[1.] Osiboye Oludare OSIGBEMINIYI, [2.] Promise Goodness ADELEYE, [3.] Sunday Blessing OLADIPUPO

SELF-MEDICAL DIAGNOSES AND TREATMENTS AMONG STUDENTS OF SIKIRU ADETONA COLLEGE OF EDUCATION SCIENCE AND TECHNOLOGY, OMU AJOSE, OGUN STATE, NIGERIA

[1.]Tai Solarin College of Education, Omu Ijebu Ogun State, NIGERIA
[2.]Department of Agriculture, University of Ilorin P.M.B 1515. Ilorin, Kwara State, NIGERIA
[3.]Department of Water Resources and Environmental Engineering, University of Ilorin, Ilorin, NIGERIA

Abstract: The trend of self-medication and self-diagnosis among students has become a growing concern in recent years. This study aims to identify the underlying reasons behind this trend, particularly among students of Sikiru Adetona College of Education Science and Technology, Omu-Ajose, Ogun State. A structured questionnaire was distributed to three hundred (300) students from the school of science, and four variables were utilized to concretely situate this study. The four hypotheses were tested using chi-square, and all of them were rejected at the 0.05 level of significance. The results of the study revealed that students engage in self-medical diagnoses and self-treatment to ensure self-preservation, avoid diagnosis expenses, manage their health in situations where drugs are unavailable, and succumb to peer pressure. However, it is recommended that higher institution students should be encouraged to access professional medical diagnoses and treatment to maintain and sustain healthy living. In conclusion, self-medication and self-diagnosis have become prevalent among students due to several reasons, but it is essential to address these issues through effective educational programs and awareness campaigns that emphasize the importance of seeking professional medical advice. This study provides valuable insights for stakeholders in the education and health sectors, as well as policymakers, on the need to prioritize students' health and well-being.
Keywords: medication; self-treatment; self-diagnoses; self-preservation; peer pressure

INTRODUCTION

Self-medication is the act of using medicines by individuals or their family members to treat conditions or symptoms that they have recognized or diagnosed themselves (Al Shibly et al., 2022; Ruiz, 2010). While responsible self-medication can increase access to medicines, provide relief for patients, and promote patient involvement in their healthcare, it is not entirely safe, especially when practiced irresponsibly (Al Shibly et al., 2022; Noone & Blanchette, 2018). Risks of self-medication include inaccurate self-diagnosis, delayed seeking of medical advice, severe adverse reactions, dangerous drug interactions, incorrect administration, dosage, and selection of therapy, masking of severe illnesses, and risk of addiction and abuse (Mannasaheb et al., 2022; Ruiz, 2010). In society, the growing trend of individuals self-diagnosing and treating their illnesses is a cause for concern (Al Shibly et al., 2022; Preuss et al., 2022). This behavior is worrisome, as it could lead to inaccurate diagnoses, delayed treatment, and potentially hazardous self-medication practices (Preuss et al., 2022; Ruiz, 2010). To ensure proper management of any health condition, it is vital to seek expert medical advice before self-diagnosing and treating (Shrestha et al., 2021). Self-diagnosis and self-treatment are indicative of a lack of interest in seeking medical help from professionals and disregard for the advantages of professional medical intervention (Al Shibly et al., 2022; Ruiz, 2010; Zhang et al., 2022). These habits involve individuals using medicinal products to treat perceived disorders or symptoms without diagnostic testing or consulting healthcare experts (Ruiz, 2010; Shrestha et al., 2021). Such symptoms are commonly associated with particular ailments or diseases and may result in incorrect self-diagnosis, delayed treatment, and the possibility of harm due to improper self-medication (Dydyk et al., 2022; Tavares et al., 2022). Self-diagnosis and self-treatment practices are not dependent on social background, social status, or age (Adelekan et al., 1992; James et al., 2006). The previous studies have affirmed that people turn to self-diagnosis and treatment due to delays and barriers experienced in hospitals, leading to prolonged waiting times (Dulal et al., 2020; Hamilton et al., 2022; Noone & Blanchette, 2018). A lack of specialist doctors and doubt in the ability of western-trained doctors to manage certain health conditions have also been identified as factors contributing to self-diagnosis and treatment (El Ezz & Ez-Elarab, 2011; James et al., 2006). Adolescents commonly self-diagnose and self-treat ailments like headaches, stomachaches, coughs, and catarrh (Mannasaheb et al., 2022). Self-medication after

inaccurate self-diagnosis is especially prevalent in college settings among students, according to a study previously conducted by Chang FR and Trivedi PK (Chang & Trivedi, 2003). Students tend to rely on their own judgment when it comes to their health, believing that they know their bodies best. This view may be reinforced by previous experiences with medical professionals, leading them to assume that one treatment can be applied to all illnesses with similar symptoms (Mannasaheb et al., 2022; Mmari et al., 2010; Noone & Blanchette, 2018; Tavares et al., 2022). In Africa, self-diagnosis and self-treatment are common trends, with reasons including the desire for self-care and self-cure, lack of access to medication, peer pressure, and the need for self-preservation, as reported by the studies earlier conducted (Bolla et al., 2020; Tesfamariam et al., 2019; Verduin-Muttiganzi & Verduin-Muttiganzi, 1998). According to Town et al., teenagers' self-diagnosis and self-treatment behaviors may be influenced by their belief in their capacity to identify their own health problems (Town et al., 2021). For this study the following null hypothesis were postulated:

- HO_1- Ultimate desire for self-preservation will not significantly be a perceived cause of Self medical diagnoses and self-treatment among students of Sikiru Adetona College of Education, Omu-Ajose, Ogun State
- HO_2 – Peer pressure will not significantly be a perceived cause of Self medical diagnoses and self-treatment among students of Sikiru Adetona College of Education, Omu-Ajose, Ogun State
- HO_3 – High Diagnoses expenses will not significantly be a perceived cause of Self medical diagnoses and self-treatment among students of Sikiru Adetona College of Education, Omu-Ajose, Ogun State
- HO_4 – Non availability of drugs will not significantly be a perceived cause of Self medical diagnoses and self-treatment among students of Sikiru Adetona College of Education, Omu-Ajose, Ogun State.

METHODOLOGY

The descriptive survey was used for the study. The survey entails the deployment of questionnaire that elicited responses from the students. Kiani, A.K., et al posited that the descriptive survey is appropriate for a large population such as this present work (Kiani et al., 2022). The descriptive survey method is a widely used research approach aimed at gathering information from a large sample of people to gain a better understanding of a specific population's characteristics and experiences (Thompson Burdine et al., 2021). Researchers utilize a standardized questionnaire to obtain data from a representative subset of the population, allowing them to identify patterns and trends (Kiani et al., 2022). While this method is convenient and cost-effective, the data collected may be limited in accuracy and depth due to self-reporting and the possibility of omitting relevant information (Thompson Burdine et al., 2021). Nonetheless, the descriptive survey method remains a crucial research tool when used appropriately and complemented by other methods like interviews and observations (Kiani et al., 2022; Thompson Burdine et al., 2021). The target population for this study comprised female and male student of Sikiru Adetona College of Education, Omu-Ajose, Ogun State. A total sample of three hundred (300) respondent were interrogated for this study. A self-structured questionnaire validated with a reliability coefficient of 0.88 was deployed to gather data. The questionnaire consisted of 20 items of close ended statements based on the four-point Likert modified scale for eliciting responses (Jebb et al., 2021). Therefore, in this study four trained research assistants were employed in the collection of data from respondents. Inferential statistics of chi-square was deployed to test the hypothesis at 0.05 level of the significance. Ultimate desire for self-preservation will not significantly be a perceived cause of Self medical diagnoses and treatment among students of Sikiru Adetona College of Education, Omu-Ajose, Ogun State, Nigeria.

Table 1: Chi-square analysis showing ultimate desire for self-preservation.

Responses	Frequencies	%	X^2	df	Remarks
SA	123				
A	62		48.41	3	Significant
D	60				
SD	55				

Calculated X^2= 48.41, df=3. Significance level <0.05 table value =7.82. The result in table 1 reveals that the computed X^2 value of 48.41 was greater than the critical value of 7.82 at 0.05 level of significance. Therefore, the null hypothesis that stated that ultimate desire for self-preservation will not significantly be a perceived cause of self-medical diagnoses and treatment among students of Sikiru Adetona College of Education, Omu-Ajose, Ogun State was hereby rejected.

Hypothesis II

Chi-square analysis showing peer pressure will not significantly be perceived cause of self-

BUPT

medical diagnosis and treatment among students of Sikiru Adetona College of Education, Science and Technology, Omu-Ajose, Ogun State.

Chi-square analysis showing peer pressure impact.

Calculate X^2 value =19.80, df=3 significant level, table value 7.82. Table 2 reveals that the chi-square value at 7.82 with degree of freedom (df) at 0.05 level of chi square (X^2) test therefore was significant, thus giving the basis for rejecting the hypothesis which stated that peer pressure will not significantly be one of the perceived causes of self-medical diagnosis and treatment among students of Sikiru Adetona College of Education, Science And Technology.

Table 2: Chi square analysis showing peer pressure.

Responses	frequencies	%	$\bar{X}^2$	df	Remarks
SA	108				
A	72				
D	70		19.80	3	Significant
SD	50				
TOTAL	300				

Hypothesis III

High medical diagnosis and treatment expenses will not significantly be a perceived cause of self-medical diagnosis and treatment among students of Sikiru Adetona College of Education, Omu Ajose, Ogun State.

Table 3. Chi-square analysis showing high medical diagnosis and treatment expenses

Responses	frequencies	%	$\bar{X}^2$	df	Remarks
SA	149				
A	30		194.41	3	significant
D	115				
SD	06				
TOTAL	300				

Calculate X^2=194.41, df=3. Significance level <0.05, table value =7.82

Table 3 shows the response of the respondents to high medical diagnosis and treatment expenses as one of the causes of self-medical diagnosis and treatment. Applying the chi – square test at 0.05 alpha level , the table value is 7.82 while the calculated value is 194.41. Since the calculated value is greater than the critical value, the null hypothesis which states that high diagnosis and treatment expenses will not significantly be a perceived causes of self-medical diagnosis and treatment is thus rejected.

Hypothesis IV

Non availability of drugs will not significantly be a perceived cause of self-medical diagnosis and treatment among students of Sikiru Adetona College Of Education, Science And Technology.

Table 4. Chi-square (X^2) analysis on non-availability of drugs.

Responses	frequencies	%	$\bar{X}^2$	DF	Remarks
SA	150				
A	125		216.81		significant
D	20				
SD	05				
TOTAL	300	100			

Calculate (X^2) value = 216.81, df=3 significant level <0.05, table value = 7.82. Table IV reveals that the calculated chi-square value of 216.81 is greater than the critical value of 7.82 at 0.05 level of significance. Therefore, the null hypothesis which stated that non-availabity of drugs will not significantly be a perceived cause of self-medical diagnosis and treatment is thus rejected.

DISCUSSION OF FINDINGS

Hypothesis one states that ultimate desire for self-preservation will not significantly be perceived as cause of self-medical diagnosis and treatment among students of Sikiru Adetona College of Education, Omu-Ajose. The analysis in Table1 show that the above hypothesis was rejected. The result implies that the students perceived that their ultimate desire for self-preservation made them to engage in self-medical diagnosis and treatment. This is consistent with Holman H, Lorig K (2000) and Bodenheimer T, et al. posited that self-preservation is the ultimate instinct of every human being (Bodenheimer et al., 2002; Holman & Lorig, 2000).

Hypothesis two stated that peer's pressure will not significantly be perceived causes of self-medical diagnoses and treatment.

This result agrees with Bongers I. L et al (2008) who asserted that the pressure of peers has led many youths to go astray (Bongers et al., 2007). Furthermore, another study equally stated that peer pressure plays a major role in influencing many young adults owing to group dependency among friends(Farrell et al., 2017). The position of many research outcomes on drug use has revealed that peer group impacts adolescents more as they often had their first contact with hard drugs through playmates and associates (James et al., 2006; Pagano et al., 2015).

Hypothesis three states that high medical diagnosis and treatment expenses will not significantly be a perceived cause of self-medical diagnosis and treatment among students of Sikiru Adetona College of Education, Science And Technology, Omu-Ajose, Ogun State. As shown in Table III that hypothesis was rejected implying that a high medical diagnosis

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and treatment expenses is a compelling cause of self-medical diagnosis and treatment. This result agrees with Chang FR, Trivedi PK. (2003) which stated that paucity of funds often compels teenagers to engage in self-medical diagnosis and treatment (Chang & Trivedi, 2003).

Also Onwujekwe OE, Chima R, Okonkwo P (2000) emphasized that economic status of most Nigerians is so low hence, the propensity to engage in self-medical diagnosis and treatment is a humongous challenge (Onwujekwe et al., 2000).

Hypothesis four stated that non-availability of drugs will not significantly be a perceived cause of self-medication among students of Sikiru Adetona College of Education, Science and Technology, Omu-Ajose, Ogun State. Analysis presented in Table IV revealed that as a result of non-availability of drugs in the community health center, students of Sikiru Adetona College Of Education, Science And Technology, Omu-Ajose, Ogun State get involved in Self medical diagnoses and treatment. This revelation is in line with Hughes CM et al that states that the non-availability of drugs in some community and school health centers is the reasons for teenagers getting involved in self-medical diagnoses and treatment (Hughes et al., 2001).

CONSEQUENCES OF SELF-MEDICAL DIAGNOSES AND TREATMENTS AMONG STUDENTS

Self-treatment, including self-diagnosis and treatment without professional medical advice, has become prevalent among students. Although it may appear to be a convenient and rapid solution, it can severely affect the well-being and overall health of the individual. Misinformation, inadequate knowledge, stigmatization, mental health problems, decreased academic performance, increased healthcare costs, and complications and harm are some of the outcomes of self-medication practices. Brief information is given on the perceived consequences on the self-medical diagnoses and treatments among students (see Table 4)

Table 4: Consequences of self-medical diagnoses and treatments among the students.

S/N	Consequences	Short notes
1	Incorrect self-diagnosis	Incorrect self-diagnosis can occur when students try to diagnose themselves without seeking professional medical advice. This practice can result in incorrect treatment that may worsen their condition. In other words, students may wrongly identify the cause of their ailment and treat it with the wrong medication or procedure, which can have adverse effects on their health
2	Delayed treatment	Self-treatment can delay seeking professional help for more serious conditions. Students often rely on self-help strategies to manage their health concerns, but it may not be enough for severe conditions, leading to a delay in seeking professional help. This delay can make the condition worse and more difficult to treat. Therefore, students should acknowledge the limitations of self-treatment and seek professional help when necessary to improve their chances of successful treatment and recovery.
3	Complication and harm	Self-medication without professional advice may result in complications and harm to a student's health. These can include allergic reactions, drug interactions, and toxicity, which may lead to severe health problems, hospitalization, or even death. Seeking medical advice and following recommended dosage and treatment regimen is crucial to avoid potential complications and manage the health condition properly.
4	Increased healthcare costs	Self-treatment may lead to complications that require professional medical help, resulting in increased healthcare costs for students and the healthcare system. Misdiagnosis or incorrect medication usage can lead to the need for specialized medical attention, hospitalization, or long-term health consequences. The resulting extensive and costly treatments can increase healthcare costs for the student and their family.
5	Decreased academic performance	Self-treatment may lead to health complications and impact students' overall health, leading to decreased academic performance and attendance. It can result in prolonged illness, absence from school, and emotional and physical effects that hinder concentration, study, and academic performance. Self-medication practices may negatively impact students' academic goals and future prospects, highlighting the need for professional medical care and caution in self-treatment.
6	Misinformation and inadequate knowledge	Self-diagnosing and treating among students may lead to poor decision-making due to a lack of adequate knowledge and information about their health conditions. Students may rely on unreliable sources, leading to ineffective treatment or worsening of their condition. Insufficient knowledge of the potential risks and complications of self-treatment can also cause further harm to their health. Seeking professional medical advice and adhering to recommended treatment options can help avoid the negative consequences of misinformation and inadequate knowledge.
7	Mental issues	Students who engage in self-diagnosis and treatment may experience high levels of stress and anxiety due to the uncertainty and fear of their health condition. This can result in feelings of helplessness and a loss of control, which can negatively impact their mental health. Even after seeking professional medical help, the stress and anxiety may persist, leading to conditions such as depression and anxiety. Hence, self-treatment practices among students may result in mental health issues that can significantly affect their well-being and quality of life
8	Stigmatization	Self-diagnosis and treatment can lead to stigmatization of students, as their peers or society may not understand their health condition, resulting in discrimination and prejudice. This stigma can cause feelings of shame, embarrassment, and social isolation, which can negatively affect the student's mental health and well-being. As a result, students may avoid seeking professional medical help or disclosing their health condition to others, further worsening their condition. Therefore, it is essential to provide students with the necessary support and education to reduce the stigma associated with their health conditions and promote a more inclusive and understanding society.

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PROPOSED SOLUTIONS TO SELF-MEDICAL DIAGNOSES AND TREATMENTS AMONG STUDENTS

Students who engage in self-medication practices may experience serious negative consequences on their health and well-being. These consequences include inadequate knowledge, misinformation, stigmatization, mental health issues, reduced academic performance, higher healthcare costs, and potential harm (Mira et al., 2015). Consequently, it is essential to identify solutions to promote safe and effective healthcare practices among students (Behzadifar et al., 2020; Mira et al., 2015). In this section, we will explore some potential solutions to address the issue of self-medication practices among students.

- Health Education Programs: It is essential to educate students about the significance of consulting medical professionals and avoiding self-treatment, and health education programs can help with that (Kanwal et al., 2018). These programs can be conducted in educational institutions like schools and colleges to enlighten students about the potential risks and consequences of self-medication (Hughes et al., 2001). The programs may include lectures, seminars, and workshops on various health-related topics such as proper medication usage, identifying common illnesses' symptoms, and the value of seeking medical advice (Mira et al., 2015). Additionally, these programs can create awareness about the risks of self-diagnosis and treatment, emphasizing the importance of obtaining accurate diagnoses and appropriate treatments from medical experts (Behzadifar et al., 2020).
- Professional Medical Advice and Access to Healthcare Services: Encouraging students to seek professional medical advice when they have health concerns is crucial. To facilitate this, educational institutions should make healthcare services available to students, such as on-campus medical clinics, to encourage them to seek medical attention when required (Bornstein, 1984). Health experts, like doctors and nurses, can provide students with accurate diagnoses and effective treatment plans. Providing access to medical professionals and healthcare services can ensure that students receive adequate care, and the possibility of self-diagnosis and treatment can be reduced (Hughes et al., 2001).
- Awareness Campaigns: Another way to address the issue is by creating awareness campaigns about the hazards and effects of self-medication practices (Zhang et al., 2022). Educational institutions can arrange campaigns that concentrate on the risks of self-medication, the significance of seeking professional medical advice, and the advantages of using healthcare services (M et al., 2015). These campaigns can be executed through various communication channels, such as social media, school websites, posters, and flyers, with the aim of educating and informing students about the importance of making well-informed decisions about their health and well-being (James et al., 2006; Preuss et al., 2022).
- Collaboration with Pharmacists: Educational institutions can partner with pharmacists to provide students with reliable information about medication usage. Pharmacists are qualified professionals who can offer guidance and advice on the appropriate use of medications (Cavaco et al., 2018; Kasal & Sabol, 2022). This partnership can involve educating students about medication side effects, how different medications interact with each other, and the significance of following dosage instructions. Additionally, this collaboration can facilitate students' access to high-quality medications at reasonable prices (Kasal & Sabol, 2022; M et al., 2015).
- Mental Health Support: Students who participate in self-medication practices may also encounter mental health concerns such as stress, anxiety, and other issues. To assist students in coping with the emotional and psychological impact of health problems, educational institutions can provide mental health support services, such as counseling and therapy (Cavaco et al., 2018; Liekens et al., 2016). By addressing mental health concerns, educational institutions can foster a healthy and supportive atmosphere in which students can obtain the resources and assistance required to maintain their mental and emotional well-being (Cavaco et al., 2018; Preuss et al., 2022).

RECOMMENDATION

From the study, the following recommendation were proffered:

- Regular public education is crucial to enlighten teenagers and young adults about the specific risks and side effects of self-medication because of the increasing

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prevalence of self-medication among young people, which can lead to severe consequences. The indiscriminate use of drugs may result in drug resistance, addiction, and overdose, which can be fatal. In addition, self-medication can cause misdiagnosis and mistreatment of a health condition, leading to further complications. Therefore, it is essential to conduct regular public enlightenment campaigns aimed at educating teenagers and young adults about the dangers of self-medication. These campaigns should emphasize the importance of seeking medical advice from qualified health professionals and highlight the risks and side effects of self-medication. Additionally, raising awareness of accessible and affordable healthcare services, such as clinics and hospitals, should be a focus of these campaigns. Ultimately, regular public education can help reduce the prevalence of self-medication among young people and promote their overall health and well-being.

— To promote the overall health and well-being of teenagers and young people, it is crucial to encourage them to develop knowledge, skills, and positive attitudes towards living a healthy lifestyle. One effective approach is to incorporate health education into the school curriculum. By teaching students about healthy living practices, such as proper nutrition, physical exercise, and stress management, they can learn how to take care of themselves. Furthermore, health education can help students comprehend the importance of taking preventative measures and detecting diseases early, which can lead to better health outcomes in the future. This knowledge can empower young people to make informed decisions about their health. In addition, promoting healthy living through the school curriculum can help address problems such as obesity, mental health issues, and substance abuse among young people. By equipping students with the necessary knowledge and skills, they can adopt healthy behaviors that will benefit them throughout their lives.

— To prioritize the provision of health services for college students in their communities and health centers is crucial, and it is recommended that the government and school authority take action. College students are a vulnerable population due to several factors such as stress, peer pressure, and lifestyle changes, which can negatively affect their physical and mental health. By prioritizing health service provision for college students, the government and school authority can ensure that students have access to quality healthcare services that cater to their unique needs, including preventive care, mental health services, and health education programs that promote healthy living practices. Additionally, prioritizing health service provision can help to decrease health disparities that exist among this population. Many college students come from low-income families or communities that lack sufficient healthcare services. By providing accessible and affordable health services, the government and school authority can help to reduce these disparities and enhance the health outcomes of college students.

— The teaching of drug education should be emphasized for all categories of students across all departments in college. It is advisable for drug education to be included as part of the general courses offered in the college. This is because drug abuse and addiction can have serious consequences on an individual's physical, mental, and social well-being, and can also impact their academic performance. By including drug education in the curriculum, students can learn about the risks associated with drug use and addiction, as well as the signs and symptoms of drug abuse. They can also learn about the various types of drugs and their effects on the body and mind, and how to make informed decisions about drug use. Moreover, drug education can help to promote healthy behaviors and prevent drug abuse among college students. This can include education on stress management techniques, healthy coping mechanisms, and how to seek help if needed.

CONCLUSIONS

Based on the outcome of this study, it was concluded that the respondents were of the opinion that student of Sikiru Adetona College Of Education, Science And Technology, Omu-Ajose, Ogun State engage in self-medical diagnoses and treatment as a result of ultimate self-preservation, peer pressure, high medical diagnoses, treatment expenses, and perceived non-availability of drugs in their schools and community health centre. To summarize, the study has revealed that self-medication is a widespread issue among students at Sikiru Adetona College of Education Science and Technology, Omu Ajose, Ogun State, Nigeria. The accessibility and availability of drugs, cost, and inadequate knowledge about potential

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side effects and risks are some of the contributing factors. Self-medication can result in severe consequences, and immediate action is necessary to address this issue. To tackle this problem, it is crucial to launch public awareness campaigns that highlight the dangers of self-medication and stress the importance of seeking professional medical advice. Additionally, providing drug education as part of the general courses offered in the college can equip students with the knowledge and skills to make informed decisions about their health. Therefore, continuous monitoring and intervention are necessary to reduce self-medication among college students and promote their overall health and well-being. Prioritizing student health involves addressing the issue of self-medication and promoting healthy practices.

Declaration of competing interest

The authors affirm that they have no known financial or interpersonal conflicts that would have appeared to have an impact on the research presented in this study.

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Faculty of Engineering Hunedoara,
5, Revolutiei, 331128, Hunedoara, ROMANIA
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