

# MENTAL HEALTH STATUS AND ACADEMIC PERFORMANCE OF AUTOMOBILE TECHNOLOGY STUDENTS IN UNIVERSITIES IN SOUTH-SOUTH, NIGERIA

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## **Abstract**

The study sought to determine the effect of multiple stress management intervention on mental health status and academic performance of university Automobile Technology Education students in South-South, Nigeria. 2 purposes with corresponding research questions were generated, answered and tested respectively. The study employed quasi-experimental design. The population for the study was 97 first year Automobile students in South-South, Nigeria. The instruments used for data collection were validated by 3 experts and has overall reliability coefficients of 0.77. Data analysis was carried out using mean and standard deviation. The findings revealed significant effect of the intervention on student's health status and improved academic performance. It was therefore recommended among others that multiple stress management intervention should be integrated in Automobile technology education and other engineering/technology based programmes to foster effective stress management practices among students. Also, there is the need for stress management training for all levels of Automobile students with involvement of capability within the university.

**Key Words:** Automobile Technology Education, Academic Performance, Mental Health Status and Multiple Stress Management Intervention.

## **Introduction**

Helping students to manage stressful academic lives has been a goal of counseling practitioners, the concerns of Psychologists and Automobile Lecturers. Automobile is a self-propelled vehicle used for transportation of goods and passengers on the ground. The goal of Automobile Technology Education in Nigerian universities including South-South Universities is to produce Automobile Technology teachers and technologists with sound theoretical and practical knowledge who can test, diagnose, service and repair faults relating to Automobile assembly main units and systems to the manufacturers specification (Poripo, 2023). The achievement of this goal requires adequate provision of learning facilities, stress free and conducive learning environment, qualified and skilled Automobile lecturers who will facilitate students learning. In addition, the Automobile students optimal performance would be possible if the students have good mental health.

Automobile Technology is one of the trades offered as an option in technical education in the tertiary institutions in Nigeria. Automobile Technology Education involves the application of scientific knowledge in the design, selection of materials, construction, operation, maintenance and pedagogical skills acquisition of automobiles (Poripo, Ede, Nwaodo & Youdiowei, 2020; Poripo & Youdiowei, 2014). The programme of Automobile Technology in tertiary institutions including universities in South-South Nigeria is designed to produce competent

graduate technologists in various Automobile trades despite the stressful nature of the university education (Poripo, 2023), Poripo, Ede, Nwaodo & Youdiowe, 2020).

Literature however, revealed that students with high stress level face various negative consequences of stress including sleeping problems (Akerstedt, 2006), burnout (Maslach & Leiter, 1997), increased risk of depression and anxiety (Melchior, Caspi, Milne, Danese, Poulton & Moffitt, 2007), suicide thoughts and anger (Elgard & Arlett, 2002; Al-Qaisy, 2011), risky health behaviours and poor dietary patterns (Lee, Ahmed, Pathirana & Papier, 2016)). This is an indication that stress would most likely have negative consequences among universities students especially with no multiple stress management intervention (MSMI), which may result in dangerous mental or psychological health risks and poor academic performance of Automobile Technology Education students. Thus, students at this level require expert's assistance to be able to cope with and handle their stressful experiences (boujut, Koleck, Bruchon-Schweitzer, & Bourgeois, 2009). Compass, Connor-Smith, Saltzman, Thomsen and Wadsworth (2001) asserted that a wide range of psychological interventions for the treatment and prevention of detrimental outcomes of stress should be designed to enhance the motivation and coping skills of Automobile Technology Education students to avoid being stressed.

Stress is the adverse reaction students have in excessive academic pressure. Stress is a holistic transaction between the Automobile Technology student and a stressor. According to Lazarus and Folkman (1984), stress is a particular relationship between a student and the environment that is appraised by the student as tasking or exceeding his or her resources, and endangering his or her well-being. Chinaveh (2013), Hage (2000) and Al-Qaisy (2011) indicated that large percentage of higher institution students are feeling overwhelmed, sad, hopeless, and so depressed that they are unable to function. Students in Universities in South-South, Nigeria are among those experiencing such situation (Chinaveh, 2013; Unger, Johnson, Gong, Chen, Trinidad, Tran, and Lo, 2001). Hence, students who are daily exposed to unavoidable stressors may experience high level of stress impact (Heber, Lehr, Ebert, Berking, Cuijpers and Riper, 2016). According to Karabay, Akyuz and Elci, (2016) and Hudson (2016), stress is the adverse reaction students have in excessive academic pressure or other types of demands either physical or mental based on students cognitive appraisal that causes unpleasant emotional stress or even feeling of fear, anxiety, terror, anger, annoyance, dread, irritation, sadness, discomfort, grief and depression and can have an adverse effect on student's psychological and physical well-being, with negative impact on students' academic performance (Tosevski, Milovancevic & Gajic, 2010). In this study, stress implies events or psychological difficulties which Automobile Technology students encounter during the course of study as a result of combining multiple demands which include academic, personal, social, economic, and workshop practice that poses serious threat and challenges to their mental health.

Mental health is a very vital aspect of human make up that determines overall human performance. Mental health may be strongly influenced by exposure to stress and affected by ways of coping with stress. Mental health is described as a state of well-being in which an individual realizes personal potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make contributions to the community (Oku, Oku,

Owoaje & Monjok, 2015). However, mental health, emotional and physical wellbeing of university students are reported to be affected by stress as seen in negative emotions, anxiety and depression, and a host of health problems which include lack of appetite and sleep, low stamina and energy levels, headaches and low academic performance (Adewuya, Ola, Olutayo, Mapayi & Oginni, 2006; Vergara, Smith & Keele, 2010; Nerdrum, Rustoen & Ronnestad, 2006; Wei, Heppner, Mallen, Ku, Liao & Wu, 2007).

Academic performance is the measure of students' success. Students' success implies meeting up with the set academic standard and cut-off demands prescribed by the school. Academic performance points to the extent to which Automobile students have gained from a particular curriculum, subject or task based on relatively standardized experiences, such as a class test (Akinade, 2001). Effective learning and sound academic performance are said to constitute an integral part of the goal of schooling for students' optimal performance (Hassan 2006). Student's academic performance however, have high tendency to be drastically affected or influenced by academic stressors manifestation which include lack of concentration in the classroom, absence from lectures, examination tension, fear of failure and academic grading system, inability to complete multiple assignments, inadequate study equipment, work apparatus, and facilities for practicals, limited time for practical activities among others (Nkem 2015, Bataineh 2013, Awino and Agolla, 2008). This implies that, if the stresses experienced by Automobile Technology students are not properly managed, it could affect their academic performance. Vergara, Smaith, Keele (2010), Al-Qaisy (2011), noted that stress, concomitant with limited coping resources, render students unable to meet academic demands and can lead to academic decline, poor relationships with peers and overall dissatisfaction with life. Pariat, Rynjah, and Kharjana (2014) asserted that stressors have an impact on the academic performance of student. However, effects of stress on students' performance may be reduced if students acquire higher level of motivation and coping skills and also provide appropriate responses during stressful events and conditions. The reduction of stress and addition of stress coping skill can be made possible through student motivation and stress management. In this study, academic performance means the total or overall output of an Automobile Technology student after assessment for participating in required academic activities at the end of the session. Automobile students need intervention, such as MSMI.

MSMI is a structured psycho-educational therapy in form of a training programme. The MSMI approach is a face-to-face training which, according to Heber, Lehr, Ebert, Berking, Cuijpers and Riper (2016), is the most effective method of stress management therapy. MSMI has higher tendency to improve students stress management skills (Chinaveh, 2013). Automobile Technology students would most likely use appropriate motivation and coping mechanism to prevent the gross negative consequences of stress and may improve their mental health and academic performance (Bataineh, 2013; Stevenson & Harper, 2006; Chang, 2007). Therefore, carrying out this intervention study could be a life time opportunity for students in overcoming the defects of stress in their entire life. However, if Automobile students are not exposed to stress management treatments especially at this early stage of their university life before adult life, stress may jeopardize their academic ambition, force them to adopt maladaptive behaviours. Thus, it becomes imperative to investigate the effect of MSMI on

level of stress, motivation, mental health and academic performance of Automobile students in South-South Nigeria.

### **Statement of the Problem**

The Automobile Technology graduates in South-South Nigeria prove to be ill equipped and lack interest in Automobile activities as most companies and industries spend money in training and retraining the graduates of Automobile Technology in South-South Nigeria in order to meet the standard required by the companies and industries, instead of starting work immediately (Poripo, Ede, Nwaodo & Youdiowei, 2020). However, literatures have shown that automobile students are prone to series of stress. In order to prevent severe psychological effects and its implications among the Automobile Technology students, effective stress management intervention is needed which could help or assist the students in handling stressful academic events appropriately, thereby reducing its harmful effects which could affect or jeopardize student's academic performance and future working ambitions.

### **Purpose of the Study**

The general purpose of this study is to determine the mental health status and academic performance of automobile technology education students in universities in southern Nigeria.

### **Research Questions**

The following research questions were answered in the study:

1. What is the effect of MSMI on mental health status of Automobile Technology Education students?
2. What is the effect of MSMI on academic performance of Automobile Technology Education students?

### **Methodology**

Quasi-experimental design was adopted for this study. The study was conducted in South-South, Nigeria. The population for this study consists of 97 students of Automobile Technology in South-South, Nigeria. A structured questionnaire was used as instrument for data collection. The instrument was validated by three experts from the University of Nigeria, Nsukka. Statistical Package for Social Sciences (SPSS) version 20.0 was used to analyze the data collected from the respondents. Cronbach alpha reliability coefficient index was used to determine the internal consistency of the instruments. The overall reliability index for the instruments was 0.77. The data collected from the administration of both pre-test and post-test, were analyzed and interpreted using mean ( $\bar{X}$ ) and standard deviation (SD).

### **Presentation of Results**

#### **Research Question 1**

What is the effect of MSMI on mental health status of automobile technology education students?

*Table 1: Pretest/Posttest Mean scores of Students on the effects of MSMI on mental health status of automobile technology education students*

Groups	Pretest			Posttest		Mean Gain/Loss	Remarks
	N	$\bar{x}$	SD	$\bar{x}$	SD		
Experimental	51	18.57	5.02	12.29	1.60	-6.28	Decrease
Control	46	14.00	1.85	17.63	3.62	3.63	Increases

The results presented in Table 1 shows the mean difference between the pretest and posttest responses of students in the experimental and control groups on mental health status among Automobile Technology students in Universities in South-South Nigeria. The results show that MSMI had more positive effect on mental health status of Automobile Technology Education students in Universities South-South, Nigeria in the experimental group more than the control group.

### Research Question 2

What is the effect of MSMI on academic performance of automobile technology education students?

**Table 2: Pretest/Posttest Scores of Students on the effect of MSMI on academic performance of automobile technology education students**

Groups	Pretest			Posttest		Mean gain	Remarks
	N	$\bar{x}$	SD	$\bar{x}$	SD		
Experimental	51	53.57	4.39	58.14	4.18	5.54	Increases
Control	46	50.60	3.99	56.14	3.38	4.57	Increases

The results presented in Table 2 shows the mean difference between the pretest and posttest responses of students' academic performance in the experimental and control groups among Automobile Technology students in Universities in South-South Nigeria. This results show that the MSMI seems to effectively influence the marginal increase in the academic performance of the Automobile Technology students in universities in South-South Nigeria in the experimental group compared to those students in the control group with no stress management experience or absence of MSMI therapy among Automobile students.

### Discussion of Findings

The findings in Table 1 on mental health status among Automobile Technology Education students in South-South Nigeria corroborate the position of Chinaveh (2013) and Al-Qaisy (2011) who established that integrative theoretical models or effective stress intervention would aid prevention of psychological difficulties and detrimental outcomes; and Heber et al., (2016) who agrees that a stress management intervention like the MSMI with a face-to-face training approach is the most effective method of stress management therapy.

The findings in Table 2 complement previous studies that an educative assistance such as MSMI on stress management would most likely help Automobile students use appropriate coping mechanism to prevent the gross negative consequences of stress most especially on mental health and to be motivated for academic performance (Bataineh, 2013; Stevenson & Harper, 2006; Cahng, 2007). This finding is in consonance with the position of Hudson (2016), Chinaveh (2013) and Al-Qaisy (2011) who established that integrative theoretical models or effective stress intervention would aid prevention of psychological difficulties and detrimental outcomes; Heber et al., (2016) and Moos (2004) who agrees that a stress management intervention like the MSMI with a face-to-face training approach is the most effective method of stress management therapy.

### **Conclusion**

Based on the findings, this study concludes that MSMI will be effective in training Automobile students in stress management thereby limiting and reducing the detrimental effects of stress among students. The results show that MSMI had more positive effect on mental health status of Automobile Technology Education students in Universities South-South, Nigeria in the experimental group more than the control group. Also, the findings show that the MSMI seems to effectively influence the marginal increase in the academic performance of the Automobile Technology students in universities in South-South Nigeria in the experimental group compared to those students in the control group with no stress management experience or absence of MSMI therapy among Automobile students.

### **Recommendations**

Based on the findings of this study, the following recommendations were made: MSMI should be integrated in Automobile Technology Education and other engineering/technology based programmes to foster effective stress management practices among students. There should be stress management training for all levels of Automobile Technology Education students with involvement of professional therapists and educational stakeholders to improve students stress management capability within the university education.

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