The Relationship between Personality Traits and Achievement Motivation of Students of Tertiary Institutions in Plateau State, Nigeria

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Authors' contributions

Article Information

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ABSTRACT

This study examined the relationship between personality traits and achievement motivation of students in tertiary institution in Plateau state. The study adopted the cross-sectional research survey design in its investigation of the variables. Primary source of data was generated through structured, self- administered questionnaire using the big five inventory which comprises of 44-items and achievement motivation inventory which comprises of 32 items. A sample of 333 respondents was drawn from a population of 2000 second year (200 levels) students in the Faculty of Education in five tertiary institutions in Plateau State. Reliability of the instrument was achieved by the use of the Cronbach Alpha coefficient with all the items scoring coefficients above 0.70. Data generated were analyzed and presented using both descriptive and inferential statistical techniques. The hypotheses were tested using the Pearson's Product Moment Correlation (PPMC). The tests were carried out at a 95% confidence interval and a 0.05 level of significance. Findings revealed that there is a positive significant relationship between personality traits and

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achievement motivation of students in tertiary institution in Plateau state. The study thus recommends that teachers should guide students to identify their personality traits and encouraged them to strive to develop their traits in order to be successful in their pursuit.

1. INTRODUCTION

Students have distinctive personality characteristics which makes them prepared for having different worldviews, and thus for behaving differently in various social and educational settings. Taking these differences into account can help educators recognize students' individual differences and how to motivate them into achieving their best in every area of endeavour. It is this individual difference that propels the individual into achieving success or failure in life. When these traits are overlooked and neglected, the student's achievement will be hampered and the zeal to be original and creative will also die. Personality trait is a unique set of psychological and behavioural characteristics within a person that is consistent, stable and develops throughout the life cycle of the person and which influence and distinguish the beliefs, motivations, emotions, behaviours and even their environment from other people.

In fact, personality has been found to correlate strongly with life satisfaction [1]. According to McAdams DP et al. [2], personality is a set of individual differences that are affected by the development of an individual's values, attitudes, personal memories, social relationships, habits, and skills. Personality has been conceptualized from a variety of theoretical perspectives, and at various levels of abstraction or breadth [3, 4]. Each of these levels has made unique contributions to our understanding of individual differences in behaviour and experience. However, the number of personality traits, and scales designed to measure them, escalated without an end in sight [5].

The five factor model of personality, often termed the "big five" personality frame work [6, 7, 8, 9], is one of the most prominent models to describe the most salient features of personality. It is one of the most widely accepted comprehensive models of personality. It emerged as a robust, clear, and concise model which was developed by analyzing the thousands of trait adjectives used by individuals to describe themselves or others [9].

Motivation can be defined as the driving force behind all the actions of an individual. It is based on your emotions and achievement-related goals. Intrinsic motivation is internally oriented and driven by an interest or satisfaction an individual gain from performing a task rather than relying on external pressures. Extrinsic motivation is external in nature and comes from influences outside of the individual. It is a tendency of an individual to engage in activities in order to gain an external reward. Achievement motivation is measured along the dimensions of the will to succeed, mastery need in relation to challenging tasks, and the meaningfulness of academic performance [10]. Achievement motivation is also commonly referred to as the drive for competency. According to John OP et al. [11], the concept of Achievement Motivation is based on a person's sense of need for achievement, sense of power to exert in a social phenomenon, and affiliation within the surroundings where someone wishes to be. Achievement motivation can be defined as the need for success or the attainment of excellence.

The five-factor model of personality is a hierarchical organization of personality traits in terms of five basic dimensions and does not imply that personality differences can be reduced to only five traits. Rather, these five dimensions represent personality at the broadest level of abstraction, and each dimension summarizes a large number of distinct, more specific personality characteristics. It is a model based on common language descriptors of personality which are openness to experience, conscientiousness, extraversion, agreeableness and neuroticism (or emotional stability), they are abbreviated as OCEAN. The Big Five taxonomy serves an integrative function because it can represent the various and diverse systems of personality description in a common framework. This study focuses only on two of the traits namely: conscientiousness and extraversion. Therefore, the purpose of this study is to examine the relationship between personality traits and achievement motivation of tertiary institution students in Plateau State.

This study will seek to provide answers to the following questions:

i. What is the relationship between conscientiousness and achievement motivation of tertiary institution students in Plateau State?
ii. What is the relationship between extraversion and achievement motivation of tertiary institution students in Plateau State?

2. LITERATURE REVIEW

2.1 Theoretical Framework

The underpinning theory on which this study is based on is the Big Five model of personality (McCrae & Costa, 2006) and David McClelland's Theory of Achievement Motivation.

2.2 The Big Five Personality Model

The Big Five model is considered to provide a framework for interpreting a person's personality and is based on personality traits which have been encoded into their language and are then used to clarify differences between individuals [8, 9]. The Five Factor Model was initially proposed by Goldberg LR [8] and describes the relation between an individual's personality and various behaviours. The five-factor model of personality is a hierarchical organization of personality traits in terms of five basic dimensions: openness, conscientiousness, extraversion, agreeableness, and neuroticism [8, 12, 9]. It is also a helpful tool for understanding different individuals' personalities in various samples. It is widely used in studies which aim to examine individual personality in different fields and diverse cultures because it seems to be robust within many theoretical structures that utilize different instruments [13]. The big five traits can be found in almost any measure of personality [12], including the analysis of trait adjectives in many languages and these data strongly suggest that personality trait structure is universal [14]. Research evidence also indicated that the big five traits are highly stable over time [15] and appear to be shaped by biological (genetic) factors [16, 17], although the environment also plays its role. Finally, [12] concluded that long history, cross-cultural replication, empirical validation across many methods and instruments make the five-factor model a basic discovery of personality psychology.

The above theory relates to this study because it is very important in understanding individuals' personality traits. An individual's personality is very consequential to his or her achievement motivation drive since this understanding will help assign people into different achievement levels as well as give them clues about how they are likely to behave in different situations, it will also help in motivating students in tertiary institution to set their priorities and be productive in their areas of specialization. It is on this anchor the Big Five personality model lends itself to this current study.

2.3 David McClelland's Achievement Motivation Theory

One achievement motivation theory of prominence is McClelland's achievement motivation theory. It originated from the work of [18] and his colleagues at Harvard University who sought to understand what drives individuals toward achieving excellence [19]. Digman JM [18] defines achievement motivation as "the need to perform well or the striving for success, evidenced by persistence and effort in the face of difficulties". McClelland said that those who are achievement motivated set goals they can achieve with their own efforts, abilities and perform well both in education and other areas of human endeavour. He posited that achievement motivated students prefer to work on a problem rather than leaving the outcome to chance, seem to be more concerned with their internal needs for achievements rather than the rewards success will earn them. They are mastery oriented and study for mastery and not because they want to avoid failure. Mastery oriented learners are not ego involved learners who engage in all kinds of malpractices to pass their examinations [20]. It is generally noticed that achievement motivated students show significantly higher rate of advancement in their schools achievement compared to others who are not achievement motivated. McClelland proposed that the specific needs of an individual are acquired and shaped over time through the experiences he has had in life. This theory of Motivation is based on three types of needs: need for achievement, need for power and need for affiliation and they significantly influence the behavior of an individual.

The McClelland's achievement motivation theory is appropriate for understanding this study in the sense that it categorizes individual needs and what propels a person to pursue certain goals in

life. This theory will help educators and counselors play an important role in motivating students exhibits purposeful behaviour aimed at achieving the set goals. Being able to measure achievement motivation provides educators and counselors in primary, secondary, and higher education opportunities to assess and implement programs and interventions attempting to increase and maintain students' achievement motivation.

2.4 Personality Traits

The term personality is used in a number of ways including the apparent features of a person. Personality is a term which people are familiar with as is commonly used in people's day-to-day conversations, but the popular usage of the word differs from the scientific sense in which it is used. In psychology, personality is a field of study rather than an aspect of an individual and it encompasses all other areas of psychology. Personality is derived from the word persona, which is composed of the body, the mind and form. However, psychologists use it to refer to the characteristic pattern of thinking, feeling and acting. It refers to the totality or whole of the person. Thus, the enduring pattern expressed by the person in various situations is the hall mark of personality. Interestingly the theories of personality go beyond the literal meaning of "personality" which stands for large masks used by actors in ancient Greek drama. Contrary to this the personality theorists view personality as the essence of the person. It is a person's "true" inner nature. The unique impression that a person makes on others is equally important in understanding personality. However, the concept of personality has been defined by psychologists in many ways and it is the theoretical perspective or position which directs our attention to particular aspects of personality.

According to Smith RL [21], personality represents those characteristics of the person or of the people that generally account for consistent pattern of responses to the situation. Personality according to [22,23] is defined as the sum total of ways in which an individual reacts to and interacts with others. Smith RL [21] defines personality as a relatively enduring characteristics that differentiate people; those behaviours that make each individual unique. For Robbins SP et al. [24], personality is the total person in relation to his environment. Udoh CO et al. [25] describes it as the dynamic organisation within the individual of those psychophysical systems that determine his or her characteristic behaviours and thoughts. Thus, personality comprises the important, relatively stable characteristics that may be observable, unobservable, and conscious or unconscious [26].

However, Passer MW et al. [27] argued that personality is better defined by particular concepts contained within a given theory that is considered adequate for the complete description or understanding of human behaviours. Hall CS et al. [28] defined Personality as the set of habitual behaviors, cognitions and emotional patterns that evolve from biological and environmental factors. While there is no generally agreed upon definition of personality, most theories focus on motivation and psychological interactions with one's environment. However, Corr PJ et al. [29] observes that most definitions tend to fall into three general classes. These, he says, first are those that define personality as the individual's external appearance and behaviour. This definition highlights the salient social aspects of personality or the way a person appears to others, for example, aggressiveness, shyness, friendliness, immaturity, and so on.

Different psychological schools have different understanding of personality and its structure, based on their theoretical approaches. The trait approach in study of personality emphasizes importance of different dimensions or variables of personality. For trait theorists—Allport, Cattell, Eyzenck, personality consists of relatively stable and consistent characteristics (traits) that are unique for each individual. Traits are mental set or readiness of individuals to respond to different variety of situations in a consistent and stable way. According to trait theories, personality can be described by person's unique profile, made from different positions of each of the traits dimensions. Trait approach in describing and understanding personality has a long and rich history. Ancient Greek and Roman philosophers were trying to describe personality and organize it into types. Greek physician Hippocrates and later Roman physician Galen proposed four personality types, namely sanguine (cheerful, enthusiastic), melancholic (sad, depressive), choleric (angry, hostile) and phlegmatic (stolid, apathetic) that are corresponding with four kind of fluids (called humors) in human body (blood, black bile, yellow bile, and phlegm) [30].

Gordon Allport, one of the first trait theorists, proposed that personality can be described by the combination of traits. Allport divided all personality traits into three major categories: cardinal, central and secondary. Cardinal traits are the traits that some people have (not all, relatively few people developed these traits) and which practically define their life. Central traits are prominent traits of personality and secondary traits—these are traits that exhibited in some situations. Raymond Cattell is a trait theorist who divided traits into surface and source traits. Surface traits—these are traits that can be recognized by behaviour, while source traits—are the source that determine behaviour. Hans Eysenck offered the other model of trait structure of personality. He described personality by two, later expanded to three basic traits: neuroticism, extraversion and psychoticism. These major aspects of personality, according to Eysenck, are largely genetically determined and can be explained by differences in functions of autonomic nervous system.

Analyzing all previous research findings and list of possible traits of personality, researchers concluded that some traits are repeated from study to study. Despite the various traits name, they were similar factors. Psychologists reached the agreement that personality can be described by these fundamental traits. These include five basic traits—openness to experience, conscientiousness, extraversion, agreeableness and neuroticism. These five dimensions of personality often called Big Five gave basis for Five Factor Model theory that describes and explains personality in terms of Big Five traits. The Big Five, was introduced in 1963 by Warren Norman, in 1990 by McCrae, R.R and Costa, P.T. Jr., presented their version, called The Five Factor Theory [30].

Traits, according to the Five Factor Theory (FFT), are stable structures of personality that are not changing with time and circumstances [31]. According to FFT, traits must be distinguished from other personality attributes such as attitudes, habits, beliefs, values. All these attributes (Characteristic Adaptations) can and do changed over the time or circumstances, while personality traits (Basic Tendencies) stay relatively stable throughout the life. Basic Tendencies or basic personality traits shape the development of Characteristic Adaptations and it is important to know individual's trait profile for understanding and predicting his or her behaviour[31].

2.5 Conscientiousness

The conscientious personality is dutiful, well-organized, dependable and goal achievement striving [32]. Conscientiousness concerns self-control and skills involved in planning, organizing and performing tasks. The conscientious individual is seen as purposeful, strong-willed and determined. This trait becomes apparent through achievements, dependability and orderliness; and more negatively can result in annoying attention to detail and compulsive neatness [8]. The other side of the spectrum applies to individuals described as lazy and lacking in self-control, however this may simply reflect a less fastidious attitude toward a given task [33]. Individuals scoring high on Conscientiousness, have been found to achieve academically and occupationally, but could at the same time be seen as meticulous, compulsive workaholics. Low Conscientiousness scores are associated with individuals who are less exacting and goal-oriented [34]. The NEO-PI-R facet scales for this domain are achievement-striving, competence, deliberation, dutifulness, and self-discipline [8].

2.6 Extraversion

The domain of Extraversion, also called Positive Emotionality or Surgency, explores an individual's propensity for sociability, assertiveness, activity and talkativeness. Typically, extroverts are described as assertive, active, talkative, warm and friendly, while introverts are more reserved, independent of others, and even-paced [8]. People scoring high on Extraversion are those who enjoy being around people, especially large gatherings, and tend to be assertive, active and talkative. Extroverts like stimulation and excitement, and are generally cheerful and optimistic. The facets of the Extraversion domain according to the NEO-PI-R are: activity, assertiveness, excitement-seeking, gregariousness and positive emotions [8].

2.7 Achievement Motivation

The construct achievement motivation can be defined as the need for success or the attainment of excellence. According to McCrae RR et al. [35], achievement motivation is based on reading success and achieving all our aspiration in life by setting standard for excellence. The standard is to improve one's own past performance, an objective measure,

one out performing others in competition, challenging goals one has set or trying something new that will improve oneself. Achievement motivation has been defined as the extent to which individuals differ in their need to strive to attain rewards, such as physical satisfaction, praise from others and feelings of personal mastery Elliot AJ et al. [36]. Individuals with high achievement motives usually act in ways that will enable them to outperform others, meeting or surpassing some standards of excellence or do something unusual [37].

All students are influenced by a need to achieve to a certain degree [38]. Those students, who had a high desire of success, work hard to achieve [39]. Achievement motivation could be seen as self- determination to success in whatever activities one engages in, be it academic work, professional work, sporting events, among others [40]. Tella A [41] points out that the urge to achieve varies from one individual to another while the need to achieve is very high in some individuals, it may be very low for others based on socialization processes and learning experiences. David McClelland is most noted with the modern study of achievement motivation. He and his associates coined the term n-Ach which denotes need for achievement [18, 42]. This theory states that people will do what they have been rewarded for doing under appropriate conditions. This theory deals with the perceived causes of success and failure, the characteristics of causal thinking and subsequent emotional experiences in relation to achievement behaviours[38]. McClelland DC et al. [43] links academic to achievement motivation and sees this as the need or desire to excel in academic work as people who are motivated are likely to perform well in their examinations.

Psychologists have observed that people with a high level of achievement motivation exhibit unique characteristics such as hard work and perseverance [20]. Achievement motivated people set moderately difficult but easily achievable targets, which help them to achieve their objectives [44].

People's perception of achievement differs as their culture differs. In industrialized societies like United States of America, which tend to be individualistic cultures, achievement motivation is inferred from individual accomplishments than can be compared against some standard of excellence [45]. He concludes by observing that by contrast, people from collectivist societies

would argue that achievement motivation reflects a willingness to strive to succeed at objectives than promote social harmony or that maximize the social welfare of the group to which they belong [45]. Tella A [41] opines that, achievement motivation could be seen as self-determination, to succeed in whatever activities one engages in, be it academic work, professional work, sporting activities among others.

The motivation to achieve however may be evident only in behaviour that students value for instance, a child may be highly motivated to achieve, and this may be exhibited in athletics but not school work [46]. Tella A [41] observes that, achievement motivated students want and expect to succeed; when they fail, they redouble their effort until they do succeed. In addition, success breeds the desire for more success, which in turn breeds success. In contrast, students who do not experience success in achievement setting will tend to lose the motivation to succeed in such settings and will turn their interest elsewhere (perhaps to social activities, sports even delinquent activities in which they may succeed).

From the foregoing therefore, the study hypothesized thus:

Ho₁: There is no significant relationship between conscientiousness and achievement motivation of students of tertiary institutions.

Ho₂: There is no significant relationship between extraversion and achievement motivation of students of tertiary institutions.

3. METHODOLOGY

Primary source of data was generated through structured, self- administered questionnaire using the big five inventory which comprises of 44-items and achievement motivation inventory which comprises of 32 items. A sample of 333 respondents was drawn from a population of 2000 second year (200 levels) students in the Faculty of Education in five tertiary institutions in Plateau State. Reliability of the instrument was achieved by the use of the Cronbach Alpha coefficient with all the items scoring coefficients above 0.70. Data generated were analyzed and presented using both descriptive and inferential statistical techniques. The hypotheses were tested using the Pearson's Product Moment Correlation (PPMC) .The tests were carried out

at a 95% confidence interval and a 0.05 level of significance.

4. DATA ANALYSIS AND RESULTS

Ho₁: There is no significant relationship between conscientiousness and achievement motivation of students of tertiary institutions.

From the result in the table above, the correlation coefficient (rho) shows that there is a significant and positive relationship between Conscientiousness and achievement motivation. The *correlation coefficient* 0.81 confirms the magnitude and strength of this relationship and it is significant at p 0.000<0.01. The correlation coefficient represents a very high correlation indicative of a very strong relationship between the variables. Therefore, the null hypothesis earlier stated is hereby rejected. This implies that there is a significant relationship between Conscientiousness and achievement motivation of students in tertiary institutions in Plateau State.

Ho₂: There is no significant relationship between extraversion and achievement motivation of students of tertiary institutions in Plateau State.

From the result in the table above, the correlation coefficient (rho) shows that there is a significant and positive relationship between extraversion and achievement motivation. The *correlation coefficient* 0.32 confirms the magnitude and strength of this relationship and it is significant at p 0.000<0.01. The correlation coefficient represents a low correlation indicative of a weak relationship between the variables. Therefore, the null hypothesis earlier stated is hereby rejected. This implies that there is a significant

relationship between Extraversion and achievement motivation of students in tertiary institutions in Plateau State.

5. DISCUSSION OF FINDINGS

This study used descriptive and inferential statistical methods investigated the relationship between personality traits and achievement motivation of students in tertiary institutions in Plateau State, Nigeria. The findings revealed that a relationship exists between personality traits and achievement motivation of students in tertiary institutions in Plateau State, Nigeria used the Pearson Product Moment Correlation tool and at a 95% confidence interval. The findings of this study confirmed that personality traits have an effect on achievement motivation of students in tertiary institutions in Plateau State. This agrees with previous empirical findings in literature. The current finding of this study corroborates Eccles JS [47] who examined relations between the Big Five personality traits and academic outcomes, specifically SAT scores and grade-point average (GPA). In a study examining more than 10,000 participants, multiple personality measures such as BFI, NEO-PI-R and the HEXACO Personality Inventory (HEXACO-PI); Noftle EE [48] were used. They found strong correlations between personality traits and academic achievement students ranging from 17 to 31 years. The factor conscientiousness was strongly associated with higher GPA, both in college and high school students, being slightly higher in the high school sample. In the college sample, Eccles JS [47] also reported significant correlations between three NEO-PI-R conscientiousness facets: achievement- striving, competence and

Table 1. Pearson Product Moment Correlation (PPMC) statistics on the relationship between conscientiousness and achievement motivation of students

Variables	N	Mean	SD	df	R	Sig
Conscientiousness	293	3.06	0.41	332	0.81	0.00
Achievement motivation	293	2.13	0.37			

**Correlation is significant at the 0.01 level (2-tailed)

Table 2. Pearson Product Moment Correlation (PPMC) statistics on the relationship between extraversion and achievement motivation of students

Variables	N	Mean	SD	Df	r	Sig
Extraversion	293	4.76	0.46	332	0.32	0.00
Achievement motivation	293	2.13	0.37			

**. Correlation is significant at the 0.01 level (2-tailed)

self-discipline, and GPA. In the high school sample all of the NEO-PI-R conscientiousness facets: competence, order, dutifulness, achievement-striving, self-discipline and deliberation showed significant correlation with GPA.

Also, the current finding is in line with [49] who carried out a study on the effects of achievement motivation on personality traits of students in Aurangabad, India. The result showed that high achievement motivation students had significantly high openness to experience, conscientiousness, extraversion and agreeableness than low achievement motivation students. Also, low achievement motivation students had significantly high neuroticism than high achievement motivation students. Furthermore, Daitkar A [50] investigated the influence of personality traits on academic achievements of secondary school students in Cross River State. The findings of their study agreed with the current finding in which a significant difference was found between the achievements of students with high level of conscientiousness and agreeableness, and those with low levels of the traits [51].

6. CONCLUSION

Based on the data collected, analyzed and the findings derived in the present study, the conclusion that has been drawn is that students who are conscientious tend to perform very high than students who display extraversion. It is thus concluded that conscientiousness shows a positive relationship students' achievement motivation. Implying that when students' are conscientious (efficient, hardworking, attainment oriented and preparedness) achievement motivation would be also raised positively. The study also concludes that the level of students extraversion is low based on the studied sample.

7. RECOMMENDATIONS

The study thus recommends that teachers should guide students to identify their personality traits and encouraged them to strive to develop their traits in order to be successful in their pursuit. Students should be encouraged to pay more attention on developing personality traits that promotes high achievement such as conscientiousness, which will promote high achievement motivation and teachers should encourage group assignments requiring cooperation among students in order to improve communication and achievement motivation.

CONSENT

As per international standard or university standard, participant's written consent has been collected and preserved by the author(s).

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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