# **ORIGINAL ARTICLE**

# Prevalence of Academic Failure and Risk Factors Associated with Suicide Behaviour among Medical Students in Nigerian Universities

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Introduction	This study investigated the prevalence of academic failure and the risk variables that impact suicidal behavior among medical students at Nigerian universities
Aim	To establish the prevalence of academic failure among medical students in Nigerian institutions, identify risk variables that lead to suicide behavior, and determine the techniques used by universities to deal with academic failure.
Methods	The study used a cross-sectional approach and included 108 Year 4 undergraduate medical students from South-south Nigeria. Data were generated using a questionnaire prepared on Google form branded "Academic Failure and Suicide Behaviour Questionnaire" (AFSBQ) and self-administered by the medical students.
Results	The prevalence level of academic failure in the MBBS examination was 25 % and the highest risk factor associated with suicide was consistent poor academic performance, being a precursor to suicide with 12 %, was the highest risk factor associated with suicide among the respondents. Students were given the opportunity to retake the MBBS examination, 18%; students were aware of their progress before the MBBS examination 23 % and students' results were displayed in the open, which is detrimental to their wellbeing 18 %.
Discussion	The findings of this study shows evidence of the link between academic failure and suicide behaviour, and similarities in the respondents' perceptions of the risk factors associated with suicide behaviours, especially with respect to the publication of the students' results.
Conclusion	Medical educators should collaborate with the university authorities to organize periodical symposia for medical students to educate them on how to prevent academic failure in order to minimize suicidal behaviours. Medical students should be referred to the counselling centre for expert intervention to prevent suicide.
Keywords	Academic failure, medical students, prevalence, risk factors, suicide behaviour.
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# INTRODUCTION

Academic failure has existed for as long as education has in all countries of the world and it is a common phenomenon requiring an investigation into the factors associated with it. Academic failure seems to be one of the most dreaded issues among medical students in the universities in Nigeria and it has become a problem of the institutions, not only because of its negative effect on the students, but also due to the stigma which in some cases have resulted in suicide among the affected students. It is a new area of great concern to parents and teachers in recent times, because of the number of years spent by the students in acquiring their medical degree, as well as its financial implications. As a result of the social stigma attached to failure, some students may resort to committing suicide as a way of escape and the universities have become uncomfortable with the situation and looking for ways of curbing the trend.

Suicide behaviour is a process by which a student decides to take his/her life as a result of a problem which the victim perceives could have a devastating effect on him/her, family and friends. It seems to be a means of putting an end to a students' frustration occasioned by the inability to achieve educational success. Suicide was found to be the most common consequence of academic failure, among others such as personality factors, motivation and interest, satisfaction, loneliness, success expectation and family circumstances, all of which can affect the level of academic success in the universities<sup>[1]</sup>.

Literature has shown that suicidal tendencies were mainly common among students in the tertiary institutions of learning; and that Nigeria ranks 15<sup>th</sup> highest suicide rate committer globally<sup>[2]</sup>. Furthermore, suicide prevalence rate among medical students in Nigeria reported a relationship between depression and suicidal ideation, with an increased implication on their overall health<sup>[3]</sup>. This informs the reason why suicide has been acclaimed to be a global concern and a public health problem, which has become one of the major causes of death in the world<sup>[4]</sup>.

This research is predicated on the fact that suicide among young university students which was rare in Nigeria some decades ago, has been on the rise in recent times among medical students in Nigeria. This assertion was equally observed as becoming a more pressing issue among students in higher education especially due to the rate of depression and stress among them<sup>[5]</sup> and it is also considered a pandemic issue, which is gradually eating deep into the fabric of students in the tertiary institutions<sup>[6]</sup>.

There are only a few studies that have attempted to unravel the reasons for suicide behaviours among medical students. These studies have reported that the idea of suicide is initiated by an inner thought of wanting to die or planning for its execution<sup>[7 - 9]</sup>. Personal experiences have shown that cases of suicide or attempted suicide reaction was followed by the news of academic failure. For example, releasing the MBBS results of medical students by the universities have consistently been received with diverse behaviours/reactions, because most students have been traumatized by the stigma associated with academic failure.

Some studies have highlighted the prevalence and major causes of academic failure in tertiary institutions in Nigeria. In particular, a study found that the failure and repeat rates of students studying Medicine in a university in South-West Nigeria were very high, lamenting that it was a recurrent issue not only in the private universities, but also in the State and Federal universities in Nigeria<sup>[10]</sup>. A similar study found that students' academic failure was traced to both internal and external variables. While the internal variables were associated with the students; the external factors were related to the roles played by the government, parents, school and teachers, with the major blame attributed to students and teachers<sup>[11]</sup>. Parental factors among others include choosing courses for their wards who may not possess the academic pre-requisite, thereby resulting in academic failure<sup>[12]</sup>.

A study in India found that 82.6 % of the medical students in a Military Centre were affected by academic failure. It further showed that the students were placed on probation, many of who were unmarried and lived in the dormitory<sup>[13]</sup>. The report stated that the prevalence of academic failure among the students was 25 %; and there was a significant relationship between academic failure and variables such as marital status, residence status and date of entry into the university, family problems and amount of daily study, among others<sup>[14]</sup>.

The prevalence of academic failure among medical students have been viewed with seriousness in recent times due to the negative events that accompany failure in some cases, among which is suicide. A recent study has shown that the prevalence of depression among medical students had a slight stable increase of 0.2 % per year. This increase was attributed to pressure from medical school<sup>[15]</sup>. Similarly, a review of 167 cross-sectional and 16 longitudinal studies from 34 countries showed that medical students were at a high risk for depression and suicidal ideation, with an overall pooled crude prevalence of depression at 27.2 %, ranging from 9.3 % to 55.9 %<sup>[15]</sup>. The researchers contended that medical students' suicide may be related to social and environmental factors. They concluded that educators and supervisors should understand that the students require a considerable emotional and financial support.

Other studies have attributed medical students' suicidal ideation to personal and professional distress ranging from factors such as information overload, lack of leisure time, financial debt, being away from home, academic load and work pressure, Suicide behaviour has increased globally in the past years especially in low and middle income countries such as Africa; and that between 1990 and 2019, a 365 % suicide death increase was reported<sup>[16,17]</sup>. The report further stated that for over 130 years, medical students'

involvement in suicide was higher than the general population, 100,000 people among male physicians, which is 40 % higher than the general public and 130 % higher among female physicians<sup>[16, 17]</sup>. Besides, a high prevalence of suicidal behaviour between 9 .0 % to 9.7 % was also reported among university medical students<sup>[18-21]</sup>.

In Africa, suicide behaviour is common among medical students and the prevalence rate varies across regions in Africa and that the pooled prevalence of lifetime suicidal behaviour was 18.7 % for suicidal ideation, 3.8 % for suicidal plans and 5.5 % for suicide attempt. More so, is the fact that medical degrees are among the most stressful academic degrees<sup>[22-24]</sup>.

The factors of academic failure are multifaceted, some of which includes ineffective attitudes of medical students toward learning, ineffective learning methods, borderline performance, poor performance, weak prior knowledge, stressors and responses towards stress. Others are inhibiting behaviours and attitudes toward learning, among others<sup>[25]</sup>. A study carried out among medical students in Northwest Ethiopia showed that a total of 393 medical students participated in the study and the results showed that the prevalence of suicide ideation and attempt of the participants were 14 % and 7.4 % respectively. The factors associated with suicide were female sex, poor social support, depression and history of mental illness<sup>[26]</sup>. The psychological consequences of dropping out of the university, drug and alcohol addiction; were associated with suicide and that the most common cause of suicide was academic failure<sup>[27]</sup>. Literature. has shown that previous researchers in this area concentrated more on the causes alone without making efforts to find out the effect that it has on the victims. Unfortunately, the authorities responsible for releasing the results of the MBBS examination, do so without recourse to the stigma it leaves on those who have failed to meet up with the requirements of the programme. Thus, a lot of students have become despondent because of their academic challenges. More worrisome is the report that the medical training is rigorous, coupled with poor attention to the students' mental health<sup>[27]</sup>. Since the programme implementers do not seem to place worth on the feelings of the victims, it has become a matter of fear, grief and tension whenever the results are about to be released. Moreover, the incessant cases of suicide happening on the campuses have not been addressed. Even with the partial ban on 'sniper', a dangerous insecticide known to be used by the victims in perpetrating suicide on campus by the government, the incidences have remained unabated. The strategies for handling suicidal behaviours occasioned by academic failure has little or nothing to do with medical students specifically and this is a gap in literature which the present study is interested in filling. The researchers are of the view that the incidences

of suicidal behaviour which is related to academic failure may metamorphose into an epidemic level if not checked. To this end, the present study was aimed at finding out the relationship academic failure has with suicide and to find out if the medical students in the universities perceive the risk factors and consequences differently and to the impact of academic. Based on the foregoing, the present study was carried out to ascertain the perception of medical students of the level and factors contributing to academic failure in the universities to proffer some intervention strategies in reducing the risks associated with the behaviour to the barest minimum.

### METHODOLOGY

The study adopted a cross sectional survey method in ascertaining the opinion of Medical students in Nigerian Universities. The justification for employing this research design was to enable the collection of data from many different individuals at a single point in time. Moreover, it allows the researcher to observe variables without influencing them<sup>[26]</sup>. The population of the study consisted of all year 4 medical students attending universities in Port Harcourt, in South-south Nigeria. The justification for adopting the fourth-year students was based on the fact that this level of students had written the MBBS examination a year ago while in their third year and as such, they were in a better position to express their perception more objectively. The sample was purposively selected based on the characteristic required for the study. The population of the respondents who indicated their consent to participate in the study was 108 and this number was adopted as the sample size because the number was small and manageable.

In the recruitment process, some ethical considerations were maintained. Participation in this study was voluntary. A letter was sent along with the questionnaire explaining the purpose of the study, with a letter of informed consent seeking their consent to participate in the study. The data treatment approach was well explained. The letter further stated the risk associated with participating in the study and the duration of the research, while assuring the participants of confidentiality and protection. They were assured of the benefits of the research and that they were allowed the freedom to withdraw at any point in the research. Lastly, they were assured of confidentiality of their responses, being a sensitive topic, names of the respondents were not required and they were given adequate time to respond to the items in the questionnaire without being pressurized.

The study adopted the probability/convenience sampling method, based on the availability and willingness of the respondents to participate. The sample was made up of 43 female and 65 male medical students who completed their consent forms and the questionnaire.

A researcher-designed instrument using a structured questionnaire created on Google form tagged "Academic Failure and Suicide Behaviour Questionnaire" (AFSBQ), was self-administered by the Medical students. It comprised 21 items and the demographic data sought information concerning the name and location of individual student's university, current year of study and gender. The questionnaire adopted the 4-point rating scale of Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD). To be more specific, SA and A were merged as one and D and SD items as one respectively. The instrument was validated for face and content validity by three Medical educators from the University of Port Harcourt and two experts in Measurement and Evaluation from Ignatius Ajuru University of Education, Port Harcourt. The experts moderated the instrument for its appropriateness and suitability of the items. The experts moderated the items by expunging ambiguous and irrelevant statements. They ascertained that the remaining items were suitable and measured what it purports to measure. Out of a total of 34 items, only 21 were found useful and thus, utilized for the study. To ascertain the reliability of the instrument, it was administered once to 30 medical students from the University of Port Harcourt who were not part of the final participants for the study and the instrument yielded a reliability value of 0.81 using the Cronbach alpha method. This indicated that the instrument was consistent in measuring what it was expected to measure and was suitable for the study. The data were analyzed using frequency count and simple percentages.

#### RESULTS

The results of the research questions and hypotheses are presented in Tables 1-3.

### **Research Question One:**

What is the prevalence of academic failure at the MBBS examinations among Medical students in Nigerian Universities?

Table 1: % Responses on Prevalence of Academic Failure:

S/N ITEM	F	%	DECISION
1- The students fail massively all year round	18	17	Rejected
2- As a result of the makeup examination, students' failure is minimized	27	25	Accepted
3- The students' failure in the MBBS examination has been consistent	21	20	Accepted
4- The failure rate is very moderate	26	24	Accepted
5- The failure rate is very low	16	15	Rejected

DAS-28, disease activity score 28.

The result in Table 1 shows that five items were presented on the prevalence of academic failure in the MBBS examination. The result shows that items 1 and 5 shows the least prevalence of academic failure as the respondents disagreed that (the students fail massively all year round); and (the failure rate is very low), with percentage scores of (17 % and 15 %) respectively. On the other hand, the respondents agreed with items 2, 3 and 4 with percentage scores of (25 %, 20 % and 24 %) which shows that as a result of the make-up examination, the students' failure rate is minimized; the rate of failure has been consistent and the failure rate is very moderate. Finally, the result showed that item 2 had the highest percentage score implying that due to the make-up examination, the prevalence rate of academic failure was 25 %.

Research Question Two: What are the risk factors associated with suicide behaviour as perceived by the Medical students?

**Table 2:** % Responses on Risk Factors Associated with Suicide Behaviour:

S/N ITEM	F	%	DECISION
6. The thought of MBBS examination induces fear in most Medical students.	10	9	Accepted
7. Poor mental health is related to academic Failure and suicide.	11	10	Accepted
8. Consistent poor academic performance is a precursor to suicide.	13	12	Accepted
9. Stress of academic workload gives room to academic failure and suicide.	12	11	Accepted
10. Suppressed psychological problem of a student in school leads to suicide.	11	10	Accepted
11. Students are sometimes exposed to bullying/verbal abuse by lecturers.	8	7	Rejected
12. Lack of parental support and unresolved conflict.	11	10.5	Accepted
13. Alcohol and drug abuse.	11	10.5	Accepted
14. Psychological distress and poor coping skills.	9	8.1	Accepted
15. Undisclosed depression/mental illness.	13	12	Accepted

Table 2 shows that the respondents agreed to nine out of ten items in the questionnaire on risk factors associated with suicide behaviour among the Medical students, which includes: the thought of the MBBS examination induces fear in most Medical students, that is item 6; poor mental health is related to academic failure and suicide, item 7; consistent poor academic performance is a precursor to suicide, item 8; stress of academic workload gives room to academic failure and suicide, item 9 and suppressed psychological problem of a student in school leads to suicide, item 10. Others include students' exposure to bullying by lecturers, item 11; lack of parental support and unresolved conflict; alcohol and drug abuse; psychological distress and poor coping skills and undisclosed depression/mental illness (items 12, 13, 14 and 15) The item percentage scores were (9 %, 10 %, 12 %, 11 %, 10 %, 7 %, 10.5 %, 10.5 %,

8.1 % and 12 %) respectively. It further shows that item  $8 - \text{consistent poor academic performance is a precursor to suicide (12 %) was the highest risk factor associated with suicide among the respondents. This implies that academic failure has a link with suicide behaviour as perceived by the respondents.$ 

Research Question Three: What are the strategies adopted by the universities in handling academic failure in the MBBS examination?

 Table 3: % Responses on Strategies for Handling Academic

 Failure:

S/N ITEM	F	%	DECISION
16. Students are given an opportunity to retake the MBBS examination	19	18	Accepted
17. Students who are underachievers were referred for counselling.	12	11	Rejected
18. Students are given the choice to indicate their option for other courses.	18	17	Accepted
19. Students are withdrawn from the programme instantly.	14	13	Rejected
20. Students are aware of their progress before the MBBS examination.	25	23	Accepted
21. The results are displayed in the open, a practice that is detrimental to the students' wellbeing.	19	18	Accepted

The result in Table 3 shows that out of the six strategies suggested for handling academic failure, the respondents agreed with only four which includes, that students were given an opportunity to retake the MBBS examinationitem 16; students were given the choice to indicate their option for other courses, item 18; students were aware of their progress before the MBBS examination, item 20; and item 21; that the results were displayed in the open, which practice is detrimental to the wellbeing of the students, with the percentage scores of (18 %, 17 %, 23 % and 18 %) respectively. However, the respondents disagreed that, students who were underachievers were referred for counselling - item 17; and students were withdrawn from the programme instantly – item 19, with percentage scores of 11 % and 13 % respectively. Furthermore, the result showed that item 20 (students were aware of their progress before the MBBS examination), had the highest percentage score of 23 %. This implies that students' awareness of their progress before the MBBS examination was the highest strategy for handling academic failure as perceived by the respondents.

## **DISCUSSION OF FINDINGS**

The first research question which examined the prevalence level of academic failure among medical students showed that it was 25 %. This result is consistent with previous studies one of which found a similar prevalence level of academic failure in Nigerian

universities<sup>[14]</sup>. This result is also consistent with available records which showed an evidence of massive failure of medical students occurring in both privately-owned and public universities in Nigeria<sup>[10]</sup>. These results simply corroborate the present outcome which implies that without having to retake the examinations, many students would have failed the medical examinations massively, which may have resulted in many more contemplating suicide due to the negative feelings and stigma associated with failure.. The result of the present study is also in tandem with a previous finding in India which reported that 82.6 % of the medical students in a Military Centre were affected by academic failure which they attributed to poor academic ability<sup>[13]</sup>. This study corroborates a similar study in Northwest Ethiopia which showed that a total of 393 medical students participated in the study and the results showed that the prevalence of suicide ideation and attempt of the participants were 14 % and 7.4 % respectively due to academic failure<sup>[26]</sup>. These results are quite worrisome given the fact that medical students are supposed to be well grounded since they are mostly dealing with the lives of human beings. Therefore, failure has implications for their future medical practice.

In research question two which sought the perception of the respondents on the risk factors that are associated with suicide among Medical students, the respondents accepted the following: the thought of the examination induces fear; persistent poor mental health; stress of the workload; psychological problems and consistent poor academic performance; lack of parental support and unresolved conflict; alcohol and drug abuse; psychological distress, poor coping skills and depression/mental illness, as precursors to suicide behaviour. Some of these findings especially with regards to alcohol and depression are supported by literature. For instance literature submits that one-fifth of medical students in Africa have experienced suicidal behaviours<sup>[24]</sup> and that the use of alcohol by female medical students, depression, among others were associated with suicidal behaviours among medical students<sup>[24]</sup>. Similarly, the present result confirms a previous report which found that medical training is rigorous, coupled with poor attention to the students' mental health<sup>[27]</sup>. Furthermore, a high prevalence of suicidal behaviour between 9 .0 % to 9.7 % was also reported among university medical students [18, 19, 20, 21]. The present study included other factors in determining the associated risk factors related to suicide behaviour. The study further revealed that persistent academic failure was a precursor to suicide behaviour among the medical students which was accepted by the respondents in item 8 of the research instrument. Again, this result affirms previous finding carried out in North Ethiopia which pointed out that a link existed between academic failure and suicide behaviour<sup>[26]</sup>.

The third research question which sought to find out the strategies adopted by the universities in handling students' academic failure and suicide shows that out of the five, only three were accepted by the respondents indicating that students had an opportunity to retake the MBBS examination; that they were allowed to opt for other courses; and they had knowledge of their progress before the MBBS examination. However, they disagreed with item 17 and 19, indicating that students who were underachievers were referred for counselling; and that students were withdrawn from the programme instantly. The result of item 16 indicating that students were allowed to re-take the MBBS examination is inconsistent with previous literature. For example, a study found that 'failure to achieve consistently good academic grades usually leads to ultimate dismissal from medical school<sup>[1]</sup>.

The result of item 17 stating that the underachievers were not referred for counselling is consistent with the submission of<sup>[1]</sup>, which stated that none of the students had any form of counselling before their withdrawal from the programme. Students are given the choice to indicate their option for other courses shows a progressive step taken to ensure medical students continue in other programmes rather than asking them to leave the university. This action is not only gratifying, but i a step in the right direction which rekindles the hope that medical students have in making the best use of the opportunities available to them. In the event that the students are asked to withdraw from their programme, this may be the beginning of fear and stigma which if not properly handled by lead students into worrying which is capable of causing medical students to nurse the idea of committing suicide, When students are aware of their progress as they proceed in the programme, it allows them to think ahead and plan their academic journey by working hard to remain in the programme or apply to other departments for the continuation of their studies. Lastly, when the results are displayed in the open, it becomes detrimental to the students' wellbeing, particularly if they have been penciled down for withdrawal or repetition. In support of this assertion, a previous study found that medical students' suicide prevalence rate in Nigeria reported a relationship between depression and suicidal ideation, with an increased implication on their overall health<sup>[3]</sup>.

## CONCLUSION

This study has established that there is a 25 % prevalence of academic failure among medical students in Nigerian universities and that there is a link between academic failure and the suicidal behaviours among medical students in Nigerian universities. The respondents in the study identified some key factors that were associated with suicide behaviour among medical students, with the highest being consistently poor academic performance which attracted 12 % of responses. Finally, the study indicated certain strategies that were employed by the universities in handling academic failure, with the highest

being medical students' awareness of their academic progress before the MBBS examination which was in the range of 23 %. These findings have both educational and counselling implications.

Based on the findings, the following recommendations were made:

1. Medical educators should collaborate with the universities to organize periodical seminars for medical students on prevention of academic failure in order to minimize the prevalence rate of academic failure and suicidal behaviours.

2. The universities should look into the factors associated with academic failure and suicide behaviour, one of the highest being depression/mental illness. In this situation, the students should be made to undergo stress examination from time to time to determine their suitability for academic work so that they can be advised appropriately.

3. The strategies for communicating the results of the MBBS professional examination should be reviewed by the board of examiners. Sometimes, the cause of suicide might not be strictly due to failure itself, but the thinking that other students are aware of their failure status. Hence, the results of the assessment should be treated with confidentiality; and communicated privately to the students in order to reduce stigmatization, while the students who performed poorly should be referred to the universities' counselling centres for professional intervention. As such, the counsellors should organize workshops periodically on causes of academic failure and the associated risk factors; as well as employing both group and individual counselling to assist the students.

#### LIMITATIONS OF THE STUDY

Some of the major limitations if this study includes small sample size and the use of singular region, may have affected the generalizability of the findings. Also, there was difficulty in retrieving all the copies of the questionnaire that was self-administered by the respondents. Moreover, the reliance on self-reported data and the inability of the researchers to determine the psychological state of the respondents at the time of responding to the instrument was a limitation. Lastly, accessing all the respondents and the issue related to selection bias may also have affected the outcome of this study. In spite of these limitations, the findings remain reliable since adequate methodology was applied in carrying out the research.

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## CONFLICTS OF INTEREST

There are no conflicts of interest.

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