



Stressors Among Medical Laboratory Science Students at Imo State University, Owerri, Nigeria: A review

*Nnodim Johnkennedy¹, Okoro Peace Mmesoma¹, Abiakwu Martina Chetachi¹, Ejiogu Chimnazaekpere Divine-Favour¹, Umeoka Emmanuel Chukwuemeka¹, Dike Marycynthia Chinemerem and Ndindu Ogazie¹

¹ Department of Medical Laboratory Science at Imo State University in Owerri, Nigeria.

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*Corresponding author: [Nnodim Johnkennedy](#)

Department of Medical Laboratory Science at Imo State University in Owerri, Nigeria.

Abstract

Medical Laboratory Science (MLS) students encounter several pressures that may negatively impact their psychological well-being and academic achievement. This paper analyzes the characteristics, origins, and effects of stress among MLS students at Imo State University (IMSU), Owerri, Nigeria. The research delineates academic, clinical, economical, socio-environmental, and institutional elements as the primary sources of stress encountered by students. The effects of these stressors on students' mental health and academic performance are examined, and coping strategies along with institutional recommendations are suggested. To improve student health and the quality of professional training in medical laboratory science, it is important to understand these pressures.

Keywords: Stressors, Medical Laboratory Science Students, Imo State University, Owerri.

Introduction

Stress is an unavoidable component of academic life, especially for students in health science programs that integrate intensive theoretical education with practical and clinical training. Medical Laboratory Science (MLS) is a healthcare field that deals with doing laboratory tests that help doctors figure out what's wrong with a patient, keep an eye on their health, treat them, and stop them from getting sick. Students enrolled in this program frequently confront a multitude of stressors that surpass the typical academic expectations experienced by students in other fields [1].

Imo State University (IMSU), founded in 1981 and situated in Owerri, Nigeria, is a prominent state-owned institution in the South-East geopolitical zone. The Department of Medical Laboratory Science provides a five-year professional training program that combines rigorous academic curriculum with compulsory clinical laboratory placements. This structure produces a one-of-a-kind learning environment that puts students through a lot of different academic and professional obstacles.

Students in health-related programs have been demonstrated to be more stressed than students in other fields of study around the world [2]. In Nigeria, these problems are made worse by a lack of infrastructure, a lack of money, and academic calendars that are not predictable. So, it is very important to know what causes stress in MLS kids in order to come up with ways to help them feel better and do better in school.

According to [3], stress is a dynamic relationship between a person and their surroundings that is seen as too much for that person to handle. In academic settings, stress occurs when educational expectations exceed a student's perceived capacity to manage them efficiently.

The transactional model of stress posited by [4] underscores that stress is affected not solely by the existence of stressors but also by the individual's perception and assessment of these stressors. Two students facing analogous academic pressures may exhibit divergent stress reactions based on their coping mechanisms, social support networks, and psychological resilience [5].

This concept is especially relevant for MLS students at IMSU. Stress can stem from external reasons such as demanding schoolwork, financial difficulties, or insufficient facilities; nevertheless, the influence of these circumstances is

moderated by students' individual coping mechanisms and psychological resources [6]. So, stress among MLS students can be seen as both a mental and environmental issue.

Academic pressures constitute a primary source of stress for MLS students. The MLS program at IMSU covers a lot of ground and includes a lot of different fields, such as clinical chemistry, haematology, medical microbiology, parasitology, histology, and immunology. Students must show that they are good at both theoretical knowledge and practical lab skills, which makes the academic workload quite hard [7].

Another big source of stress is the fear of failing an exam. Research indicates that examination pressure is a prevalent stressor among university students [8]. For MLS students, this worry is heightened by the professional ramifications of academic achievement. Success in the program is closely tied to getting a license from the Medical Laboratory Science Council of Nigeria (MLSCN) in the future. If you keep failing, you may have to study for longer and pay more money. Also, strikes by the Academic Staff Union of Universities (ASUU) and other industrial actions that make academic calendars less regular add to the stress and unpredictability. These kinds of interruptions break up the flow of learning, make it take longer, and make it harder for students to stay motivated and plan, especially for students who are further along in their program [9].

Clinical training is an important part of the MLS program, and it brings with it a whole new set of pressures. During clinical postings, students are sent to hospital labs where they have to use what they've learned in class to solve real-life diagnostic problems. This shift from learning in the classroom to working in a hospital laboratory can be hard, especially for students who have never worked in a hospital laboratory before [10].

Students frequently express worry regarding the operation of advanced laboratory equipment, the fulfillment of professional standards, and engagement with senior laboratory scientists or physicians [11]. In other cases, not enough supervision or not enough training chances may make this stress even worse.

Working with biohazardous products is also a big worry for workers. During specimen processing, MLS students could come into contact with pathogens like HIV, the hepatitis B virus, and Mycobacterium tuberculosis. The potential of needle-stick injuries or unintentional contact to infectious materials exacerbates ongoing worry, particularly in environments where personal protective equipment may be inadequate [12]. Furthermore, the obligation to deliver precise laboratory results during training induces performance-related stress. Because test results have a direct impact on clinical decisions, trainees may feel a lot of pressure to avoid making mistakes that could hurt patients. Another big source of stress for MLS students at Nigerian universities is money problems. A lot of students come from families with poor or middling incomes and depend on family help to pay for school.

Students face a lot of financial stress because of the costs of tuition, lab fees, housing, textbooks, lab coats, and other school supplies [13]. Clinical placements may exacerbate costs, particularly when students must travel or relocate to teaching hospitals situated beyond Owerri.

A study of health science students in South-Eastern Nigeria shows that money problems are one of the most common stressors [14]. Some students work part-time to make extra money, but managing work and school can be hard, and it can cause role conflict and extra stress.

Financial problems can also affect kids' health and nutrition. Not eating enough and living in bad conditions can make it harder to focus, remember things, and do well in school [15].

The physical and social environment where students live and study has a big effect on how stressed they are. Many MLS students at IMSU live in hostels that are too full or off-campus housing that doesn't have many amenities. Problems like unstable power, not enough water, and bad sanitation can mess up study schedules and make people feel bad mentally [16].

Noise from the outside world and not having enough quiet places to study make learning even harder, especially in a program that needs a lot of reading and lab work. Social pressures are also significant. Conflicts with other people, problems in relationships, and peer pressure can all have a bad effect on students' mental health. Students who feel left out or alone may feel more anxious and depressed [17].

Stress might also come from what your family expects of you. Many Nigerian families expect their students to help pay for family requirements while they are still in school. In the Igbo cultural setting, significant familial commitments may impose extra emotional and financial pressures on students [17].

Institutional factors within the university system may also significantly contribute to student stress. Poor laboratory infrastructure, such as old equipment, not enough reagents, and not enough space, can make it hard to get hands-on training and make people worry about their professional skills.

Administrative inefficiencies, such taking too long to release test results or not being clear about academic rules, can also make students feel unsure and anxious. Students may feel powerless and lose motivation when they think that the mechanisms at their school are not helpful or organized [18].

A lack of staff in some departments might also make it harder for students to get academic help. Students who may not get enough help may have trouble in school and feel more stressed [19].

Chronic stress in MLS students can lead to significant academic, psychological, and bodily repercussions. High amounts of stress might make it harder to focus, remember things, and do well in school. Long-term stress has also been connected to more students dropping out of college.

In clinical settings, stressed students may be more likely to make mistakes when doing lab work, which could put patients' safety at risk.

Long-term stress exposure can result in psychological issues such as anxiety disorders, depression, burnout, and emotional depletion. Research conducted with Nigerian health science students has indicated heightened depression symptoms correlated with academic stress.

Chronic stress can show up in the body as headaches, tiredness, trouble sleeping, and a weaker immune system, which can make students' overall health even worse.

Students use different ways to deal with stress from school and their mental health. Problem-focused coping mechanisms, including efficient time management, engagement in study groups, and soliciting academic support from lecturers, have demonstrated efficacy in alleviating academic stress [20].

Nigerian pupils also often utilize emotion-focused coping techniques. These include praying, getting help from friends and family, doing fun things, and joining religious or community groups.

Several actions at the institutional level can assist lower student stress. The institution might set up a working counseling and psychological support section just for students' mental health. Stress management courses and peer mentorship programs would also be helpful support networks [21].

Better lab infrastructure and making sure that reagents and equipment are always available would make it easier to do practical training. Financial aid programs including departmental bursaries, work-study possibilities, and stipends during clinical assignments could help a lot with money problems.

At the national level, effectively resolving industrial disputes to stabilize university academic calendars would mitigate uncertainty and academic disturbance [22].

Conclusion

Stress among Medical Laboratory Science students at Imo State University is a complex problem resulting from academic, clinical, socioeconomic, socio-environmental, and institutional causes. These pressures interact to affect students' mental health, grades, and career growth. To deal with these problems, students, teachers, university administrators, and government officials all need to work together. To help students deal with stress, it is important to make institutional support systems better, increase infrastructure, and raise awareness of mental health issues. In the end, the health and safety of MLS students is not just an educational issue; it is also a public health issue. Students who are taught under too much psychological stress may not be as resilient when they start working in healthcare and may be more likely to burn out. Putting money into the mental health and academic assistance of MLS students would help Nigeria's laboratory medicine workforce stay strong and grow over time.

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