between integrity test scores and scores on personality measures (as HEXACO personality scores increase, integrity test scores will also increase).

Methodology

Participants

The study was composed of multiple samples, Middle Tennessee State University's psychology subject pool (SONA), students in a junior-level psychology course, and the general university population (faculty and students) from a campus-wide email. One hundred and fifty-two (152) participants completed the survey. The data was cleaned to remove nine participants who did not meet the criteria for a complete response: missing two or more attention checking items, being unable to take the survey as they were under eighteen, and withdrawing during the consent portion. This resulted in one hundred and forty-three (143) usable responses.

Ages for participants ranged from 18 to 74 with a median age of 22. The study included 29 men, 104 women, 10 people who identified with other genders or preferred to not disclose. Ethnicities included 101 Caucasian/White, 10 African American/Black, 2 Arab/Middle Eastern, 14 Asian/Pacific Islander, 5 Hispanic/Latino, and 11 other or preferred to not disclose. 110 participants were currently employed, with 56 employed full time and 54 employed part time. 103 participants were currently enrolled in college or university. English was the native language for 135 participants. All participants were required to be fluent in English to take the survey.

Materials

Informed consent forms were provided virtually containing information about the procedure, benefits, risks, and voluntary participation. The materials used for the study included a Qualtrics survey with the HEXACO Personality Inventory, Goldberg's

Integrity and Emotional Immaturity word exercise, Duckworth's Grit, and pre-filled out trivia items.

HEXACO Personality Inventory

The HEXACO-PI is the factor-based inventory of the cross-cultural "Big Six" model (Khoo, et al., 2023). Participants respond to statements about interests and emotions as they pertain to the six factors with responses on a Likert scale of "strongly disagree," "disagree," "neutral," "agree," and "strongly agree." The facets include Honesty-Humility (e.g., "If I knew that I could never get caught, I would be willing to steal a million dollars"), Emotional Stability (e.g., "I sometimes feel that I am a worthless person"), Extraversion (e.g., "In social situations, I'm usually the one who makes the first move"), Agreeableness (e.g., "I tend to be lenient in judging other people"), Conscientiousness (e.g., "People often call me a perfectionist"), and Openness to Experience (e.g., "I find it boring to discuss philosophy"). See Appendix E for the full list of items.

Goldberg's Integrity and Emotional Immaturity Words

For this task, participants were given adjectives (e.g., "conscientious"), and asked to rate the level the item describes them on a scale of "strongly describes me," "somewhat describes me," "neutral (sometimes describes me)," "somewhat does not describe me," and "strongly does not describe me." Measures similar to this are what I have encountered when applying to jobs as an "integrity" test. See Appendix C for full list of items.

Duckworth's Grit

The grit scale used was Angela Duckworth's 10-item Grit Scale. This grit scale has been found to correlate with conscientiousness ($r = .77$, $p < .001$), a workplace trait measured in the HEXACO and is seen as desirable for employees (Duckworth, et al., 2007). The grit scale also found that students who scored one standard deviation above average were more likely to finish a rigorous summer training program (Duckworth, et al., 2007). In Rundle et al. (2023), a shortened version of Duckworth's grit scale was found to strongly correlate with students' reasons for not participating in "contract cheating," or paying others to complete work for them. However, perseverance of effort on the grit-subscale also predicted motivation for learning, the academic environment, and self-efficacy as reasons for not cheating (Rundle, et. al., 2023). See Appendix E for full items.

Attention Checking Items

Attention checking items are placed throughout each of the measures. These questions inform participants of the item to select as proof they are paying attention. These items were used to filter out unreliable responses from the data set.

Trivia Items Changed

To assess integrity during an un-proctored online testing environment, participants were presented with a series of general trivia items (e.g., "How many states are in the United States of America?") and asked to answer them. Many of the items were set to display responses from a "previous participant." Some of the previous responses were correct and some were incorrect. Participants could either accept the responses by doing nothing and moving on to the next item or they could enter their own response. A

score for the Trivia Items Changed (TIC) was calculated by determining if a participant changed the incorrect pre-filled trivia item or if the participant viewed the item but changed nothing. See Appendix F for full list of trivia items and pre-filled responses.

Procedure

Data was collecting following approval from MTSU's Institutional Review Board. Participants signed up through the SONA system, received access to the survey through their psychology class, or were emailed details about the study with a link to the survey. Participants then were given informed consent forms, which detailed the purpose of the study, description, duration, compensation, as well as risks and benefits of participating.

The first task was to fill out the personality measures (HEXACO), followed by the integrity measure (Goldberg's). The next step was the Duckworth's Grit measure. Next, the participants were given a "unique participant ID" to enter in the field below. The field was pre-filled with a different ID number, to imply to participants the survey had saved data from previous subjects. Following the entry of the number, the participants moved on to the trivia and IQ tasks. At the end of the study, participants were surveyed on research engagement, demographic information, and if they believed their answers to be honest and should be included in the analysis. Lastly, participants were taken to a debriefing page to explain what happened during the study.

Results

Descriptive Statistics

Descriptive statistics for Trivia Items Changed (TIC), Duckworth grit scores, Goldberg's integrity scores, and each of the HEXACO facets are shown in Table 1. Due to the inability to measure if participants changed correct answers, they were excluded from the analysis. On average, participants changed nine of the fourteen items assessed. Participants were also found to have higher scores in conscientiousness, openness, honesty-humility, and emotional stability when compared to the other facets of the HEXACO. Lastly, there was higher levels of variation between scores for extraversion compared to the other factors.

Table 1 - Descriptive Statistics.

	n	Mean	SD
TIC	143	9.31	3.80
Grit	142	3.44	0.72
Goldberg's*	143	2.06	0.67
Honesty-Humility	143	3.56	0.74
Emotional Stability	143	3.47	0.71
Extraversion	143	3.09	0.80
Agreeableness	143	3.13	0.65
Conscientiousness	143	3.82	0.63
Openness	143	3.57	0.69

**Lower scores indicate higher levels of self-rated integrity*

Linear Regression

A regression analysis for TIC was conducted for Duckworth's Grit, Goldberg's Integrity, and the HEXACO variables of Honesty-Humility, Emotional Stability, Extraversion, Agreeableness, Conscientiousness, and Openness. The Alpha level for all statistical tests was .05. Duckworth's Grit Scale was found to not be statistically significant at predicting changing items on the trivia measure, $F(1, 140) = 1.05$, $p = .307$, nor was Goldberg's Integrity words measure, $F(1, 142) = 1.49$, $p = .224$.

For the HEXACO variables, Emotional Stability was not found to be a statistically significant predictor of TIC, $F(1, 141) = 0.11$, $p = .743$, nor was Extraversion, $F(1, 141) = 0.65$, $p = .421$, Agreeableness, $F(1, 141) = 1.47$, $p = .223$, or Conscientiousness, $F(1, 141) = 2.31$, $p = .131$. However, Honesty-Humility was found to be a statistically significant predictor of TIC, $F(1, 141) = 5.45$, $p = .021$, as was Openness, $F(1, 141) = 11.52$, $p = .001$.

Multiple Regression

A multiple regression analysis was conducted to predict TIC for the HEXACO variables-Honesty-Humility, Emotional Stability, Extraversion, Agreeableness, Conscientiousness, and Openness. This resulted in a significant model, $F(6, 136) = 3.12$, $p = .007$. The individual predictors were evaluated further and indicated that Openness was a significant predictor ($t = 3.149$, $p = .002$), while Honesty-Humility ($t = 1.565$, $p = .120$), Emotional Stability ($t = -0.277$, $p = .782$), Extraversion ($t = -1.189$, $p = .237$), Agreeableness ($t = 0.568$, $p = .571$), and Conscientiousness ($t = 0.969$, $p = .334$) were not significant predictors of TIC.

A stepwise linear regression analysis was conducted for the six HEXACO variables to identify potential predictors of the outcome of TIC. At each step, variables were chosen based on a p-values and a p-value threshold of 0.1 was used to set a limit on the total number of variables included in the final model. The final model included the variables of Openness ($t = 3.30$) and Honesty-Humility ($t = 2.22$). This model was found to be statistically significant ($p < .001$).

Correlations

Pearson correlations for Goldberg's Integrity and HEXACO personality scores can be found in Table 2. Goldberg's Integrity score was correlated with HEXACO variables Honesty-Humility, Extraversion, Agreeableness, and Conscientiousness.

Table 2 – Correlations

	Honesty-Humility	Emotional Stability	Extraversion	Agreeableness	Conscientiousness	Openness	Goldberg's Integrity
Honesty-Humility	1	-.127	.117	.340*	.315*	.059	-.395*
Emotional Stability		1	-.316*	-.130	.025	-.053	.095
Extraversion			1	.105	.135	-.026	-.350*
Agreeableness				1	-.046	.061	-.272*
Conscientiousness					1	.055	-.530*
Openness						1	-.042
Goldberg's Integrity							1

**indicates a significant correlation at p = 0.01*

Discussion

Hypothesis 1: There is a negative relationship between integrity, personality, and grit test scores and cheating on the trivia test (as integrity increases, the likelihood of cheating will decrease).

This study did not find significant differences between better scores on the integrity or grit measures and the amount of pre-filled trivia items changed. However, the results did show a relationship between HEXACO Openness and Honesty-Humility scores with answering more trivia items.

Honesty-Humility was found to be correlated overt-integrity and ethical decision making in previous studies (Lee, et al., 2007; Marcus et al., 2005), however, this relationship was not found in prior research for Openness to Experience, which was found to be the strongest predictor of participants changing more responses on the trivia quiz. Openness to experience was operationally defined by Hakimi et al. (2011) as reflecting "an individual's broad-mindedness, depth of attitude, and penetrable awareness."

Hypothesis 2: There is a positive relationship between integrity test scores and scores on personality measures (as HEXACO personality scores increase, integrity test scores will also increase).

There were moderate correlations between scores on Goldberg's integrity scores and several traits of the HEXACO, consistent with previous findings that personality measures are correlated to integrity tests (Ones, et al., 1993). In Ones, et al. (1993),

researchers found that personality-based integrity tests were more accurate at predicting job performance when compared to overt integrity measures.

Both hypotheses support these previous findings, however, they do not align with the results of Marcus et al. (2013), which found that personality tests do not "add" anything to the results of integrity tests. While the integrity tests were less accurate at predicting integrity in using the already answered trivia items, personality factors of Honesty-Humility and Openness were more accurate, despite only Honesty-Humility being correlated with Goldberg's Integrity measure.

Future Research & Limitations

Openness to experience (as well as Honesty-Humility and Emotionality) have been associated with higher university-level academic achievement in previous studies (Jia, et al., 2022), which could explain higher accuracy at trivia and thus more questions changed to be correct. One limitation of this study is that we did not measure accuracy, instead focusing on if the participants tried to answer the question on their own. Future research could explore if openness predicts integrity, or simply predicts higher levels of achievement.

During data collection for the study, I received emails from numerous individuals informing me that the survey was showing a previous participant's answers trying to warn me to save my research. Due to the anonymity of the data collection, I was unable to connect the emails with participant IDs, but future research could explore the differences between people simply changing answers and those who actively contact the researcher to inform them of errors.

Lastly, another limitation of this study was the reliance on unmonitored self-report data. While we know if participants changed their answers, we were unable to tell if they were behaving unethically in other ways, such as looking up answers on another device. Future research could explore the differences between in-person and online integrity and the different factors of the HEXACO.

List of Appendices

Appendix A

Institutional Review Board Approval Letter

Date: February 22, 2024

PI: Erika Allen

Department: Middle Tennessee State University, Psychology

Re: Initial - IRB-FY2023-162

Trivia quizzes and grit

The Middle Tennessee State University Institutional Review Board has rendered the decision below for the above referenced study.

Decision: Exempt

Category: Category 2.(i). Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording) if at least one of the following criteria is met:
The information obtained is recorded by the investigator in such a manner that the identity of the human subjects cannot readily be ascertained, directly or through identifiers linked to the subjects;

Findings:

Research Notes:

Please note that even though your proposed study is deemed exempt from further IRBreview, the following apply to your approved study:

1. In accordance with 45 CFR 46.110, expiration dates do not apply to research eligible for Exempt Review under the Common Rule, and continuing review is not required by the IRB.
2. Any unanticipated harm to participants or adverse events must be reported to the Office of Compliance.
3. All modifications to the approved study must be submitted for review through Cayuse IRB for approval before their implementation. Adding new researchers constitutes a modification to the protocol. Per MTSU Policy, a researcher is defined as anyone who handles the data or interacts with participants. Everyone meeting this definition for this project must have completed the required CITI training and received IRB approval prior to becoming actively involved in the project.
4. Closure of the study must be submitted within Cayuse when the study ends or when personal identifiers are removed from the data and all codes and keys are destroyed.
5. All research materials must be retained by the PI for at least three (3) years after study completion and then destroyed in a manner that maintains confidentiality and anonymity.

Sincerely,
The Middle Tennessee State University Institutional Review Board

Appendix B

Demographic Questionnaire

Are you currently employed?

Current Employment Status

Please indicate the number of years you have been employed full time (40+ hours a week), **even if you are currently unemployed**

Please indicate the number of years you have been employed part time (less than 40 hours a week), **even if you are currently unemployed**

How many hours per week do you work?

What is your current age (in years)?

What is the last degree you obtained?

Are you currently enrolled at a college or university?

What is your current level in college?

What is your current major(s)?

What is your race/ethnic identity?

Please select the group that best describes you.

Is English your native language?

What is your current marital status?

Please indicate which gender you identify with most.

Which of the following best describes your sexual orientation?

Appendix C

Goldberg's Integrity and Emotional Immaturity – Words

	Strongly describes me	Somewhat describes me	Neutral (Sometimes describes me)	Somewhat does not describe me	Strongly does not describe me
Considerate					
Bright					
Efficient					
Conscientious					
Careful					
Pleasant					
Undependendable					
Unintelligent					
Unkind					
Inefficient					
Rude					
Impractical					
Moody					
Nervous					
Inconsistent					
Careless					

Appendix D

HEXACO Items

1 _____ I would be quite bored by a visit to an art gallery.
2 _____ I plan ahead and organize things, to avoid scrambling at the last minute.
3 _____ I rarely hold a grudge, even against people who have badly wronged me.
4 _____ I feel reasonably satisfied with myself overall.
5 _____ I would feel afraid if I had to travel in bad weather conditions.
6 _____ I wouldn't use flattery to get a raise or promotion at work, even if I thought it would
7 _____ I'm interested in learning about the history and politics of other countries.
8 _____ I often push myself very hard when trying to achieve a goal.
9 _____ People sometimes tell me that I am too critical of others.
10 _____ I rarely express my opinions in group meetings.
11 _____ I sometimes can't help worrying about little things.
12 _____ If I knew that I could never get caught, I would be willing to steal a million dollars.
13 _____ I would enjoy creating a work of art, such as a novel, a song, or a painting.
14 _____ When working on something, I don't pay much attention to small details.
15 _____ People sometimes tell me that I'm too stubborn.
16 _____ I prefer jobs that involve active social interaction to those that involve working alone.
17 _____ When I suffer from a painful experience, I need someone to make me feel comfortable.
18 _____ Having a lot of money is not especially important to me.
19 _____ I think that paying attention to radical ideas is a waste of time.
20 _____ I make decisions based on the feeling of the moment rather than on careful thought.
21 _____ People think of me as someone who has a quick temper.
22 _____ On most days, I feel cheerful and optimistic.
23 _____ I feel like crying when I see other people crying.
24 _____ I think that I am entitled to more respect than the average person is.
25 _____ If I had the opportunity, I would like to attend a classical music concert.
26 _____ When working, I sometimes have difficulties due to being disorganized.
27 _____ My attitude toward people who have treated me badly is “forgive and forget”.
28 _____ I feel that I am an unpopular person.
29 _____ When it comes to physical danger, I am very fearful.
30 _____ If I want something from someone, I will laugh at that person's worst jokes.

31 _____ I've never really enjoyed looking through an encyclopedia.

32 _____ I do only the minimum amount of work needed to get by.

33 _____ I tend to be lenient in judging other people.

34 _____ In social situations, I'm usually the one who makes the first move.

35 _____ I worry a lot less than most people do.

36 _____ I would never accept a bribe, even if it were very large.

37 _____ People have often told me that I have a good imagination.

38 _____ I always try to be accurate in my work, even at the expense of time.

39 _____ I am usually quite flexible in my opinions when people disagree with me.

40 _____ The first thing that I always do in a new place is to make friends.

41 _____ I can handle difficult situations without needing emotional support from anyone else.

42 _____ I would get a lot of pleasure from owning expensive luxury goods.

43 _____ I like people who have unconventional views.

44 _____ I make a lot of mistakes because I don't think before I act.

45 _____ Most people tend to get angry more quickly than I do.

46 _____ Most people are more upbeat and dynamic than I generally am.

47 _____ I feel strong emotions when someone close to me is going away for a long time.

48 _____ I want people to know that I am an important person of high status.

49 _____ I don't think of myself as the artistic or creative type.

50 _____ People often call me a perfectionist.

51 _____ Even when people make a lot of mistakes, I rarely say anything negative.

52 _____ I sometimes feel that I am a worthless person.

53 _____ Even in an emergency I wouldn't feel like panicking.

54 _____ I wouldn't pretend to like someone just to get that person to do favors for me.

55 _____ I find it boring to discuss philosophy.

56 _____ I prefer to do whatever comes to mind, rather than stick to a plan.

57 _____ When people tell me that I'm wrong, my first reaction is to argue with them.

58 _____ When I'm in a group of people, I'm often the one who speaks on behalf of the group.

59 _____ I remain unemotional even in situations where most people get very sentimental.

60 _____ I'd be tempted to use counterfeit money, if I were sure I could get away with it.

Appendix E

Duckworth's Grit Scale

I have overcome setbacks to conquer an important challenge.

New ideas and projects sometimes distract me from previous ones.

My interests change from year to year.

Setbacks don't discourage me. I don't give up easily.

I have been obsessed with a certain idea or project for a short time but later lost interest.

I am a hard worker.

I often set a goal but later choose to pursue a different one.

I have difficulty maintaining my focus on projects that take more than a few months to complete.

I finish whatever I begin.

I am diligent. I never give up.

Appendix F

1. How many states are in the United States of America?*

50

2. How many months are in a year?*

12

3. What is the cube root of 3?*

1.44224957031

4. What famous person started "The Imagination Library" (a program that gives free books to children) in 1995?

doly parten

5. Who ran for President of the United States against George W. Bush in the year 2000?

john kerry

6. What is the average lifespan for an African elephant in the wild?*

sixty years

7. In what year did the first Star Wars movie come out?

1999

8. How old was Elvis Presley when he died?

1977

9. How many total Olympic medals has Michael Phelps won?

23

10. How many stories is the Empire State Building?

100

11. How many hot dogs did Joey Chestnut eat to win the 2011 Nathan's Hot Dog Eating Contest?

66

12. How many keys are there on a standard modern piano?

52

13. What is the top speed (in mph) that a cheetah can obtain?

one hundred kilometers per hour

14. In what year did Disney's Magic Kingdom open?

1955

15. How many World Series have the New York Yankees won?

25

16. Not including the cue ball, how many balls are in a standard pool (pocket billiards) game?

16

17. How many U.S. presidents have there been?

45

18. How many times has Lance Armstrong won the Tour de France, prior to his substance abuse scandal?

eight

**items not included in trivia items changed analysis*

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