

ADOLESCENTS' ENTREPRENEURIAL BEHAVIOUR: THE PREDICTIVE EFFECT OF THE BIG FIVE PERSONALITY FACTORS.

ADENUGA, R. Alaba PH.D

Educational Foundations and Management (EFM)
Faculty of Education, Olabisi Onabanjo University,
Ago - Iwoye, Ogun State, Nigeria
E-mail: alabaadenuga2005@yahoo.com

Phone: +2348034753633, + 2348056226591

AYODELE, Kolawole Olanrewaju

Office of Institutional Effectiveness
Babcock University Ilishan,
P.M.B. 21244, Ogun State, Nigeria
E-mail: ayodelek@babcock.edu.ng,
ayodelewole@gmail.com

Phone numbers: 08060253428, 08055676925

ABSTRACT

This study examined the effect of the big-five personality dimensions on adolescents' entrepreneurial behaviour. One hundred and fifty (150) adolescents were randomly selected and participated in the study. Data were collected using two instruments with already established psychometric properties. These instruments are Robinson et al. (1991)'s Entrepreneurial Attitudes Orientation Survey, and (ii) John and Srivastava (1999)'s Big Five Inventory (BFI). Multiple regression analysis (stepwise) statistical method was used to test the two hypotheses formulated for the study at .05 level of significance. The outcome of the analysis revealed that 33.1% of the total variance in adolescents' entrepreneurial behaviour was accounted for by the predictor variables. The most potent factors to the prediction of entrepreneurial behaviour among the participants were conscientiousness and openness to experience personality type. Based on the findings of this study, counselling implications were discussed and recommendations were made.

Keywords: *Adolescents, entrepreneurial behaviour, personality factors, neuroticism, extraversion, openness to experience, agreeableness, conscientiousness.*

Introduction

It's no more a gainsaying that "entrepreneurship is gaining increasing respect from the scholars as a field of research as well as practical application worldwide as a means to achieve wealth creation and personal fulfillment" (Ma and Tan, 2006). In the words of Kuratko, (2006) "History has proven that with each economic downturn, it is the entrepreneurial drive and persistence that brings us back".

Entrepreneurship has been acknowledged by Dickson et al, (2008) as an essential feature and performance index of organization and economies. They assert that "entrepreneurship contributes in an immeasurable ways toward creating new job, wealth creation, poverty reduction, and income generating for both government and individuals". Also, Shane and Venkataraman, (2000) affirms that "entrepreneurship is a mindset that encourages creativity and innovation, changing the game, and being unique".

Like all behaviors, entrepreneurial behavior may be influenced by factors other than an individual's interest and socio-economic factors. One of such factor is a person's behavioral and mental characteristics – personality factors. Thus, underlying individual's innovative and creative behavior is personality which is crucial to his/her survival. Undergoing entrepreneurial conditions has been linked to personality (Ciavarella et al. (2004), while the likelihood of engaging in certain coping strategies (David & Suls, 1999), and the effectiveness or outcomes of these coping strategies (Gunthert et al., 1999).

Personality usually refers to that, which is unique about a person, the characteristics that distinguish people. Therefore, thoughts, emotions, and behaviours as such do not constitute a personality, but rather, the dispositions that underlie these elements. Personality implies predictability about how a person will act or react under different circumstances (Owoseni, 2011). This according to Mount & Barrick (2002) includes "social (e.g., extraversion and impulsiveness)", "perceptual (e.g., openness)", and "cognitive (e.g., neuroticism) characteristics".

However, Ayodele & Nwosu, (2011) and Costa & McCrae, (1992) agreed that personality type this days are best studied using the big-five personality elements. "The Five-Factor Model is a broad based taxonomy of personality dimensions that arguably represent the 'minimum number of traits' needed to describe personality" (Lee-Baggley, Preece & DeLongis, 2005; Mount & Barrick, 2002; David & Suls, 1999; McCrae & Costa, 1985). The identified personality elements are Agreeableness (A), Conscientiousness (C), Extraversion (E), Neuroticism (N), and Openness (O).

In psychology, the Big Five personality factors are the classification of a person's personality into the categories of neuroticism, extraversion, agreeableness, conscientiousness and openness to experience. The 'Big Five', as they are called are five broad factors of personality traits discoverer through empirical research (Goldberg, 1993 cited in Ayodele & Nwosu, 2011).

The Big Five personality factors can be summarised as follows:

- Neuroticism:** A tendency to easily experience unpleasant emotions such as anger, anxiety, depression, vulnerability, hostility and impulsiveness
- Extraversion:** Energy, urgency and the tendency to seek stimulation and the company of others.
- Conscientiousness:** A tendency to show self-discipline, act dutifully and aim for achievement.
- Agreeableness:** A tendency to be compassionate and cooperative rather than suspicious and antagonistic towards others.
- Openness to experience:** Appreciation for art, emotion, adventure, unusual ideas, imagination and curiosity.

The Big-five Personality Elements and Entrepreneurial Behaviour

Neuroticism (N): People with neurotic characteristics are said to be exhibiting emotional problems related to aggression, depression, anxiety; and have a tendency to be impetuous and awkward (Lee-Bagglely, Preece & DeLongis, 2005; McCrae, 1992). Individual higher on neuroticism was found to have “hostile reactions, catharsis (venting of negative emotions), confrontative coping” (David & Suls, 1999) or “interpersonal withdrawal” (O’Brien & DeLongis, 1996). Neurotic-characterized individual have also been reported to exhibit zero tolerance to finding solutions to any problem encountered (Lee-Bagglely, Preece & DeLongis, 2005; David & Suls, 1999).

In addition, neuroticism is connected to weaker psychological and physiological health (Lahey 2009). The habit of neurotic people to have negative emotions and to be angry (Lahey 2009) is perhaps not beneficial with respect to relations or communications with other stakeholders (see Barrick et al. 2001). Hence neuroticism is likely to cultivate interpersonal problems.

Extraversion (E): Extraverts have a propensity to experience positive emotions and tend to be sociable, warm, cheerful, energetic, and assertive (Lee-Bagglely, Preece & DeLongis, 2005, McCrae, 1992; McCrae & Costa, 1987). Researches have shown that “individuals higher on E tend to use more adaptive forms of emotion-focused coping” (Hooker et al., 1994; McCrae & Costa, 1986), such as “support seeking” (Amirkhan, Risinger & Swickert, 1995; David & Suls, 1999; Hooker et al., 1994; Watson & Hubbard, 1996), “positive thinking or reinterpretation” (McCrae & Costa, 1986; Watson & Hubbard, 1996), and “substitution and restraint” (McCrae & Costa, 1986).

Barrick et al. (2001), Hurtz and Donovan (2000), Salgado (1997), and, Barrick and Mount (1993) in their various studies suggest that “extraversion is correlated to the performance of managers in general”. In addition, Gellately and Irving (2001) revealed that “managers with extraversion behaviour perform better on average in a high occupational autonomy tasks”.

Openness to Experience (O): Studies by Costa & McCrae (1992); McCrae, (1992); McCrae & Costa, (1987) revealed that “individual high on O tend to be creative, imaginative, curious, psychologically minded, and flexible in their thinking; and they are likely to experience a diversity of emotions, to have broad interests and a preference for variety, and to hold unconventional values”.

Indication from those individuals higher in openness to experience shows their engagement towards positive reappraisal engagement (O’Brien & DeLongis, 1996; Watson & Hubbard, 1996); and their survival perceptions are higher (Watson & Hubbard, 1996).

An environment characterized with innovation and creativity encourages personnel performance especially the managers, which is said to be positively influenced by openness to experience. “In other words, open entrepreneurs may develop adaptations that are beneficial in fast changing or uncertain environments” (Burke and Witt 2002).

An awareness of other people’s needs and aspirations is critical to organizational success. This assertion corroborates the view that “openness is related to occupational success in dyadic job-settings” (Barrick et al. 1998) and “in team jobs” (Barrick et al. 2001).

Agreeableness (A): Agreeableness individuals according to McCrae, (1992) incline towards altruistic, acquiescent, trusting and helpful. “Consistent with models of A, individuals higher on A are more likely to cope in ways that engage or protect social relationships such as seeking support and avoiding confrontation” (O’Brien & De- Longis, 1996). Individual with high tendency of agreeableness appear “less likely to employ emotion focused coping strategies such as self-blame, avoidance, wishful thinking” (Lee-Bagglely, Preece & DeLongis, 2005; Hooker et al., 1994), or “disengagement (Watson & Hubbard, 1996) as compared to those lower on A”.

Though, Barrick et al. (2001); Hertz and Donovan 2000; and Salgado (1997) reported no amazing relationship between managerial success and agreeableness personality. In spite of their reports, agreeableness personality was connected to better managerial success in market environment characterized by innovation (Wilfling, Cantner, & Silbereisen, 2011).

Conscientiousness (C): Those higher on C tend to be organized, reliable, hardworking, determined, and self-disciplined (Lee-Bagglely, Preece & DeLongis, 2005). Limited researches have examined the impact of conscientiousness on individual adjustment, but with no consistency in report findings. Though, some studies have shown that conscientiousness is a strong indicator of life adjustment. “Typical traits of this factor are thinking before acting, delaying gratification, following norms and rules, and planning, organizing, and prioritizing tasks” (John and Srivastava 1999 cited in Wilfling, Cantner, & Silbereisen, 2011).

Task and goal oriented modifications and survivals was attributed to conscientiousness personality traits (Gellately 1996), and was essential in the management of new undertakings. Failure in any life ventures

might be negatively related to the degree of conscientiousness personality an individual possesses, which is as a result of low managerial success. On the hand, Barrick et al. (2001), Hurtz and Donovan (2000), Salgado (1997) attributed “a low managerial performance to a low level of conscientiousness”.

Related Empirical Studies

Study by Kato and Honjo (2010) shows that “disregarding heterogeneity among entrepreneurial exits, which may entail a wrong understanding of the impacts that affect entrepreneurial exit and survival”. Conversely, Wilfling, Cantner, & Silbereisen (2011) reported that “it impedes the economic interpretation of entrepreneurial longevity as well”. A meta-analysis report reveals a generally conspicuous deficiency in studying failure in entrepreneurship is the negligence to project beyond failure, which prevents continuity of entrepreneurial activities (Wennberg et al. 2010, Amaral et al. 2007).

Interrelationship among the big-five personality dimensions and business survival was measured by Ciavarella et al. (2004) and reported that “openness is negative and conscientiousness is positive related to this measure”. They explained further that all the other components of the personality dimensions (agreeableness, extraversion and neuroticism) failed to have significant relationship with business survival. On the other, hand entrepreneurs who were high on extraversion exhibited more innovative behavior than those who were low on it was reported by Owoseni (2011).

Wilfling, Cantner, & Silbereisen (2011) reported that “agreeable entrepreneurs have a lower probability to fail at all times from the startup of their firms. In contrast, conscientiousness increases the failure hazard rate at the time of launching a firm, even if this effect diminishes over time. Neuroticism, openness, and extraversion are seemingly not related to the hazard of entrepreneurial failure in highly innovative industries”. Conscientiousness in particular added to the survival of business venture, while openness to experience hindered it (Ciavarella et al. 2004).

Rationale for the Study

Some researchers have tried to establish the relationship between vocation and personality types/dimensions. For instance, Adeyemo, (2001); Salami, (2001); Sullum, Clark, & King, (2000) worked on distinctive personality traits such as self-efficacy, self-esteem, self-motivation, and locus of control. Eysenck & Eysenck, (1985) and Cattell & Eber, (1964) in their various used more global personality magnitudes in the establishment of the relationship between personality dimensions and career or vocation. Smith & Williams (1992) asserts that “The main problem faced by this kind of research is the use of a large diversity of personality constructs, frequently redundant and measured with different instruments”

The main purpose of this study, therefore, is to determine the extent at which personality factors (neuroticism, extraversion, openness to experience, agreeableness and conscientiousness) influence the adolescents’ entrepreneurial behaviour.

Hypotheses

Two hypotheses were tested at 0.05 level of significance in order to achieve the purpose of the study:

1. There is no significant composite contribution of the big five personality elements to the prediction of adolescents' entrepreneurial behaviour.
2. There is no significant relative contribution of the Big Five personality elements to the prediction of adolescents' entrepreneurial behaviour.

METHODOLOGY

Research Design

An ex-post-facto survey research design was adopted for this study, while two (2) of questionnaires were used for the collection of data among the participants of the study.

Participants

150 participants comprising of 63 males and 87 females were selected through stratified random sampling technique from SS3 students in five randomly selected secondary schools in Ikenne Local Government Area of Ogun State, Nigeria. The age range of the participants was between 14 and 19, while the mean age was 15.7 years with a standard deviation of 5.18.

Measures

1. **Entrepreneurial Attitudes Orientation Survey Instrument (EAO):** Entrepreneurial Attitude Orientation (EAO) scale developed and tested by Robinson et al. (1991) was used for the collection of data on adolescents' entrepreneurial attitude. As the EAO scale was constructed with entrepreneurs and non-entrepreneurs in mind, certain changes were made where necessary to suit the secondary school context. Example of the EAO scale is "I will feel like a total failure when my business plans don't turn out the way I think they should."
2. **The Big Five Inventory (BFI):** The BFI is a multi-items inventory of 50 items developed by John and Srivastava (1999), sub-divided into 5 traits namely Neuroticism, Extraversion, Openness to experience, Agreeableness and Conscientiousness. The items included "Make plans and stick to them," "Have a vivid imagination," Respondents indicate how they generally feel by rating the degree of their feelings on a six-point scale where 1="extremely disagreed", 2="very disagreed", 3="somewhat disagreed", 4="somewhat agreed", 5="very agreed", and 6="extremely agreed". The BFI is reported to have overall alpha of 0.84 while the neuroticism scale = .82; extraversion = 0.86; openness to experience = 0.82; agreeableness = 0.86 and conscientiousness = 0.87. BFI has been used among Nigerian subjects and reported valid and not culturally biased (Ayodele & Nwosu, 2011; Idowu & Oledikwa, 2003)

Procedure

A set of questionnaires for assessing the variables of the study were given out to the participants with the help of two research assistance (colleagues). A total of 180 questionnaires were distributed while 150 questionnaires found useable for the data analysis.

Data Analysis

The data collected from the respondents were subjected to statistical analysis of simple percentages, and multiple regression statistical analysis.

Table 1: Analysis of the composite effect of the big-5 personality factors on adolescents' entrepreneurial behaviour

R	= 0.437 ^a				
R ²	= 0.339				
Adj R ²	= 0.331				
SE	= 2.106				
Model	sum of squares	Df	Mean of squares	F	sig
Regression	3876.475	5	775.295	9.870	.000 ^a
Residual	11310.871	144	78.548		
Total	18585.976	149			

P<.05

Table 1 shows the regression value for the combined effect (0.437) and the adjusted R² (0.331). This implies that 33.1% of the variance in the adolescents' entrepreneurial behaviour is accounted for by the big-5 personality factors. The table also shows that the f-value (9.870) is significant at .000, a level that is less than 0.05. This shows that the personality factors have significant effect on entrepreneurial behaviour of the adolescents used for the study. The implication of this study is that individual's needs, drives, attitudes, beliefs, and values are the primary determinants of an entrepreneur's behavior, which are all embedded in one's personality.

Table 2: *Test of significance of Regression Coefficients*

Model	Unstandardized Coefficients		Standardized coefficient	t-ratio	Sig
	B	SE	Beta		
(constant)	32.006	2.698		12.179	.000
Neuroticism	-.342	.116	-.348	1.208*	.000
Extraversion	-.307	.128	-.495	2.061*	.011
Conscientiousness	-.363	.189	.811	8.103*	.201
Openness to exp.	-.288	.107	.652	6.102*	.010
Agreeableness	-.401	.122	-.476	2.005*	.000

a. Dependent variable: Entrepreneurial Behaviour

*Significant at <.05

Table 2 shows the relative contribution of each predictor variable to the variance in interpersonal relationship between lecturers and students. Conscientiousness has the highest beta value (.803) significant at less than .05 alpha level; followed by openness to experience with beta value of .652, followed by Extraversion (-.495), followed by agreeableness (-.476); and lastly by Neuroticism (-.348), all significant at 0.05. Therefore, Conscientiousness and openness to experience personality type were found to be the most potent factors to the prediction of entrepreneurial behaviour among the adolescent participants.

Discussion

The findings of the first hypothesis which stated that “There is no significant composite contribution of the big five personality factors to the prediction of adolescents’ entrepreneurial behaviour” indicated a significant composite contribution of the personality factors on the adolescents’ entrepreneurial behaviour. Therefore, the null hypothesis was rejected. The result is consistent with the findings of Wilfling, Cantner, & Silbereisen (2011), Kato and Honjo (2010), Wennberg, Wiklund, DeTienne, and Cardon, (2010) that personality factors to a greater extent determine the success or failure of a business venture.

The outcome of the second hypothesis indicated that the big five personality factors were significant predictors of adolescents’ entrepreneurial behaviour. The study further found that conscientiousness, openness to experience, extraversion, agreeableness, and neuroticism are potent personality factors to the prediction of entrepreneurial behaviour among secondary school students. It is not surprising to find conscientiousness to be the most potent predictor than other predictor variables because conscientiousness trait has been found to be crucial for task- and goal oriented adjustments in life. These life adjustments are powerfully significant in handling new projects.

Results from this study support earlier studies (Saulsman & Page, 2004; Barrick & Mount, 1991), which found the predictive value of the Big Five across a wide range of behaviours. Also, empirical evidence attributes venture survival to a high level of conscientiousness (Ciavarella et al., 2004).

Conclusion

This study set out to examine the extent at which personality factors (neuroticism, agreeableness, extraversion, openness to experience and conscientiousness) influence the adolescents' entrepreneurial behaviour. This study shows that the Big Five Personality Factors are potent factors in the prediction of adolescents' entrepreneurial behaviour.

It is therefore conceptualized that believing in the importance of innovation, perceiving new business as an opportunity (rather than a risk), perceiving work as something that one creates (rather than receives), having self-efficacy in starting a new business, and holding a positive humanistic image of start-ups would each contribute to greater interest in creating a start-up.

Now that the Ogun State government has introduced entrepreneurship education as a compulsory programme in secondary schools, workable strategy should be adopted by the schools and government to assist the students incubate their entrepreneurial intention. This will help to influence students' attitude towards entrepreneurship.

Counselling Implications

The introduction of entrepreneurial counselling programs in schools will equip students with the necessary skills and mindsets required for successful entrepreneurship from their early years and also to instill in them the self-confidence and assurance required for launching business later in life.

The results call on school counsellors to design programmes that will enhance students' interest in entrepreneurship education. In relation to this, career information should be provided early enough for the adolescents, so that the students will be aware of the various occupational opportunities in their environment and how to be self-independent.

It is highly recommended that the aspect of the individual's personality that will enhance entrepreneurial behaviour should be fostered by the School Counsellors through appropriate skills development programme.

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