PERSONALITY PREDICTORS OF AGGRESSION

An Undergraduate Research Scholars Thesis

by

KATRINA GODBEE

Submitted to Honors and Undergraduate Research
Texas A&M University
in partial fulfillment of the requirements for the designation as an

UNDERGRADUATE RESEARCH SCHOLAR

Approved by
Research Advisor: Dr. Arnold LeUnes

May 2015

Major: Psychology

TABLE OF CONTENTS

ABSTRACT

Personality Predictors of Aggression. (May 2015)

Katrina Godbee
Department of Psychology
Texas A&M University

Research Advisor:
Dr. Arnold LeUnes & Dr. Tony Bourgeois
Department of Psychology
Texas A&M University

Aggression is commonly understood as hostile or violent behavior directed towards another person. While in some cases this behavior is applauded, other times it is intensely punished. Athletes are constantly told to play aggressively in their respective sports but are disciplined for behaving aggressively in the public sector. While some individuals are capable of keeping the aggression solely to their sport, some find it very difficult to draw the line of when the behavior is appropriate. There is a possibility that specific personality traits could predict overly aggressive behavior. The objective of this research project is to investigate what personality traits predict aggressive behavior but most importantly excessive aggressive behavior

DEDICATION

I would like to dedicate this thesis to my wonderful parents, John and Debbie Godbee, who instilled in me the drive to be successful, the courage to always try, and provided me with every means necessary to accomplish my goals. I would also like to dedicate this thesis to Andrew Sciba, my soul mate, my supporter, and my encourager. These three people are the reason I do what I do, and I do it without fear.

ACKNOWLEDGEMENTS

CHAPTER I

INTRODUCTION

Big Five Personality Factors

In 1985, Robert R. McCrae and Paul T. Costa, Jr., influenced by Warren T. Norman (1963), created the NEO five-factor personality inventory, which is also known as the Big Five personality inventory. This inventory has since become the most widely accepted five-factor model to examine personality traits. The five factors include Openness to experience, Conscientiousness, Extraversion, Agreeableness, and Neuroticism/Emotional Stability (McCrae & Costa, 1985).

Similar five-factor structures were described by Norman (1963), Tupes and Christal (1961), Borgatta (1964) and Digman and Inouye (1986) but the personality traits were labeled differently. These inventories categorized personality traits as Surgency (Extraversion), Agreeableness, Conscientiousness (Dependability), Emotional Stability (Neuroticism), and Culture (Goldberg, 1990). Cattell (1945, 1947, 1948) classified personality traits by 16 primary factors with 8 secondary factors. His research was the foundation for many five-factor structures. Tupes and Christal (1961) created 36 scales from Cattell's (1946) adjective scales, which influenced Norman (1963) and Borgatta (1964) in the creation of their five-factor scale. In spite of this consensus, many scientists have criticized the factors' generalizability. Goldberg (1990) created a successful experiment to counteract Waller and Ben Porath's (1987) argument. Goldberg's (1990) results provided sufficient evidence that the Big Five structure is representative of any large English trait adjectives.

McCrae and Costa (1985) suggest that the Big Five model of personality should consist of the following five factors:

1. Openness to new experience, similar to Norman's (1963) culture factor, examines artistic and intellectual interests. It also focuses on imagination, willingness to try new things, and variety of experience. People with high scores in this category are typically more liberal thinkers and capable of thinking about things in a more abstract and symbolic way. Alternatively, people with low scores have more conventional interests, resist change, and are more traditional. Many psychologists have focused on more concentrated aspects of openness such as Tellegen and Atkinson's (1974) openness to absorbing experience, openness to fantasy, and openness to actions. Openness to new experience has not been as widely recognized as a major personality dimension but the use of different types of openness as a factor shows that it is a major aspect of the personality (McCrae & Costa, 1985).

2. Conscientiousness is a person's tendency to be self-disciplined, set high goals, and have great work ethic. People with high scores in this category are hardworking, reliable, and prefer planned behavior, while people with low scores will have less control, dislike order, and lack responsibility. Personality traits that greatly influence conscientiousness are knowledgeable, persistent and intelligent (McCrae & Costa, 1985).

3. Extraversion, also known as surgency, deals with the social aspect of a person. Someone with high scores in extraversion will be more talkative, open, adventurous and sociable,

while someone with low scores will be more silent, secretive, cautious, and reclusive (Norman, 1963). McCrae and Costa (1983) added adjectives to describe extraversion such as warmth, assertiveness, activity, and positive emotions to the personality factor.

4. Agreeableness evaluates an individuals relationships and effort to live in social agreement. A person, who scores high in agreeableness will value getting along with people, is trusting, kind, and generous. Other trait adjectives that describe high scores are good-natured, not jealous, mild, gentle, and cooperative (Norman, 1963). Agreeableness is a social personality trait that positively correlates to relationship quality and leadership skills. People who score low in agreeableness will choose self-interest over relationships with other people, and are skeptical and unfriendly.

5. Neuroticism/Emotional Stability is the susceptibility to experience negative emotions and vulnerability. McCrae and Costa (1983) characterized neuroticism as consisting of six specific sub-traits, anxiety, hostility, depression, self-consciousness, impulsiveness, and vulnerability. Neuroticism is typically tested as emotional stability, meaning lower scores translate to greater neuroticism and higher scores translate to better emotional stability. Someone with low scores will probably feel threatened more often and be easily frustrated. Neuroticism is also linked with negative emotions, which causes it to impact relationships and work habits. Someone with high scores does not experience negative emotions as often and can typically remain calm and controlled in stressful situations.

Support for the Big Five Personality Model

There is a large body of literature that provides evidence of the strength and efficacy of the five-factor personality model. Using a variety of frameworks and instruments in different cultures, the five-factor model has proved to be one of the most efficient and effective ways to observe the personality of an individual. There is a general agreement between researchers concerning the number of factors needed to define personality but there is some disagreement about what the factors should be and what each factor should encompass. It is not surprising that there is some variation between five factor models considering the inclusivity of the factors and that they cover a broad spectrum of traits.

The Big Five Factor model has the greatest commonality of factors between the different models. The factor Extraversion is widely agreed upon (Botwin & Buss, 1989; Digman & Takemoto-Chock, 1981; Hakel, 1974; Hogan, 1983; Howarth, 1976; John, 1989; Krug & Johns, 1986; McCrae & Costa, 1985; Noller et al., 1987; Norman, 1963; Smith, 1967). Several scholars also agree on the common traits in the third factor Agreeableness, however, the factor has other labels such as likeability (Borgatta, 1964; Conley, 1985; Goldberg, 1981; Hakel, 1974; Hogan, 1983; John, 1989; McCrae & Costa, 1985; Noller et al., 1987; Norman, 1963; Smith, 1967; Tupes & Christal, 1961), social conformity (Fiske, 1949) and friendliness (Guilford & Zimmerman, 1949). There is disagreement about the common traits of Conscientiousness. Unfortunately, this factor is known by many different titles ranging from will to achieve (Digman, 1989; Smith, 1967; Wiggins, Blackburn, & Hackman, 1969) to conformity (Fiske, 1949; Hogan, 1983). The Big Five Factor model's trait Conscientiousness has several of the common traits shared between different models. The final factor, Openness to Experience, is the least agreed upon. It is frequently referred to as intellect (Borgatta, 1964; Digman & Takemoto-Chock, 1981; Hogan,

1983; John, 1989; Peabody and Goldberg, 1989) but is also known as culture (Hakel, 1974; Norman, 1963).

The Big Five model has been used to relate personality dimensions to athletics, education, and military. One particularly interesting study related the Big Five to job performance. Three job criteria were used in comparison (job proficiency, training proficiency, and personal data) for five occupational groups, (professionals, police, managers, sales, and skilled/semi-skilled). Murray R. Barrick and Michael K. Mount hypothesized that Conscientiousness and Emotional Stability would be, "valid predictors of all job performance criteria for all jobs" (1991). They also expected other personality factors would be related to job performance but only with some criteria and some occupations. Their research successfully linked Conscientiousness for all the occupational groups and all the criterion types. They described Conscientiousness as an, "… aspect of personality appears to tap traits which are important to the accomplishment of work tasks in all jobs" (1991). Their research also found that Extraversion was linked to managers and sales across all performance criteria. There were relatively insignificant correlations for Emotional Stability and Agreeableness. Ultimately, they decided that, "From a practitioner's standpoint, the results suggest that if the purpose is to predict job performance based on an individual's personality, then those measures associated with Conscientiousness are most likely to be valid predictors for all jobs" (Barrick & Mount, 1991).

The Big Five model also successfully establishing similar results linking personality to academic achievement (Digman & Takemoto-Chock, 1981; Smith, 1967) and in other studies of professional success (Takemoto, 1979).

We chose the Big Five Personality model because it is highly supported, efficient in describing personality, and widely recognized.

8

Buss Perry Aggression

Arnold H. Buss and Mark Perry (1992) created a new and improved questionnaire that assessed various components of aggression and meet psychometric standards. The original Hostility inventory that was in use at the time was developed by Buss and Durkee (1957) and was one of the most commonly used aggression questionnaires. The reason the Buss-Durkee was so popular was because the inventory was broken down into seven substrates, assault, indirect aggression, irritability, negativism, resentment, suspicion, and verbal aggression (Buss & Perry, 1992). This made it possible for researchers to understand where the anger was manifested. Buss and Perry (1992) felt that it was outdated because it had been created 35 years before and because it did not meet current psychometric standards it should no longer be in use.

The Buss Perry Aggression questionnaire consists of four substrates, physical aggression, verbal aggression, anger, and hostility. Physical aggression can be defined as someone who hits if provoked, pushes or hits others during play, and fights physically to defend his beliefs while verbal aggression is someone who argues or likes to debate every conversation, yells frequently in arguments, and uses strong language to cut people down. Aggression represents an emotional element of the personality and includes physiological arousal. Hostility is a combination of resentment and suspicion, and involves feelings of ill will or injustice. The questionnaire has adequate internal consistency, scale and total score reliability, and meets current psychometric standards (Buss & Perry, 1992).

Generalizability of the Buss Perry Aggression Questionnaire

The Buss Perry Aggression Questionnaire has been criticized regarding its generalizability. Researchers have questioned the sample size for being too narrow and for having a skewed distribution. A research study was conducted to test the Buss Perry AQ's generalizability, structure, and psychometric properties on a nationally representative sample of adult Hungarians (Gerevich, Bacskai, & Czobor, 2007). Their results replicated the results found previously by Buss and Perry. Specifically, Physical Aggression, Verbal Aggression, and Hostility had high reproducibility. Anger, however, had a more moderate level of reproducibility. This information is "Consistent with previous studies, the examination of the fit indices (GFI, AGFI, RMSE) indicated the four-factor structure can provide only moderate fit to the data" (Gerevich, Bacskai, & Czobor, 2007). The study also adjusted the average age of the sample to a younger age, which increased the reproducibility for all four factors.

We chose to use the Buss Perry Aggression Questionnaire because it is reputable, supported, and highly generalizable.

Big Five Personality Traits in Relation to Aggressive Behavior

Many theorists have postulated that personality variables can predict aggressive behavior. The General Aggression Model (GAM) predicts that personality "traits can influence aggression through their impact on aggressive emotions or on aggressive cognitions" (Barlett and Anderson, 2012). The GAM is a well-liked model of aggression because it is a social-cognitive model that integrates biological and social influences along with cognitive processes. The main objective of the GAM is to demonstrate that it is possible to explain why a person behaved aggressively

based an individual's biology, environment, and personality. Three stages are created to help understand a single aggressive incident, which are "(1) person and situation inputs, (2) present internal states (i.e., cognition, arousal, affect, including brain activity), and (3) outcomes of appraisal and decision-making processes" (DeWall, Anderson, & Bushman, 2011). Christopher Barlett and Craig Anderson (2012) conducted an experiment to compare Big Five personality traits to different types of aggression (physical and verbal), aggressive emotions and aggressive attitudes. Their previous research showed that agreeableness and conscientiousness were negatively related to the aggressive emotion vengefulness, while neuroticism was positively related vengefulness (McCullough, Bellah, Kilpatrick, & Johnson, 2001). Other research found neuroticism to be positively related to anger and hostility, but negatively related to agreeableness, extraversion, and conscientiousness (Sharpe & Desai, 2001). It was postulated and later supported that Big Five personality traits and aggressive behavior could be directly or indirectly related through emotions and attitudes (Barlett & Anderson 2012). "Within the context of the learning processes in GAM, this suggests that the personality dispositions of individuals will be related to developing an aggressive personality depending on the specific Big 5 trait" (Barlett & Anderson 2012).

Hypothesis

The purpose of this research was to assess the relationship between the Big Five scales and the Buss Perry indices of aggression. We hypothesize that there will be a strong relationship between the Big Five and the Buss Perry measures.

CHAPTER II

METHODS

The participants consisted of 242 undergraduate students attending Texas A&M University in College Station, Texas. The sample was made up of 90 males, 152 females, and one gender undecided student with various different majors. The participants were required to complete a survey consisting of the NEO Big Five and the Buss-Perry Aggression scales. The survey was hand administered by professors in one introductory psychology course and one introductory sports management course. SAS statistical procedures were employed in order to conduct General Regression analyses involving the Big-Five measures (Openness, Conscientiousness, Extraversion, Agreeableness, and Neuroticism) as predictors of the Buss-Perry scales (Physical Aggression, Verbal Aggression, Anger, and Hostility) as well as composite scores derived by combining Physical and Verbal (Instrumental Aggression) and by combining all four Buss-Perry scales into a Total Aggression composite.

CHAPTER III

RESULTS

The Big-Five subscales were found to be strongly related to Physical Aggression [$F_{(1,235)}$ = 17.25, p<.0001, r^2=.22]. Specifically, the Big-Five Agreeableness subscale proved a strong predictor of Physical Aggression ($t_{(1,235)}$ = 8.20, p<.0001, β = .49).

The Big-Five subscales were also found to be strongly related to Verbal Aggression [$F_{(1,235)}$ = 35.49, p<.0001, r^2=.37]. Particularly, the Big-Five Agreeableness subscale was a strong predictor of Verbal Aggression ($t_{(1,235)}$ = 12.42, p<.0001, β = .65).

The Big-Five subscales were also found to be strongly related to Buss-Perry Anger [$F_{(1,235)}$ = 27.41, p<.0001, r^2=.43]. The Big-Five Agreeableness subscale was a strong predictor of Anger ($t_{(1,235)}$ = 7.21, p<.0001, β = .40). Additionally, the Big-Five Neuroticism scale proved a significant predictor of Anger ($t_{(1,235)}$ = - 4.43, p<.0001, β =- .25).

The Big-Five subscales were also found to be strongly related to Buss-Perry Hostility [$F_{(1,235)}$ = 28.39, p<.0001, r^2=.37]. Specifically, the Big-Five Agreeableness subscale proved a strong predictor of Hostility ($t_{(1,235)}$ = 5.41, p<.0001, β = .30). Again, the Big-Five Neuroticism scale significantly predicted of Hostility ($t_{(1,235)}$ = - 8.02, p<.0001, β =- .45).

The Big-Five subscales were also found to be strongly related to the Buss-Perry Instrumental Aggression composite [$F_{(1,235)}$ = 33.03, p<.0001, r^2=.41]. The Big-Five Agreeableness subscale was a strong predictor of Instrumental Aggression ($t_{(1,235)}$ = 11.68, p<.0001, β = .63).

The Big-Five subscales were also strongly related to Buss-Perry Total Aggression composite [$F_{(1,235)}$ = 41.84, p<.0001, r^2=.47]. Particularly, the Big-Five Agreeableness subscale proved a strong predictor of Total Aggression ($t_{(1,235)}$ = 11.53, p<.0001, β = .59). Again, the Big-Five Neuroticism scale was a significant predictor of Total Aggression ($t_{(1,235)}$ = - 3.31, p<.001, β =-.17).

CHAPTER IIII

CONCLUSION

Our results were obtained from a regression analysis, which shows the level of correlation one variable has to another and its significance in predicting that the variable will be present.

The most significant finding in this study was the salience of the personality factor Agreeableness. Our results showed that Agreeableness was predictive of all four of the Buss Perry factors, Physical Aggression, Verbal Aggression, Hostility, and Anger as well as the two composite factors, Instrumental Aggression and Total Aggression. Agreeableness had extremely high levels of predicting Verbal Aggression and the Instrumental Aggression Composite. It also predicted a significant portion of Physical Aggression and Total Aggression. If a person had low levels of Agreeableness, we could predict that the person would be significantly physically and verbally aggressive, and show high levels of anger and hostility.

The other significant finding was the correlation of Emotional Stability. Our results showed that Emotional Stability was correlated to Hostility, Anger, and Total Aggression. Emotional Stability also significantly predicted the three variables. Low levels of Emotional Stability mean that a person has high levels of self-consciousness, hostility, vulnerability, and anxiety. A person with low levels of Emotional Stability would be significantly angry and hostile

No other Big Five factor was significantly related to any of the Buss-Perry scales.

Future research should be designed to reveal the relation of the Big Five measures and the Bus-Perry scales on in individuals traditionally viewed as aggressive (scholarship or professional athletes). Relating the Buss Perry scales to psychometric measures designed to measure sport specific measures.

REFERENCENCES

Barlett, C. A., Anderson, C. A. (2012). Direct and indirect relations between the Big 5 personality traits and aggressive and violent behavior. *Personality and Individual Differences, 52*, 870-875.

Barrick, M. R., Mount, M. K. (1991) The Big Five Personality Dimensions and Hob Performance: A Meta-analysis. *Personnel Psychology, 44.*

Borgatta EE (1964). The structure of personality characteristics. *Behavioral Science*, *12*, 8-17.

Botwin MD, Buss DM. (1989). Structure of act-report data: Is the five-factor model of personality recaptured? *Journal of Personality & Social Psychology, 56*, 988-1001.

Buss, A.H., Durkee, A. (1957). An Inventory for Assessing Different Kinds of Hostility. *Journal of Counseling Psychology. 21*(4). 343-349.

Buss, A. H., Perry, M. (1992). The Aggression Questionnaire. *Journal of Personality and Social Psychology, 63*(3). 452-459.

Conley JJ. (1985). Longitudinal stability of personality traits: A multitrait-multimethod-multioccasion analysis. *Journal of Personality & Social Psychology*, *49*, 1266-1282.

Cattell RB. (1943). The description of personality: basic traits resolved into clusters. *Journal of Abnormal Social Psychology, 38*, 476-506.

Cattell RB. (1946). The description and measurement of personality. Yonkers, NY: WorldBook.

Cattell RB. (1947). Confirmation and clarification of primary personality factors. *Psychometrika, 12*,197-220.

Cattell RB. (1948). The primary personality factors in women compared with those in men. *British Journal of Psychology, I*, 114130.

Costa PT Jr., McCrae RR. (1988). From catalog to classification: Murray's needs and the five-factor model. *Journal of Personality & Social Psychology, 55*, 258-265

DeWall, C. N., Anderson, C. A., & Bushman, B. J. (2012). Aggression. Chapter in I. Weiner (Ed.), *Handbook of Psychology, 2*(5), p. 449-466.

Digman JM. (1989). Five robust trait dimensions: Development, stability, and utility. *Journal of Personality, 57*,195-214.

Digman JM. (1990). Personality structure: Emergence of the five-factor model. *Annual Review of Psychology, 41*, 417-440.

Digman JM, Inouye J. (1986). Further specification of the five robust factors of personality. *Journal of Personality & Social Psychology, 50*,116-123.

Digman JM, Takemoto-Chock NK. (1981). Factors in the natural language of personality: Re-Analysis, comparison, and interpretation of six major studies. *Multivariate Behavioral Research, I6*, 149-170.

Fiske DW. (1949). Consistency of the factorial structures of personality ratings from different sources. *Journal ofAbnoma1 Social Psychology, 44*, 329-344.

Goldberg, L. R. (1990). An Alternative "Description of Personality": The Big-Five Factor Structure. *Journal of Personality and Social Psychology. 59*(6). 1216-1229.

Guilford JP, Zimmerman WS. (1949). The Guilford-Zimmerman Temperament Survey. Beverly Hills, CA: Sheridan Supply.

Hake1 MD. (1974). Normative personality factors recovered from ratings of personality descriptors: The beholder's eye. *Personnel Psychology, 27*, 409-421.

Hogan R. (1983). A socioanalytic theory of personality. In Page MM. (Ed.), Personality—current theory & research: Nebraska symposium on motivation. Lincoln, NE University of Nebraska Press.

Hogan R. (1986). Manual for the Hogan Personality inventory. Minneapolis: National Computer Systems.

Hogan R. (In press). Personality and personality measurement. In Dunnette MD. (Ed.), Handbook of Industrial and Organizational Psychology. Palo Alto, CA: Consulting Psychologists Press.

Hogan J, Hogan R. (1989). How to measure reliability. *Journal of Applied Psychology, 74*, 273-279.

Gerevich, J., Bacskai, E., & Czobor, P. (2007). The generalizability of the Buss-Perry Aggression Questionnaire. *International Journal of Methods in Psychiatric Research, 16*(3), p. 124-136.

John, OP. (1989). Towards a taxonomy of personality descriptors. In Buss DM, Cantor N (Eds.), Personality psychology; Recent trends and emerging directions. New York: Springer-Verlag.

Krug SE, Johns EF (1986). A large scale cross-validation of second-order personality structure defined by the 16PF. *Psychological Reports, 59*, 683-693.

Lorr M, Youniss RP. (1973). An inventory of interpersonal style. *Journal of Personality Assessment, 37*, 165-173.

McCrae, R. R., Costa, P. T., (1983). Joint factors in self-reports and ratings: Neuroticism,

extraversion and openness to experience. *Personality and Individual Differences, 4*(3), p. 245-255

McCrae, R. R., Costa, P. T., (1985). Updating Norman's "Adequate Taxonomy": Intelligence and Personality Dimensions in Natural Language and in Questionnaires. *Journal of Personality and Social Psychology, 49*(3), 710-721.

McCrae RR. (1989). Why I advocate the five-factor model: Joint factor analyses of the NEO-PI with other instruments. In Buss DM, Cantor N (Eds.), Personalitypsychology: Recent trends and emerging directions. New York Springer-Verlag.

McCullough, M. E., Bellah, C. G., Kilpatrick, S. D., & Johnson, J. L. (2001). Vengefulness: Relationships with forgiveness, rumination, well-being, and the Big Five. *Personality and Social Psychology Bulletin, 27*, 601–610

Noller P., Law H., Comrey AL. (1987). Cattell, Comrey, and Eysenck personality factors compared: More evidence for the five robust factors? *Journal of Personality and Social Psychology, 53*, 775-782.

Norman, W. T. (1963) Toward an Adequate Taxonomy of Personality Attributes: Replicated Factor Structure in Peer Nomination Personality Ratings. *Journal of Abnormal and Social Psychology. 66*(6). 574-583.

Peabody D, Goldberg LR. (1989). Some determinants of factor structures from personality trait descriptors. *Journal of Personality & Social Psychology, 57*,552-567.

Sharpe, J. P., & Desai, S. (2001). The revised Neo Personality Inventory and the MMPI-2 Psychopathology Five in prediction of aggression. *Personality and Individual Differences, 31*, 505–518.

Smith GM. (1967). Usefulness of peer ratings of personality in educational research. *Educational and Psychological Measurement, 27*, 967-984.

Tupes EC, Christal RE. (1961, May). Recurrent personality factors based on trait ratings (ASD-TR-61-97). Lackland Air Force Base, TX: Aeronautical Systems Division, Personnel Laboratory.

Takemoto NK. (1979). The prediction of occupational choice from childhood and adolescent antecedents. Unpublished masters thesis, University of Hawaii, Honolulu, HI.

Tellegen, A, Atkinson G. (1974). Openness to absorbing and self-altering experiences ('absorption'), a trait related to hypnotic susceptibility. *Journal of Abnormal Psychology, 83*(3), p. 268-277

Waller, N. G., Ben-Porath, Y. (1987). Is it time for clinical psychology to embrace the five-factor model of personality? *American Journal of Psychology, 42,* p.887-8896

Wiggins N, Blackburn M, Hackman JR. (1969). The prediction of first-year success in psychology: Peer ratings. *Journal of Educational Research, 63,* 81-85.