

CORRELATIONAL STUDY ON THE IMPACT OF STRESS ON PRE-SERVICE TEACHERS' ACADEMIC ACHIEVEMENT IN KWARA STATE.

IBRAHIM ALI ALLAFIAJI
Agbede Polygate, Ilorin, Kwara State, Nigeria

Abstract

This study examined the Impact of Stress on Pre-Service Teachers' Academic Achievement in Kwara State. The design adopted for the study was correlational type of survey design. However, 384 students, both male and female were purposively selected for the study using random sampling technique. Two instruments were used for data collection. They are; Pre-Service Teachers Stress Questionnaire (PTSQ) and Pre-service Teachers Academic Performance Scores (PSTAPS). The research instruments were duly validated by experts and have reliability coefficient index power of 0.87 and 0.84 respectively. The Pearson Product Moment Correlation Coefficient was used in the test of the null hypothesis postulated by the study. the study found that that significant relationship exist between stress and academic achievement of pre-service teachers in Kwara State College of Education, Ilorin ($r = -0.810$, $p = 0.000$). In the light of the foregoing, it is recommended among others that the college academic environment should be made conducive by improving on classrooms for lectures and amenities such as light, strong and uninterrupted internet connectivity and water supply system.

Keywords: Academic Achievement, Stress, Impact, Pre-Service Teachers, Correlation.

Introduction

Stress is considered as a circumstance that affects human life in different proportions. It is expressed as an internal pressure; feeling of unease, or fear attached to specific objects or situations, a personality characteristic of responding to certain situations. It is a non-specific response of the body to a demand. It is the result or failure to adjust to change, particularly the inability to respond properly to emotional or physical commination to the organism whether actual or imagined. Stress is personal and distinct to each individual such that what may be relaxing to one person may be stressful to another (Keil, 2004; Okorie, 2016). It is seen as a stimulus that interfere with the biological as well as psychological balance of an organism (Udoh & Ajala, 2005; Okorie, 2016).

Studies conducted have indicated that chronic and continued exposure to stressful condition leads to emotional, physical and mental disturbance of the students (Silver & Glicker, 1990; Melaku, Mossie & Negash, 2015). Persistent stress leads to low self-esteem of students, difficulty in handling different situation, sleep disorder, decreased attention and abnormal appetite which eventually effects the academic achievement and personal growth of students (Shapiro, Shapiro & Schwartz, 2000). Stress can also lead to improved performance and one of the reasons for this could be students approach to coping with stress (Davenport & Lane, 2006) and the other could be the environmental context (Post & Weddington, 1997).

Previous studies indicated that self-reported stress is associated with the presentation of anxious states and lower well-being (Carter, Garber, Ciesla, & Cole, 2006; Kessler, 1997; Robotham & Julian, 2006). A systematic review of 13 studies showed that in individuals undertaking higher education, self-reported levels of stress are associated with poorer quality of life and well-being (Ribeiro et al., 2017). Ongoing stress also precipitates the development of more serious mental health issues such as anxiety and depression (Kessler, 1997; Moylan, Maes, Wray, & Berk, 2013). The prevalence of anxiety is as high as 35% in tertiary students (Bayram & Bilgel, 2008; Eisenberg, Gollust, Golberstein, & Hefner, 2007; Ozen, Ercan, Irgil, & Sigirli, 2010) and the prevalence of depression is 30% (Ibrahim, Kelly, Adams, & Glazebrook, 2013). The reciprocal relationship between stress and depression and anxiety is well established (Dantzer, 2012; Dantzer, O'Connor, Lawson, & Kelley, 2011; Maes, 2008). Indeed, major stressful life events are one of the best predictors of the onset of depression (Kendler et al., 1995; Kessler, 1997). Accordingly, in young people the first onset of depression is often preceded by major life stressors (Lewinsohn, Allen, Seeley, & Gotlib, 1999).

Academic achievement is an accomplishment that has taken place as a result of exposure to a relatively defined learning experience (Halpern, 2000). Academic achievement may be put to varied uses. The achievement helps school make decisions about a students' placement in a particular class, acceptance into a program, or advancement to a higher grade level. Cohen and Swerdik (2010) states that students' academic achievement is helpful in determining the quality of instruction in a particular class, school, school district, or state. The American Psychological Association, the American Educational Research Association, and the National Council on Measurement in Education, noted that achievement scores are too limited and unstable to be used as the sole source of information for any major decision about student placement or promotion. Achievement scores should always be used in combination with other sources of information about student achievement when making important decisions about students (National Research Councils, 2001).

The World Health Organisation (1996) states that students must be healthy and emotionally secure to fully participate in education (World Health Organisation, 1996). Indeed, the abovementioned OECD survey reports that anxiety about schoolwork, homework and tests has a negative impact on students' academic performance in science, mathematics and reading. The survey highlights that top-performing girls report that the fear of making mistakes often disrupts their test performance (OECD, 2015). Students in the bottom quarter of academic performance report feeling far more stressed compared to those in the top quarter of academic performance. As many as 63% of students in the bottom quarter of science performance report feeling anxious about tests no matter how well prepared they are, while 46% of students in the top quarter report feeling anxious (OECD, 2015). This demonstrates that higher perceived stress levels are associated with poorer academic performance. Stressful life experiences as well as acute or chronic stress usually lead to depression which can interrupt the normative progression of developmental mile stones in students, both at home and in school. As such, stressful experiences and emotional difficulties are likely to undermine a variety of school-related competencies, including academic motivation and school engagement, goal orientation, scholastic performance and school conduct (Balarabe, 2003).

In Nigerian higher education institutions, the main task that faces the student is an intellectual one but the students' academic achievement is influenced and affected with a unique set of

stressors that may be overwhelming, thus, altering the ability to cope with the situation. A study by Shalshidar, Rao and Hedge (2009) shows that a large number of young people are moving through universities into adult life with fears of whether they will be able to find a job after graduating and even finding a suitable life partner. It has been widely recognized that learning is not an isolated process but is profoundly embedded in the complex biological, psychological and social aspect of an individual's functioning. Therefore, the academic success of students depend largely on how conducive and safe the learning environment is. Productive interaction depends on how well balanced a student is both cognitively and psychologically. When a student is mentally well organized and balanced, the Issue of good relationship, abstract thinking that demonstrated creative potentials, which leads to quality interaction can be guaranteed. Technical and scientific breakthrough cannot occur in an individual's life or society in a situation of inadequate mental health. It is in a state of sound mental fitness that people or society talk of meaningful contribution that guarantees functional development. Stress and how students are able to cope with it may affect their academic achievement.

At the tertiary education level, a large proportion of students lead two lives and dwell in two worlds. There is the world encompassed by what is offered and demanded at school. There is also the world consisting of the students' fantasies, perplexities, strivings and hopes (Okorie, 2016). These worlds are often widely separated. There is the scholar the learning institutions sees in the flesh; but there is also the hidden scholar, laboring with some concerns. These two lives and dwelling in two worlds could affect the academic achievement of students. It is against this background that this study examines the impact of stress on pre-service teachers' academic achievement in Kwara State, Nigeria.

Objective of the Study

The main objective of this study is to determine the impact of stress on pre-service teachers' academic achievement in Kwara State. Specifically, the study is aimed at finding out:

1. the relationship between stress and academic achievement of pre-service teachers in Kwara State College of Education Ilorin-Nigeria;

Research Question

The study asked the following question:

- i. What is the relationship between stress and academic achievement of pre-service teachers in Kwara State College of Education Ilorin-Nigeria?

Null Hypothesis

The study was guided by the following hypothesis:

H₀: There is no significant relationship between stress and academic achievement of pre-service teachers in Kwara State College of Education Ilorin-Nigeria?

Methodology

The population of this study comprised of all NCE regular students of Kwara state college of education, Ilorin. In this regard, Research Advisors (2006) table of determining sample size from a given population was used and 384 which is the highest sample size identified in the table. Simple random sampling technique was used to select the respondents. The sample was drawn from all three levels (i.e. NCE I, II & III). Two instruments were used for data collection.

They are; Pre-Service Teachers Stress Questionnaire (PTSQ) and Pre-service Teachers Academic Performance Scores (PSTAPS). Pre-Service Teachers Stress Questionnaire (PTSQ) was developed by Balarabe (2007). The aim of this Questionnaire is to elicit information about students stress signs or symptoms. Also, Pre-service Teachers Academic Performance Scores (PSTAPS) was collected from the school of education. The research instruments were duly validated by experts and have reliability coefficient index power of 0.87 and 0.84 respectively. The Pearson Product Moment Correlation Coefficient was used in the test of the null hypothesis postulated by the study.

Results

Hypothesis Testing

H0: There is no significant relationship between stress and academic achievement of pre-service teachers in Kwara State College of Education Ilorin-Nigeria?

Table 1: Pearson Product Moment Correlation (r) statistics on the relationship between Stress and Academic Achievement of Pre-service Teachers in Kwara State

Variables	N	Mean	S.D	r	p
Stress	324	131.872	7.567	-0.810**	0.000
Academic Achievement	324	2.445	.589		

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

Results of Pearson Product Moment Correlation statistics in Table 1 indicated that significant relationship exists between stress and academic achievement of pre-service teachers in Kwara state college of education, Ilorin-Nigeria. This is due to the fact that the calculated significant (p) value of 0.000 is lower than the 0.05 alpha level of significance at a correlation index r level of -0.810 at df of 322. In addition, their mean stood at 131.782 and 2.445 for stress and academic achievement respectively. Thus, the null hypothesis is hereby rejected. This implied that the higher the stress, the lower the academic achievement of the pre-service teachers and vice versa.

Findings

The study found that significant relationship between stress and academic achievement of pre-service teachers in Kwara State College of Education Ilorin-Nigeria with ($r = -0.810$, $p=0.000$).

Discussions

This study found that significant relationship between stress and academic achievement of pre-service teachers in Kwara State College of Education Ilorin-Nigeria. This indicates that the academic achievement of pre-service teachers is inversely affected by their stress experiences. These findings corroborate that of Balarabe (2008) and Okorie (2016) who found that excessive stress is harmful to academic performance and may lead to dropping out. Wilcox (1992) found that higher levels of stress reduce grade point averages (GPA) which led to increase in psychological and somatic symptomology. The finding is also in consonance with that of Magol (2008), which shows that concentration is usually lessened

under stress. This finding is in line with Sergerstrom and Miller (2004) who found that academic workload and time pressure in no small measure kill cognitive functioning in students.

This finding is supported by the study of Ndu (1990) who also found that overcrowded classrooms contribute to poor academic performance of students. Even an overcrowded dormitory, with five to six students in a room built for two can be stressful, he maintained. Such students cannot have enough sleep because of noise. Ross, Neibling and Heckert (1999) asserted that noise is a stressor that emanate from over-crowded environment. The finding of the present study is also in accordance with the study of Keil (2004) who found that research materials are inadequate in some universities, and assessing the internet has posed a big problem. As a result, students are always anxious and tensed up which undermine academic attainment (Lazarus and Folkman, 2007). The present study supports Lovallo (2005) in whose contribution, remarked that poor academic achievement is not due to inability but rather due to some other psychological problems that block the students.

The academic-related stress experienced by tertiary students impacts their mental and physical health and leads to a range of academic problems. Good stress-management skills have the potential to benefit young people in an ongoing manner throughout their lives, given that many long-term health-related behaviours and patterns, both positive and negative, are established during adolescence and early adulthood (Sawyer et al., 2012).

Conclusion

Stress makes an individual to be constantly tensed, worried and can edge such that he or she is in panic, fear, and feels threatened. This state of disorder distorts mental, school, family and responsibilities such that an individual's interactions, competence and productivity diminish. In the light of the foregoing, it is concluded that significant relationship exist between stress and academic achievement of pre-service teachers in Kwara State College of Education, Ilorin-Nigeria.

Recommendations

This narrative review highlights that academic-related stress is a major concern for secondary and tertiary students. The ongoing stress relating to education has demonstrated negative impact on students' learning capacity, academic performance, education and employment attainment, sleep quality and quantity, physical health, mental health and substance use outcomes. Increasing students' stress-management skills and abilities is an important target for change. In the light of the findings made, it is recommended that the Kwara State government to as a matter of urgency to provide conducive learning environment with the much needed facilities like hostels, classrooms, and reading materials for effective learning and interpersonal relationship. This will assist in reducing the stress level among learning and enhance academic excellence. Also, providing opportunities to improve young people's academic stress-related coping abilities during this highly stressful, crucial period of development is an important target.

References

- Balarabe, M (2003) "Psychological Dimensions of Stress: likely Effects and Management strategies". Maiduguri: *Journal of Educational Studies*, Vol. 7, pp 22-31.
- Balarabe, M. (2007). Test Manual on Stress and its Effects on Adjustment and Performance.

- Balarabe, M. (2008). Influence of Intelligence and Personality on Stress among University Medical Students. *The Nigerian Educational Psychologist*, 7,194-200.
- Bayram, N., & Bilgel, N. (2008). The prevalence and socio-demographic correlations of depression, anxiety and stress among a group of university students. *Social Psychiatry and Psychiatric Epidemiology*, 438, 667–672. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/18398558>
- Carter, J. S., Garber, J., Ciesla, J. A., & Cole, D. A. (2006). Modeling relations between hassles and internalizing and externalizing symptoms in adolescents: A four-year prospective study. *Journal of Abnormal Psychology*, 1153, 428–442. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/16866584>
- Dantzer, R. (2012). Depression and inflammation: An intricate relationship. [Comment Research Support, N.I.H., Extramural]. *Biological Psychiatry*, 711, 4–5. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/22137156>
- Dantzer, R., O'Connor, J. C., Lawson, M. A., & Kelley, K. W. (2011). Inflammation-associated depression: From serotonin to kynurenine. [Research Support, N.I.H., Extramural Review]. *Psychoneuroendocrinology*, 363, 426–436. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/21041030>
- Davenport TJ, Lane AM (2006). Cognitive appraisal of dissertation stress among undergraduate students. *The Psychological Record* 56: 259-266.
- Halpern, D. F. (2000). Validity, Fairness, and group differences: Tough questions for selection testing. *Psychology, Public Policy, and Law*, 6, 56–62.
- Ibrahim, A. K., Kelly, S. J., Adams, C. E., & Glazebrook, C. (2013). A systematic review of studies of depression prevalence in university students. *Journal of Psychiatric Research*, 47(3), 391–400. Retrieved from <http://www.sciencedirect.com/science/article/pii/S0022395612003573>
- Keil, R. M. K (2004). "Coping and Stress: A Conceptual Analysis" *Journal of Advance Nursing Vol. 45 No. 6*.
- Kendler, K. S., Kessler, R. C., Walters, E. E., MacLean, C., Neale, M. C., Heath, A. C., & Eaves, L. J. (1995). Stressful life events, genetic liability, and onset of an episode of major depression in women. *The American Journal of Psychiatry*, 1526, 833–842. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/7755111>
- Kessler, R. C. (1997). The effects of stressful life events on depression. *Annual Review of Psychology*, 48, 191–214. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/9046559>
- Lazarus, R. S & Folkman, S (2007). *Stress and Depression*. New York: Springer.
- Lewinsohn, P. M., Allen, N. B., Seeley, J. R., & Gotlib, I. H. (1999). First onset versus recurrence of depression: Differential processes of psychosocial risk. *Journal of Abnormal Psychology*, 108, 483–489.
- Lovallo, W. (2005). *Stress and health: Biological and Psychological interactions*. Newbury Park, CA: Sage.
- Maes, M. (2008). The cytokine hypothesis of depression: Inflammation, oxidative & nitrosative stress (IO&NS) and leaky gut as new targets for adjunctive treatments in depression. *Neuroendocrinology Letters*, 29(3), 287–291. Retrieved from <Go to ISI>://000257677800002
- Magol, S. K. (2008). *Advanced Educational Psychology*. India: Prentice-Hall.
- Melaku L, Mossie A, Negash A (2015). Stress among medical students and its association with substance use and academic performance. *J Biomed Educ* 1-9.

- Moylan, S., Maes, M., Wray, N. R., & Berk, M. (2013). The neuroprogressive nature of major depressive disorder: Pathways to disease evolution and resistance, and therapeutic implications. *Molecular Psychiatry*, 18(5), 595–606. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/22525486>
- National Research Council. (2001). *Knowing what students know*. Washington, D. C: National Academic Press.
- Ndu, F.O.C (1990). Planning and Organization of practical work in biology in Secondary Schools. *Journal of Science Teachers Association of Nigeria*, Vol. 18, No. 2 pp 49–60.
- OECD. (2015). *PISA 2015 Results (Volume III)*. Paris, France.
- Okorie, A. (2016). Relationships among Stress, Coping Strategies and Academic Achievement of University Undergraduate Students in Imo and Kaduna States, Nigeria. Unpublished Doctoral Thesis, Ahmadu Bello University, Zaria-Nigeria.
- Ozen, N. S., Ercan, I., Irgil, E., & Sigirli, D. (2010). Anxiety prevalence and affecting factors among university students. *Asia-Pacific Journal of Public Health / Asia-Pacific Academic Consortium for Public Health*, 22(1), 127–133. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/20032042>
- Post DM, Weddington W (1997). The impact of culture on physician stress and coping. *J Natl Med Assoc* 89: 585-590.
- Ribeiro, Í. J. S., Pereira, R., Freire, I. V., de Oliveira, B. G., Casotti, C. A., & Boery, E. N. (2017). Stress and quality of life among university students: A systematic literature review. *Health Professions Education*. Retrieved from <http://www.sciencedirect.com/science/article/pii/S2452301117300305>
- Robotham, D., & Julian, C. (2006). Stress and the higher education student: A critical review of the literature. *Journal of Further and Higher Education*, 30(2), 107–117.
- Ross, C. E., & Mirowsky, J. (2006). Sex differences in the effect of education on depression: Resource multiplication or resource substitution? *Social Science & Medicine* (1982), 63(5), 1400–1413. Retrieved from <http://www.sciencedirect.com/science/article/pii/S027795360600147X>
- Sawyer, S. M., Afifi, R. A., Bearinger, L. H., Blakemore, S. J., Dick, B., Ezech, A. C., & Patton, G. C. (2012). Adolescence: A foundation for future health. *The Lancet*, 379, 1630–1640.
- Sergerstrom, S. C., & Miller, G. E. (2004). Psychological stress and the human immune system. A meta-analytic study of 30 years of inquiry. *Psychological Bulletin*, 130, 601-630.
- Shapiro S L, Shapiro D E, Schwartz G E. Stress management in medical education: a review of the literature. *Academic Medicine* 2000; 75(7): 748-759. [[PubMed](#)]
- Shashidhar, S, Rao, C & Hedge, R (2009). Factors Affecting Scholastic Performances of Adolescents. *Indian Journal of Pediatrics* 76(5), 495-499
- Silver, Henry K, Glick AD (1990). Medical student abuse: Incidence, severity, and significance *Jama*, 263: 527-532.
- Udoh, C. O & Ajala J. (2005) *Mental and Social Health*. Ibadan: Wemilore Press.
- World Health Organisation. (1996). *Health promoting schools*. Manilla, Spain.