

Assessment of Stress Levels among Undergraduates in Nigeria: Implication for Mental Health Policy.

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Abstract: *This study assessed the stress levels among undergraduates in Nigeria, focusing on Babcock University. Using multistage sampling, 605 students were selected from 5 out of the 6 schools in the University to participate in the study. The factors examined included age, gender, religion and marital status of the respondents. Also, the respondents were classed into different stress personality types using the previously standardized Emotional Stress Inventory Questionnaire (ESIQ). Common stressors were also identified. The majorities of the respondents (78%) were less than 20 years of age, female (54%), single (96%), belong to the Yoruba ethnic group (56%) and are Christians (91%). Also, 60% of the respondents belong to personality type A. Top ten stressors causing moderate to high stress among respondents were academic oriented. However, the major stressor was the fear of graduating (with a mean of 3.02 ± 1.11). Policies and programmes geared towards enhancing effective stress coping strategies, especially targeting key stressors, should be put in place by appropriate educational ministries and by the University administration. Furthermore, Corroborative intervention education should be designed and administered to University students by public and mental health experts in order to help student develop personal coping skills and reduce stress on our campuses.*

Keywords: *Emotional Stress Inventory, Nigeria, personality type, Undergraduates*

I. Introduction

Stress is a global public health issue which is regarded as a force that can propel every human being to behave either positively or negatively [1, 2]. Stress affects human beings physically, mentally, emotionally, socially and spiritually [3]. Ninety percent (90%) of visits to the physicians were observed to be associated with stress [4]. Stress is therefore, an unavoidable characteristic of life. It influences the individual's response to the internal stimuli or to the external environment and characterises individuals to different personality types. Personality types are a collection of personality traits which are believed to occur together consistently, especially as determined by a certain pattern of response to a personality inventory. This personality trait predisposes an individual to behave in a fairly broad and consistent pattern [5]. Sayiner [6] stated that stress is not only a factor in working places; it is also a common factor in educational environment experienced by students. The more the society strives to modernise and industrialise, the greater the force of stress in the lives of people.

Every educational institution has its various stressors in the learning environment. This may include project writing in the face of limited materials, lack of constant supply of water and power, examinations especially under non-conducive conditions, food insecurity and the likes. Statistics have shown that in the United States for instance, between 2006 and 2013, four out of ten college students reported that they feel stressed often; one out of five said they feel stressed most of the time; one out of four students experienced daily stress and one in ten had thoughts of suicide [7]. Constant examination has been implicated as major cause of stress [8]. The situation is not any different in Nigeria as with other developing countries. Eweniyi [9], in his study in Ogun State University, Nigeria established a nexus between stress management skills and academic performance. Stallman [10] and Eweniyi [9] have observed that students suffer more stress than the rest of the population, but they seldom seek for help. Response to stress does not only affect personality types and academic behaviour of students, but also has a significant effect on their physical and mental well-being [3]. This is why there is a rise in mental illness cases in our Universities [11]. Stressed students are also more likely to be poorly motivated, less productive, less safe at work and vulnerable to social vices such as drug abuse and violence. On the whole, the institutions are less likely to succeed in a competitive market.

Therefore, the need for a study of this nature which was aimed at the assessment of stress levels among undergraduates in a selected Nigerian university. The outcome of the study is expected to proffer useful suggestions for educational policy actions with respect to mental health care and stress management on the campuses of our tertiary institutions nationwide.

1.1 Sources and types of Stress

Factors that causes or increases stress are generally referred to as stressors. They are situations that are considered as stress provoking. In an academic environment, examples of stressors may include academics,

dating, extra-curricular activities, peers, housing, weather, time management, money or even parents. According to the Klinik Community Health Centre (KCHC) [12], we can experience stress from four basic sources:

- i. The Environment – the environment can bombard you with intense and competing demands to adjust. Examples of environmental stressors include weather, noise, crowding, pollution, traffic, unsafe and substandard housing, and crime.
- ii. Social Stressors – we can experience multiple stressors arising from the demands of the different social roles we occupy, such as parent, spouse, caregiver, and employee. Some examples of social stressors include deadlines, financial problems, job interviews, presentations, disagreements, demands for your time and attention, loss of a loved one, divorce, and co-parenting.
- iii. Physiological – Situations and circumstances affecting our body can be experienced as physiological stressors. Examples of physiological stressors include rapid growth of adolescence, illness, aging, giving birth, accidents, lack of exercise, poor nutrition, and sleep disturbances.
- iv. Thoughts – Your brain interprets and perceives situations as stressful, difficult, painful, or pleasant. Some situations in life are stress provoking, but it is our thoughts that determine whether they are a problem for us.

The causes of stress can also be broadly classified as internal or external stressor, or developmental or situational stressors. Physical stressors include cold, heat, and chemical agents, pain, and fatigue. Psychosocial stressors are fear of failing an examination, disappointments, losing a job and being impatient on a queue. Emotional and psychological challenges are also classified as stressors. Stressors can also occur as normal life transitions that require some adjustment, such as going from childhood into puberty, getting married or giving birth and going into teaching profession or becoming a student in the university. Stressors have also been classified as day-to-day frustrations or hassles; major complex occurrences involving large groups, even entire nations; and stressor that occurs less frequently and involves fewer people [13].

A stressor can also be categorised according to duration. It may be: an acute, time-limited stressor, such as studying for final examinations, working on a project, preparing notes for lectures and grading papers, preparing for an important interview, meeting and attending classes. Sequential stressors are series of stressful events that result from an initial event such as failing exams, job loss or divorce. Chronic intermittent stressors, include daily hassles, enduring stressor that persists over time such as chronic illness, a disability, or poverty [13].

While there are many subcategories of stress that are being treated today in literature, the major types of stress, according to Seeley, Stephens and Tate [14], can be broken down into four:

- i. **Eustress** – This is one of the helpful types of stress; it is the type of stress one experiences right before one has the need to exert physical force. Eustress prepares the muscles, heart and mind for the strength needed for whatever is about to occur. When the body enters the fight or flight response, it would experience eustress. The eustress prepares the body to fight or flee from the imposing danger. This type of stress would cause the heart to pump more blood to the major muscle groups and would increase the heart rate and blood pressure. If the event or danger passes, the body would eventually return to its normal state [14].
- ii. **Acute stress** – This is the type of stress that comes immediately with a change of routine. It is an intense type of stress, but it passes quickly. Acute stress is the body's way of getting a person to stand up and take inventory of what is going on, to make sure that everything is alright
- iii. **Chronic stress** – Occurs if there is constant change of routine for week after week and affects the body for a long period and also affects performance and productivity
- iv. **Distress** – This is the most serious type of all the stresses, which may be predictive of psychological, social and physical health outcomes. This state is manifested as physiologic, emotional, cognitive and behavioural changes, in which there are periods of depression and emotional upheaval [15].

Stress, therefore should be viewed as a continuum along which an individual may pass from feelings of eustress to those of distress. Indicators of distress are recognised, but those of mild or moderate stress may not be observed. The symptoms in distress level are likely to vary between individuals. Also severe and prolonged distress accumulates in more consistently observed symptoms of emotional “burnout” and serious physiological disturbance may occur [13]. It is necessary to note that persistent high stress without “due coping measures” can precipitate pathological process (that is, disease conditions can occur). In literature, stress has been recognised as an inevitable aspect of life, but what makes the difference in human functioning is how people cope with it [16]. Folkman [17] added that most people manage to maintain reasonable health and functioning under stressful conditions. There are several stressors in students' lives which may lead to stressful situations and in turn may affect their personality types and behaviours.

In order to identify the causes of stress, the use of a stress journal has been proposed by the Academic Skills Center (ASC) [18]. This entails keeping a daily log of what caused the stress, accompanied feelings

(physically and emotionally), reactions and how you managed to get over it or make the situation better. They further suggested the adoption of a stress planning process to facilitate the creation of the journal. This process include: identifying source of stress; listing and prioritizing the sources of stress; identifying appropriate stress management techniques and finally, creating a stress management plan.

1.2 Personality Types

Personality types are based on common factors that can be found at the core of each type. Everyone exhibits knowingly or unconsciously these personality traits which are usually classed as A, B, C and D [19]. Personality types describe pattern of consistent behaviour of an individual to selected stressors of internal or external environment. Studies have shown that stress exposes individuals to any of the personality types and each personality type reflects a level of stress [20]. The Type A and Type B personalities describes two common patterns of behaviour, contrasting personality types. High-strung Type A and the easy-going Type B are the most well known types [20].

Individuals belonging to Type A group are high level stressed group, those who are more exposed to stress and present a higher chance of suffering from a physical or mental disorders on account of the pressure of stressful event. For example, Type A individuals are very vulnerable with respect to cardiovascular diseases, heart attack, stroke and hypertension [21]. They are workaholics, extremely ambitious, and particularly rigid in their attitudes. Their characteristics include: having severe sense of time urgency, over achievers, and are often involved in many different unrelated activities and they may perform well in them all. Exposure to high stress makes them prone to angry outbursts. Kanade [19] also described Type A personality as highly independent in nature, competitive, assertive, high achievers and risk-takers.

Those of Type B category on the other hand are those with very mild stress level or those with a greater capacity to cope with potentially stressful situations, consequently reducing their risk of becoming stressed or ill. They are calm and have an easy-going attitude, fun loving and relaxing without feeling guilty. They lack sense of urgency; they are not assertive and are extroverts. They are also known to be charismatic in nature [19]. The difference between the two types does not depend on the fact that they present two different and well-defined personality structures, but rather on the way in which they organise their responses to stressful situations and their coping styles [19].

The personality theory system of stress level classification also divides individuals further into Types C and D [20]. While individuals with Type C personalities often suppress their desires and lack assertiveness, they are introvert, lone workers and are prone to stress. Their emphasis on details characterise them as perfectionists which separates them from other personality types. Their emphasis on details makes them suitable for technical jobs [21]. Kanade [19] opined that these individuals are suitable for accounting and computer programming jobs. Type D personality is characterised by both a negative attitude towards life combined with the person's preference to suppress their emotions. These individuals in this group are pessimistic, have low self-esteem and great fear of disapproval and suffer from enormous amount of stress which makes them prone to heart related diseases.

At the national and international levels, our educational institutions are in constant competition for high-achieving students. One of the benchmarks for achieving excellence, as earlier stated, is the attainment of a conducive learning environment [22] argued that the key to enhanced learning is the creation of an environment that encourages students to pursue educational activities in-and-outside of classrooms. Therefore, in planning and designing education reform programmes and designing of stress management policy for academic institutions, it is imperative to understand the personality types of the beneficiaries as highlighted in this initial study which was designed to serve as precursor for designing intervention policy for Babcock University in Nigeria.

II. Methodology

2.1 Description of the Population

The study was carried out in Babcock University, Ogun state, Nigeria. Babcock University received approval to run as one the first private university in the Federal Republic of Nigeria in 1999 with a major objective to improve on the learning environment offered for University education without jeopardising quality delivery. The University is located in Ilishan-Remo which sixty-eight (68) kilometres, north/west of Lagos, 60 kilometres to Abeokuta, the Capital of Ogun State and 60 kilometres south/west of Ibadan. Thus, the school is well accessible to the major cities in South-West Nigeria.

The multi-stage sampling was employed to select 605 participants especially among the second year students (with relatively the same workload) across 5 out of the 9 schools in the University. Table 1 shows the distribution of participants by the selected schools.

Table 1: Schools and distribution of participants

Schools	Code	Number of participants
Babcock Business School	BBS	164
Basic and Applied Sciences	BAS	80
Computing and Engineering Sciences	BCE	79
Education and Humanities	BEH	34
Public and Allied Health	BPH	49
Total = (N) 5 schools		605

The instrument used to collect data was the Emotional Stress Inventory Questionnaire (ESIQ) which was originally developed by Akinboye et al. [4]. The instrument had been previously tested for validity and reliability. The questionnaire was designed to collect data on respondents' demography, information concerning the stress levels and/or personality types of the participants. The ESIQ is a five-point Likert measurement scale consisting of 23 items. Scores were assigned according to the responses selected in the instrument filled. Each questionnaire was coded and analyzed using the Statistical Package for Social Sciences (SPSS) version 17. Furthermore, the causes of stress (stressors) were identified and profiled by ranks of severity following the procedure proposed by the Academic Skills Center (ASC) [18]. Ethical clearance was obtained from the Ethical Review Committee, Federal Medical Centre Abeokuta, Ogun State and consent forms were filled by all participants. Data gathered were subjected to descriptive analysis and presented in distribution tables.

2.2 Analysis of the respondents using the ESIQ

To determine the various personality types, ESIQ was administered to the participant for typing. Reliability analysis was applied to test the internal consistency of the ESIQ. Result of the analysis shows that the Cronbach's alpha value for the instrument was 0.83. Items of an instrument were considered to represent a measure of high internal consistency if the total Cronbach's alpha value was more than 0.7 [23, 8].

The scores were calculated according to the following cut off points out of the maximum point scale of 115: The personality Type A ranged from 89 and above ($\geq 77\%$); personality Type B ranged between 56 and 88 (49% - 76%); personality Type C ranged between 16 and 55 (14% - 48%) while personality Type D ranged from 15 and below ($\leq 13\%$).

III. Results And Discussion

3.1 Demographic Characteristics of the Participants

Results in Table 2 shows that the majority of the respondents (78%) were less than 20 years of age and are composed of slightly more female (54%) than the male (46%). The result further showed that most of the respondents are single (96%), are from the Yoruba ethnic group (56%) and largely Christians (91%).

Table 2: Distribution of demographic characteristics of the participants

VARIABLES	N=605	
	Frequency	Percent %
Age distribution:		
< 20	470	77.7
21-30	112	18.5
> 30	23	3.8
Gender:		
Male	276	45.6
Female	329	54.4
Ethnic group:		
Yoruba	338	55.9
Igbo	155	25.5
Hausa	26	4.3
Other languages	86	14.2
Religion:		
Christian	552	91.2
Islam	53	8.8
Marital status:		
Single	582	96.2
Married	23	3.8

Source: Computed from field survey, 2013

3.2 Stress level and personality typing of the participants

The respondents were classified to different personality types based on their response to different levels of stress. Results are presented in Table 3.

Table 3: Distribution of the participant into personality type by selected schools

Schools	No. of students	Personality types (%)		
		Type A	Type B	Type C
BBS	164	85 (52)	72 (44)	7 (4)
BAS	80	53 (66)	27 (34)	0 (0)
BCE	79	46 (58)	30(38)	3 (4)
BEH	34	15 (41)	19 (59)	0 (0)
BPH	49	36 (73)	12 (24)	1 (2)
Total	605	365 (60)	229 (38)	12 (2)

Source: Computed from field survey, 2013

From Table 3, the majority (60%) of the respondents belong to personality type A followed by type B (38%) and type C (2%). There were no students belonging to the personality type D. This is consistent with previous studies that the personality type A and B are the most common and that personality type C and D are rarely found in colleges [25, 26]. Disaggregating the assessment by schools showed that all the schools, which are science or social science based, with the exception of BEH (School of Education and Humanities), had majority of their students in the type A personality. Previous studies have posited that students and professionals in science oriented disciplines and programmes usually possess the type A personality traits [27]. This result shows that there is the existence of high stress level of the type A group among the study population. Thus, the students are likely to be vulnerable to the behaviour patterns and health challenges that have been previously found to correlate with this personality type as earlier reviewed. Critical among these traits is the vulnerability of the personalities to violence, substance use and stress related illnesses such as coronary heart diseases, obesity, raised blood pressure etc [26]. This in turn will have serious implications on general performance of these individuals.

3.3 Identified Stressors and their degree of severity

Results in Table 4 showed that the top ten stressors causing moderate to high stress were both internal and academic oriented. However, the major stressor among the study population was the fear of graduating (with a mean of 3.02±1.11). This evaluation is imperative in guiding counselling on appropriate coping strategies and designing stress management policy for the institution. According to Folkman and Lazarus [28], using coping strategies effectively and appropriately designed in line with the identified stressors will help the students in improving their stress level.

Table 4: Major identified stressors by mean degree of perceived severity among respondents.

Rank	Stress item (stressor)	*Degree of stress	
		Mean	Std Dev.
1	Afraid of the possibility not graduating	3.02	1.11
2	Getting poor marks	2.57	1.01
3	Examination	2.43	1.01
4	Lack of time to do revision	2.36	1.14
5	Difficulties in understanding content of course (s)	2.33	1.07
6	Too many courses with too many contents	2.24	1.00
7	Too many quizzes and assignments given by teachers	2.22	1.19
8	Learning schedule are too packed	2.07	1.06
9	Unable to answer questions from teachers	2.06	1.09
10	Feeling of incompetence	2.02	1.10
11	High self-expectation	2.01	0.98
12	Participation in class presentation	1.92	1.22
13	High expectation imposed by others	1.82	0.96
14	Perceived unfair assessment grading systems	1.81	1.21
15	Teachers' lack of teaching skills	1.71	1.08
16	Poor reading or learning environments	1.66	1.13
17	Insufficient reading material	1.66	1.23
18	Conflict with peers	1.54	1.24
19	Conflict with family	1.52	1.06
20	Verbal or physical abuse done by teachers	1.51	1.15
21	Financial pressure	1.43	1.48
22	Pressure from spouse, fiancé, boyfriend or girlfriend	1.41	1.31

*Degree of stress classification: 0 - 1.00 is 'causing nil to mild stress', 1.01 – 2.00 is 'causing mild to moderate stress', 2.01 – 3.00 is 'causing moderate to high stress' and 3.01 – 4.00 is 'causing high to severe stress'.

IV. Conclusions And Recommendations

This study assessed the stress level among undergraduates in Nigeria, specially focusing on Babcock University as case study. 605 students were selected from 5 out of the 6 schools in the University to participate in the study. The demographic factors examined in this study include age, gender and religion affiliation and

marital status of the respondents. Also, the respondents were classed into different stress personality types using the previously standardized Emotional Stress Inventory Questionnaire (ESIQ). Common stressors were also identified and profiled according to rank of severity.

Based on the results, the high numbers of individuals belonging to the high stress level of the personality type A suggests vulnerability to the “fight or flight” response pattern and susceptibility to stress related illnesses among the study population. Policies and programmes geared towards enhancing effective stress coping strategies, especially targeting key stressors, should be put in place by appropriate educational ministries and by the University administration. This should entail a holistic approach involving diet regulation, devotion, physical fitness education, study skill counsel, recreation and tourism. Furthermore, Corroborative intervention education should be designed and administered to University students by public and mental health experts in order to help student develop personal coping skills and reduce stress on our campuses.

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