SUBJECTIVE WELLBEING AND COGNITIVE TEST ANXIETY AS PREDICTORS OF STUDENTS' ACADEMIC ACHIEVEMENT IN BUSINESS RELATED SUBECTS

— — — — — — — — — —

[1]Margaret Moronke **DOSUNMU** &
[2]Janet Oyebola **ADETAYO**

[1]*Deparment of Educational Foundations and Management, Olabisi Onabanjo University, Ago-Iwoye, Ogun State, Nigeria*
[2]*Department of Science & Technology Education, Olabisi Onabanjo University, Ago-Iwoye, Ogun State, Nigeria*

Abstract

Academic achievement is the performance or outcomes that indicate the level of success that took place during teaching and learning process. A lot of factors are responsible for the performance of students in Business Studies which may include subjective wellbeing, cognitive test anxiety, teacher-related factors, school-related factors and the student-related factors. The main purpose of this research is to examine how subjective wellbeing and cognitive test anxiety could predict the academic achievement of students in Business Subjects. Three research questions were raised and answered in this study. Three hundred (300) students in Commercial class constituted the sample for the study using simple sampling technique. Three self-designed and validated instruments were used for the purpose of data collections which are Subjective Wellbeing questionnaire (r = 0.76), Test Anxiety questionnaire (r = 0.82) and Academic Achievement Test on Financial Accounting and Commerce. Data collected was analyzed using the statistical method of Regression analysis. Results revealed

that subjective wellbeing and cognitive test anxiety jointly and relatively had a significant influence on academic achievement of students in Business Subjects. Also, there was a significant difference in the male and female students' cognitive test anxiety in Business Subjects. Therefore, it was concluded that subjective wellbeing and cognitive test anxiety are part of the factors responsible for students' academic achievement in Business Subjects. It was recommended among others that academic confidence should be tackled at home by the parents in building a good subjective well-being in their children. Parents must build in their children a level of confidence to face academic challenges, as a willing heart is needed to achieve academic excellence. No student should be seen as a failure; as such every student should be attended to independently to bring out the best in them.

Keywords: Subjective Wellbeing, Cognitive Test Anxiety, Academic Achievement, Business Related Subjects

Introduction

The end of a term or session when the performances of students are determined through examination is a critical time in the life of the students. This is a time they exhibit nervousness and apprehension while sitting for the examination. Academic achievement of a student determines how well the student had mastered what had been taught; it leads to determining the grades scored by all the students, and further determines the students who are to move to the next class.

Academic achievement can be regarded as a long-term endeavour, for example, having a degree while performance is short-term, that is performance makes ways for achievement.

It is the level of attainment of success in a study. Academic achievement is the end-product of all educational endeavour (Maiyo &Siahi, 2015). Steinmayr (2014) opined that academic achievement prepares students for future career, thus making it easy for them to enter competitive fields. It avails the students the opportunity to

further their education and engage in future occupation. As opined by Ng, Huebner and Hills (2015) academic achievement was termed to be values necessary for the attainment of success for the students, teachers and the school. It is a performance indicator to the extent of which a student has accomplished specific goals and this can be measured through the score obtained on a subject or course.

In order to achieve high academic achievement in Business Studies, the students must be emotionally stable, as Business subjects require concentration and some level of seriousness. Business Studies were designed to make students to be self-reliant, thereby making them to be employers of labour. The level of their academic achievement; thus prepares them for future career and make them competitive in the market (Steinmayr, 2014). Jonsdottir (2012) asserted that tests scores are predictor of future success as measured by education, occupation and income. Busseri and Sadava (2011) defined subjective well-being to mean how an individual evaluate their lives, as such it is the overall state of wellness. Diener, Inglehart and Tay (2013) categorized subjective well-being into two (2), namely: affective well-being and cognitive well-being. Affective well-being is the presence of happiness and absence of unpleasant emotions. The cognitive well-being is the overall evaluation of what satisfies an individual. But, Ryan and Deci (2011) emphasized that subjective well-being consisted of three (3) components, which are: life satisfaction, positive mood and not being in a negative mood.

When a student is happy with a particular subject, there is bound for a positive result to be achieved in form of performance. A negative subjective well-being and attitude will result in poor performance. This was supported with the assertions of Mega, Ronconi and DeBeni (2014) that positive emotions are associated with better self-regulated learning, high motivation and better examination grades.

Anxiety is a state of uneasiness towards a phenomenon. As explained by Barrow (2012), it is an emotion which is experienced by individual and it is one of the major constructs of human behaviour. Woolfork (2009), noted that an anxious person may experience perceptual distortions of non-psychotic proportions, which may reflect in attention process and thereby critically affect

the cognitive performance and information processing ability of such person. Akinleke and Adeaga (2014) affirmed the various factors which can influence test anxiety as; environmental factors (Aremu & Sokan, 2003); teacher factors and psychological factors (Ngwoke & Mbaegbu, 2015). It has been observed that test anxiety does not deal with average students alone, but the brilliant students also experience this through examination panicking and lack of self-esteem. Though Harvey and Goudvis (2000) have shown that, effective study skills have a positive influence on academic performance, thereby negating test anxiety. Birjandi and Alemi (2010) affirmed that test anxiety is not completely bad; as a low level of it is regarded to be normal and needed for concentration, motivation and help the students to stay both physically and mentally active. But Anastasi and Urbina (1997) as cited by Ahmed (2016) opined that, high level of test anxiety is dangerous, as it can cause emotional setback, concentration difficulty and worries, thus having a negative effect on learning.

Yasmin, Ghani and Spielberger (2012) defined test anxiety as a feeling of disturbance and distress among the students. Cassady (2015) asserted that cognitive test anxiety have a significant negative impact on students' academic performance. Cohen (2004) argued that test anxiety affect people in all fields of life, especially when people are to be evaluated, assessed or graded with regards to their abilities, achievements or interest. Based on the foregoing, the study intends to investigate how subjective wellbeing and test anxiety can predict academic achievement in Business subjects.

Achievement is the attainment of educational endeavours. It is the joy of every teacher to see that learners achieve the educational objectives. Researchers had dealt with various factors which could lead to poor academic achievement, ranging from low cognitive ability, government factors, teachers' variables, medical conditions of the students, to poor study habits etc. At the mention of test or examination, many students panic thereby leading to disorganized minds and work. Oftentimes students who are high in test anxiety are usually poor performers. Optimistic students see themselves as emotionally stable to handle any form of examination or test. A good subjective well-being enhances cognitive performance. This

research work examined if subjective well-being and cognitive test anxiety can predict the academic achievements in Business Subjects of Students in some selected secondary schools in Ijebu-Ode Local Government area of Ogun State.

Purpose of the Study

The purpose of this study is to establish if:

i.   Subjective well-being will predict students' achievement in some Business related subjects in Ijebu-Ode Local Government Area of Ogun State.

ii.   Cognitive test anxiety will predict students' achievement in some Business related subjects in Ijebu-Ode Local Government Area of Ogun State.

iii.   Subjective well-being and Cognitive test anxiety when taken together will predict students' achievement in some Business related subjects in Ijebu-Ode Local Government Area of Ogun State.

Research Questions

1.   Is there any significant influence of subjective well-being on academic achievement of students in Business Subjects?

2.   Is there any significant influence of cognitive test anxiety on academic achievement of students in Business Subjects?

3.   Is there any significant combined influence of subjective well-being and cognitive test anxiety on academic achievement of students in Business subjects?

Methodology

The descriptive survey research design was adopted. This is appropriate because all the variables would not be manipulated but would be described as they exist. The study population comprised of all the Senior Secondary School students in Ijebu-Ode, Ogun State. Three hundred (300) Senior Secondary School Students in Commercial Class constituted the sample for the study and this was done through simple random sampling technique. Three self-designed instruments were used for data collection which are:

Academic Achievement Test, Subjective Well-being questionnaire and Test Anxiety questionnaire.

Subjective well-being was measured by a 26-item questionnaire which measure affective balance and life satisfaction of the respondents with a reference base consistent for the students. The questionnaire provided the respondents with items which best describes the students. [Each item in the scale used a 4-point frequency based Likert scale]. Cognitive test anxiety was a self-designed questionnaire which was measured by a 20-item which measured the test anxiety of students. It provided the respondents with items which best describes their anxiety towards test or examination. The academic achievement was measured using Achievement test on Commerce and Financial Accounting after the test items were subjected to item analysis, it was established that the discriminating indices and difficulty index of item differentiate well between the above average and below average students. Regression analysis and analysis of variance were the statistical tools used to analyze the data collected for the study at 0.05 level of significance and to provide answers to the research questions raised.

Results

Research Question 1: Is there any significant influence of subjective well-being on academic achievement of students in Business subjects?

Table 1: Regression analysis on Subjective Well-being and Academic Achievement

Regression Model	Source	Anova Sum of Squares	Df	Mean square	F	Sig.
R = .332[a]	Regression	1185.90	1	1185.9	36.81	.000[b]
R² = .110Adj.	Residual	9598.17	298	32.2		
R² =-.107	Total	10784.08	299			

Table 1 revealed that subjective well-being and academic achievement yielded a co-efficient of regressions (R) of 0.332 and a multiple regression square of 0.110. This shows that 11% of the total variance in academic achievement is accounted for by subjective well-being. The table also indicated that the analysis of variance of the regression data produced an F-ratio value of 36.819 which is significant at 0.05 level. This means that subjective well-being had a significant influence on academic achievement of the students of Business subjects.

Research Question 2: Is there any significant influence of Cognitive test anxiety on academic achievement of students in Business subjects?

Table 2: Regression analysis of Cognitive Test Anxiety and Academic Achievement

Regression Model	Source	Anova Sum of Squares	Df	Mean square	F	Sig.
R = .327ᵃ	Regression	1155.93	1	1155.9	35.77	.000ᵇ
R· = .107Adj.	Residual	9628.14	298	32.3		
R· =-.104	Total	10784.08	299			

Table 2 showed that Cognitive test anxiety and academic achievement yielded a co-efficient of regression (R) of 0.327 and a regression square of 0.107. This shows that 7.1% of the total variance in academic achievement is accounted for by the cognitive test anxiety. The table also indicated that the analysis of variance of the regression data produced an F-ration value of 35.77 which is significant at 0.05 level of confidence. This means that the cognitive test anxiety had a significant influence on academic achievement of the students in Business subjects.

Research Question 3: Is there any significant combined influence of subjective well-being and cognitive test anxiety on academic achievement of students in Business subjects?

Table 3: Summary of the Multiple Regression Analysis of Subjective Well-being, Cognitive Test Anxiety and Academic Achievement.

Regression Model	Source	Anova Sum of Squares	Df	Mean square	F	Sig.
R = .352[a]	Regression	1336.56	2	668.28	21.00	.000[b]
R = .124Adj.	Residual	9447.51	297	31.81		
R =-.118	Total	10784.08	299			

Table 3 revealed that subjective well-being, cognitive test anxiety and academic achievement yielded a co-efficient of regression (R) of 0.352 and a multiple regression square of 0.124. This shows that 12.4% of the total variance in academic achievement was accounted for by the combination of subjective well-being and cognitive test anxiety. The table further indicated that the analysis of variance of the multiple regression data produced an F-ration value of 21.009 which was significant at 0.05 level of confidence. This means that subjective well-being and cognitive test anxiety had a significant influence on academic achievement of students in Business subjects.

Discussions

The main objective of the study is to know if subjective well-being and cognitive test anxiety could predict the academic achievement of students of Business subjects in Ijebu-Ode of Ogun State. Research question one stated that: "Is there any significant influence of subjective well-being on academic achievement of students in Business subject? The result showed that there is a significant influence of subjective well-being on academic achievement of students in Business subjects. Subjective well-being is a state of mind which sees possibility and is optimistic in every situation of life. It could both be positive or negative. A positive mind enhances positive decision making, which will spur a student to make the right choices in his/her academics.

The result is in agreement with the findings of Dierner (2012) who affirmed that subjective well-being enhances cognitive performance, as it was discovered that a positive subjective well-

being induces creativity and imagination by promoting a more flexible style of thinking, which leads to a broader cognitive context. It has been discovered that a positive mood enhances academic achievement. The result is also supported by Langevin (2013), which discovered a positive correlation between being happy and the overall GPA of the students. Diener and Seligman (2012) also opined that, happiness is a major factor which can improve other aspects of life of a student. A happy student is not likely to be depressed; therefore, a happy and brilliant student would rather put in their best for a better performance.

Research question two stated that; "Is there any significant influence of cognitive test anxiety on academic achievement of students in Business subjects? The result revealed that there was a significant influence of cognitive test anxiety on academic achievement of students in Business subjects. The result finds support from the research works of Harvey and Goudvis (2007), which examined the effect of cognitive test of students on comprehension and understanding of expository test passages. The work revealed that there is a significant impact of cognitive test anxiety on performance, which by implication means that, test anxiety often interferes with learning. Salend's (2012) work also affirmed that test anxiety and academic performance are negatively correlated with each other. The study reported that students who experience low level of test anxiety can possibly score higher than those who experience high levels of test anxiety. The result of the work is in disagreement with the findings of Oladipo and Ogungbamila (2013), which concluded that test anxiety has no significant relationship with students' achievement level.

Research question three stated that; "Is there any significant combined influence of subjective well-being and cognitive test anxiety on academic achievement of students in Business subjects? The result revealed that there was a significant combined influence of subjective well-being and cognitive test anxiety on academic achievement of students in Business subjects. The works of Rana and Mahmood (2010) affirmed that, worry, negatively have influence on students' GPA. Also, Thomas and Gadbois (2007) reported that

test anxiety was a significant predictor of mid-term examination grades of students.

Conclusion

The study examined the prediction of subjective well-being and cognitive test anxiety on academic achievement of Business Studies students. The result revealed that there is a relationship among subjective well-being, cognitive test anxiety and academic achievement. The results further showed a significant influence of subjective well-being on academic achievement. Also cognitive test anxiety had a significant influence on academic achievement of Business Studies students.

Recommendations

Based on the findings from the study, it was recommended that academic confidence should be tackled at home by the parents by building a good subjective well-being in their children. Parents must build in their children a level of confidence to face academic challenges, as a willing heart is needed to achieve academic excellence. A good study pattern of a student gives them some level of confidence over test anxiety, as such, students should adopt a better study habit which will make them to be well-prepared and thereby have less of test anxiety. The teachers must help in building the confidence level of the students by treating past questions with them and covering of important topics which are likely to come out in the examination.

References

Akinleke, W. O. (2014). Contributions of test anxiety, study habits and locus of control of academic performance. *British Journal of Psychology Research 2*(1), 14 – 24.

Anastasi, A. & Urbina S. (1997). Psychological testing (7th ed.). Prentice Hall, Pearson Education.

Aremu, A. O. & Sokan, B. O. (2002). Multi casual evaluation of academic performance of Nigeria learners: Issues and implication for national development. An unpublished paper.

Barrow, D.H. (2012). Anxiety and its disorders: The nature and treatment of anxiety and panic (2nd ed.), New York: Guilford Press.

Birjandi, P. & Alemu, M. (2010). The Impact of test anxiety on test performance among Iranian EFL learners' brain. *Broad Research in Artificial Intelligence and Neuroscience*. 1(4), 45 – 68.

Busseri, M. A. & Sadava, S. W. (2011). A review of the tripartite structure of subjective well-being: implications for conceptualization, operationalization, analysis, and synthesis. *Personality and Social Psychology Review.* 15, 290 – 314.

Cassady, J. C. (2015). Using factor mixture modeling to identify dimensions of cognitive test anxiety. *Learning and Individual Differences. 41*, 14-20.

Diener, E. (2012). Assessing subjective well-being: Progress and opportunities. *Social Indicators Research. 31*, 103-157.

Diener, E., Inglehart, R., & Tay, L. (2013). Theory and validity of life satisfaction scales. *Social Indicators Research.* 112(3), 497 – 527.

Diener, E., & Seligman, M. (2017). Subjective well-being: Three decades of progress. A*merican Psychological Association, Psychological Bulletin. 125*, 276-302.

Harvey, S. & Goudvis, A. (2007). Strategies that work: teaching Comprehension to enhance understanding. *International Journal of Psychology*. 8(2), 14 – 25.

Jonsdottir, D. A. (2012). Academic achievement in 4th and 7th grade: the contribution of gender parental education, achievement goals and intelligence. Reyk, Avik: Island.

Langevin, E. L. (2013). Undergraduate student happiness and academic performance: A correlation study". Doctoral dissertation, University of Phoenix, Arizona.

Maiyo, J. & Siahi, E. A. (2015). Study of the relationship between study habits and academic achievement of students: a case study of Spicer Higher Secondary School, India. *International*

Journal of Educational Administration and Policy Studies. 7(7), 134-141.

Ronconi, L. & DeBeni, R. (2014). What makes a good student? How emotions, self-regulated learning and motivation contribute to academic achievement. *Journal of Educational Psychology*. 106 (1).

Ng, Z. J., Heuber, S.E. & Hills, K. J. (2015). Life satisfaction and academic performance in early adolescents: Evidence for reciprocal association. *Journal of School Psychology*. 53 (6), 479 – 491.

Ngwoke, D. U. Mbaegbu, A. N. (2015). Techniques for creating positive classroom climate for students. *The Educational Psychologist*. 9 (1), 215 – 233.

Oladipo, S. E. & Ogungbamila, A. (2013). Academic level and students' faculties factors of test anxiety among undergraduates in Nigeria. *International Journal of Development and Sustainability*. 2 (2), 704-710,

Rana, R. A., & Mahmood, N. (2010). The relationship between test anxiety and academic achievement. *Bulletin of Education and Research*. *32*, 63-74.

Ryan, R. M. & Deci, E. L. (2011). On happiness and human potentials: A review of research on hedonic and cudaimonic well-being. *Annual review of Psychology*. 52 (1), 141 – 166.

Salend, S. J. (2012). Teaching students not to sweat the test. *Phi Delta Kappan. 93 (6)*, 20–25.

Steinmayr, R. (2014). Academic achievement. In L. H. Meyer (Ed.), Oxford bibliographies online: Education, New York, NY: Oxford University Press.

Thomas, C. R. & Gaidbois, S. A. (2007). Academic Self-handicapping: the role of self-concept clarity and students' learning strategies. *British Journal of Educational Psychology*. 77(1), 101 – 119.

Yasmin, N. F., Ghani, R. & Spielberger (2012). Gender differences in test anxiety and academic performance of Medical Students. *International Journal of Psychology and Behavioural Sciences*. 2 (2), 38 – 43.