



FUTURITY
Education

DOI: <https://doi.org/10.57125/FED.2024.12.25.13>

How to cite: Ogbodu, O. M. (2024). Persuasive Communication: A Vehicle for Positive Change In Medication Misuse By University Undergraduates — An Exploratory Study. *Futurity Education*, 4(4). 194-211. <https://doi.org/10.57125/FED.2024.12.25.13>

Persuasive Communication: A Vehicle for Positive Change In Medication Misuse By University Undergraduates — An Exploratory Study

Olubunmi Margaret Ogbodu

PhD in Health Studies, Postdoctoral Research Fellow, Department of Anaesthesiology and Critical Care, Faculty of Medicine and Health Sciences, Walter Sisulu University, Mthatha, Eastern Cape, 5099, South Africa, <https://orcid.org/0000-0002-2488-2963>

Corresponding author: ogbodu@wsu.ac.za.

Received: July 17, 2024 | **Accepted:** October 28, 2024 | **Available online:** November 19, 2024

Abstract: Stress levels escalating to significant proportions have been reported in university students, especially during tests and examination periods, hence the misuse of prescription and over-the-counter medications. The situation of medication misuse amongst university undergraduates in Nigeria is no exception, as found globally. Medication misuse is influenced by risk and promotive factors. Persuasive communication is a message intended to reinforce or change the responses of others and has been found relevant in behavioural health changes. It could be adopted to change medication misuse by university students. The study was done at the University of Lagos in Lagos State, Nigeria. An exploratory, descriptive research design using one-on-one in-depth interviews to collect data from 20 respondents but with data saturation after the 12th participant. The respondents were selected using a purposive sampling method with defined inclusion and exclusion criteria for registered university undergraduates and academic and non-academic staff of the university. Data analysis was performed using Tesch's Open Coding method. The study revealed the risk and promotive factors of medication misuse by university students during examination periods, family income, gender, peer influence, and ease of access to medications. The study advocates for the adoption of persuasive communication by the

university management to communicate frequently the risks of medication misuse to positively impact students in taking appropriate initiative for their health. Persuasive communication to mitigate medication misuse by university students, including the positive use of the media and celebrities and increased sensitisation by the university management on the dangers of medication misuse, is discussed and recommended. This study contributes to effective public health information dissemination, discouraging medication misuse among university students. The limitations and recommendations of the study were discussed.

Keywords: Medication misuse, self-medication, examination periods, university students, persuasive communication.

Introduction

Adolescence is a critical development period from childhood to adulthood characterised by several physical, psychological, and social changes with an age range between 14–25 years with immediate and long-term implications for the health and well-being of individuals and society (Akanbi et al., 2015; Salmanzadeh et al., 2020; Zuhri, 2022). Adolescence has also been described as the period of "identity search" or the period of "storm" by Zuhri (2022), further describing the turbulence and risk-taking potentials of this population. This transitory phase is prone to experimentation and risk-taking. It is often one in which adolescents complete secondary school education and proceed to institutions of higher learning in Nigeria, with a majority of undergraduates belonging to the age range of 16–25 years (Akanbi et al., 2015; Oliha, 2014; Adeyemo et al., 2016). Medication misuse is defined as the non-medical use of prescription and OTC medicines to experience the feeling caused by the medicine without a doctor's prescription and the use of medications at doses different from recommended (Benotsch et al., 2014). The misuse of medication among teenagers and youths has become a global public health challenge, with implications for their present and future health, such as dependence (Benotsch et al., 2013; Geurts et al., 2022). In a Nigerian study, Adejumo et al. (2021) also posited that the age bracket 15–24 covers senior secondary and tertiary school graduates, implying the age bracket for university undergraduates in the country. According to Salmazadeh et al. (2020), adolescence is the age when people begin to misuse medications. The prevalence of misuse of medications by teenage undergraduates has been alluded to by Abraham et al. (2021) in a study conducted in the US with adolescents, suggesting that mental health challenges, stress, family and peer influence, pain, recreational use, and addiction are motives for such uses. The situation of medication misuse among university undergraduates in Nigeria is no exception, as found in different parts of the world with self-medication, one of the leading causes of drug misuse in people (Elemile et al., 2023; Adeyemo et al., 2016). Academic stress and the need for academic success are motivators for using medications to achieve cognitive enhancement, motivational enhancement, and an overflow of energy to achieve good quality sleep, reduce nervousness, and improve overall performance in exams and study-related assessments (Almalak et al., 2014; Sharif et al., 2021). Therefore, students resort to the non-medical use of medications as a coping strategy to handle multiple stressors, including achieving high academic success (Franke et al., 2011; Onuoha & Subair, 2013; Sharif et al., 2021).

Research Problem

University students experience a variety of pressures, such as a heavy workload, ongoing pressure to perform well, rivalry among their peers, and prospective anxieties. As a coping mechanism, they often abuse medications to manage these strains and excel academically (Franke et al., 2011; Olapegba et al., 2021; Onuoha & Subair, 2013). University undergraduates in Nigeria belong to the broad categories of adolescents and youths who are prone to experimentation with new things, such as non-medical use of

medication, amongst others, because of their developmental stage (Akanbi et al., 2015). The academic stress experienced by students in the pursuit of academic excellence, amongst others, remains one of the motivations for medication misuse to enhance concentration while studying, maintain mental alertness, reduce sleep time, and reduce anxiety associated with preparation for tests and examinations (Almalak et al., 2014). The researcher did not find any studies reported in Nigeria on medication misuse during examination periods or a call to action using persuasive communication to emphasise the negative consequences of medication misuse to discourage such use by university students, a gap this proposed study intends to fill. In light of this, the present study proposes to explore and describe risk and promotive factors that influence medication misuse during examination periods and provide suggestions on how to change the behaviour of university students who misuse medication.

Research Focus

This present study explored and described risk and promotive factors that influence medication misuse during examination periods and provided suggestions on the use of persuasive communication to change the medication misuse behaviour by university students.

Research Aim and Research Questions

What factors influence medication misuse by university students during examination periods?

What measures could be adopted to change the attitude of university students to medication misuse during examination periods?

Literature Review

Higher education students frequently endure high levels of strain, which can harm their academic, personal, and physical well-being (Tavolacci et al., 2013).

Despite the perceived benefits of non-medical use of prescription and OTC medication for cognitive enhancement by university students, Franke et al. (2011) argue that minimal scientific evidence supports the pro-cognitive properties in healthy individuals. Side effects are associated with the use of medication regardless of the therapeutic classification of either prescription or OTC medication. According to Cooper (2013), side effects may include adverse effects resulting from inappropriate use of a pharmaceutical component in a compound formulation, direct harms related to the pharmacological effects of the drug, or other consequences like the development of substance abuse that has an impact on one's personal and professional lives as well as monetary expenses. Young people's health is an essential indicator of future health and social and economic development in any nation, with crucial determinants of future life prospects (Hannon et al., 2024). Therefore, it is essential to make deliberate efforts to safeguard their health by discouraging medication misuse. Codeine, for example, amongst other OTC medications perceived by the general public to be safe, has been mentioned severally as responsible for sending many university undergraduates to Psychiatric hospitals in Nigeria (Alagbe, 2016). This development requires intentional preventive measures.

Factors Associated With Medication Misuse By University Students

Medications frequently misused by university students include over-the-counter and prescription medications and illicit hard drugs. By way of a definition, an over-the-counter (OTC) medication is a non-prescription medication used for the management of minor ailments. Consumers can conveniently obtain them from community pharmacies and other retail outlets. On the other hand, prescription medications are prescribed by a doctor, bought at a pharmacy, and intended to be used by one person

following a diagnosis of an ailment and for a cure, mitigation, treatment, or disease prevention (Kehinde & Ogunnowo, 2013). Different risk and promotive factors have been described in the literature.

Risk Factors

Male gender, involvement in a college sorority or fraternity, peer pressure, scholastic difficulties, depression, a strong desire for euphoric experiences, and usage of alcohol, cigarettes, or other illegal drugs are among the significant risk factors for prescription abuse (Flory et al., 2014). Conversely, Fingleton et al. (2016) argue that being younger, having a long-standing illness requiring medications, and having previous use of illicit drugs were predictive of medication misuse, while factors such as ease of access, parental income, perceived peer medication use, previous use of substances, academic failure, and low educational attainment described by Sujana et al. (2023) increased the risk of medication misuse during examination periods. In the same light, exam-related stress, peer pressure, and academic and psychological were described as factors influencing the prevalence of medication misuse (Khalifah et al., 2023).

Promotive Factors

Promotive factors are factors that discourage medication misuse. According to Kuntsche and Kuntsche (2016), parents are excellent candidates for inclusion in preventive or intervention schemes since they continue to be significant socialisation factors for their adolescent children. Geurts et al. (2022) also posited that positive parenting as a parent-related factor plays a significant role in providing direction for adolescents' adoption of healthy behaviours. Likewise, Lee et al. (2016) and Collins et al. (2011) described essential factors such as parental and school attachments, knowledge of perceived risk associated with medication misuse, commitment to schoolwork and activities, and parents' disapproval have been described to play a role in making medication misuse less attractive to adolescents and youths.

The Concept of Persuasive Communication as A Vehicle For Attitude And Behavioral Change

Different authors have described persuasive communication as having found wide application in promoting behavioural health changes (Hovland et al., 1953). According to the authors, it can be described as a theory for attitude change for the achievement of positive health behaviours such as antismoking, anti-drinking, and anti-drug abuse. To further concur with the above definitions, Zimba (2022) asserts that it remains a viable approach to influencing change by making messages more believable, supported by using credible and trustworthy personality models to enhance the audience's trust. For a message to be effective in eliciting a change in attitude, Hovland et al. (1953) and Akinsola (2002) posit that there must be an effective communicator who possesses two key characteristics to be persuasive: credibility and trustworthiness. A credible communicator is described as one who possesses expert ability and social attractiveness in the opinion of the message recipient. The higher the perceived expertise, the more persuasive they are expected to be, while trustworthiness represents the assessment by the recipient and trust that the communicator means well and that any attitudinal change on their part will benefit them rather than the communicator. Akinsola (2002) alluded to the influence on attitude and behaviour by persuasive communication by stating that persuasive communication is a vehicle for attitude change with three distinct components:

- Communicator – a communicator with a likeable personality, high credibility, and influence who meets his audience at their level of reasoning is more likely to impart attitude change in a select target group.

- Communication message – refers to what should be said, how it should be said, and relevance to a target audience. It should contain a fear-arousing element that serves as the trigger for attitude change.
- Target audience and the operating environment – the nature of the audience also plays a role in how easily the target audience is persuaded to effect attitude change.

Materials and Methods

For this study, an exploratory, descriptive research design was adopted. Semi-structured interviews were used to collect data from individuals deemed information-rich since they had direct experience dealing with students on campus during exam periods. The procedures given in Tesch's Open Coding data analysis method were used to analyse the data (Creswell, 2009). This study was conducted at the University of Lagos in Lagos State, Located in Akoka, in the Yaba local government area of Lagos State; the institution of Lagos (Unilag) is a research institution funded by the federal government. The university comprises 12 faculties that offer courses in the humanities, sciences, and arts, totalling 14 academic units. Students at Unilag come from all 36 states in the union and other countries. They are housed in 15 living accommodations on campus, six designated for undergraduate male students and seven for undergraduate female students. The two remaining halls are used by post-graduate students (Oreagba et al., 2011).

Sample and Participants

The study population was all undergraduate students registered for the 2017/2018 academic year, aged between 18–23 years old, parents, pharmacists, and pharmacy proprietors of retail pharmacies around the university. The sample consist of students, lecturers, and pharmacist-owners of retail pharmacies located around the university campus who were purposively selected for the qualitative study (Brink et al., 2018; Parahoo, 2006). This study utilised purposive sampling through the design of inclusion and exclusion criteria below. For this exploratory study, a sample size of 20 participants was envisaged; 4 lecturers, 3 administrators, 2 pharmacists, and 3 students were interviewed.

The following inclusion criteria were taken into consideration during sampling:

- Registered male and female students on campus aged 18–23. Six (6) students are envisaged, with at least a male and female student from each level of study.
- Teaching and non-teaching staff at the University of Lagos who served as key informant interviews. Five (5) interviews were planned for this category of individuals.
- Parents/guardians of registered students at Unilag, Akoka campus who were available on campus at the time of data collection. Four (4) participants were envisaged.
- Community pharmacists (including proprietors) operating retail pharmacies within a 10km radius of the Unilag campus. Four (5) participants were envisaged.

Exclusion criteria:

- Students not registered at the University of Lagos for the 2017/2018 academic year were excluded from the study.
- Academic and non-academic staff of other institutions of higher learning present on campus at the time of data collection

- Parents and guardians of students/wards who are not registered students of the University of Lagos.
- Community pharmacists whose operating premises were not within the 10km radius of the University of Lagos.

Instrument and Procedure

The semi-structured interview guide, which was used to gather data, served as a guide to help those who participated stay focused on the study's objectives. The participants were free to communicate themselves, and the researcher used demanding inquiries to elicit further information. The interview guide was pretested, and the instrument pre-testing was to make necessary adjustments and modifications to the questions. One parent and two teenage students from Yaba College of Technology, another institution of higher learning located in the Yaba metropolitan area, and two community pharmacies were also involved in the study and pre-tested the instrument. Analysis of the data gathered helped to enhance the next round of interviews. In mid-April 2018, data gathering began, and it took six weeks to finish by the end of May 2018. In April and May of 2018, the first semester exams for the 2017–2018 school year were held. Each interview lasted thirty to forty-five minutes, and the process occurred on the University of Lagos campus. Before requesting the participants' assent to participate in the study, the researcher gave them an explanation of its goal. Those who consented were brought to a comfortable and safe location on campus for the interview. While the guardians and university employees used their respective offices and the retail pharmacies conducted interviews in their practising settings, the students used the residence halls.

The UNISA College of Human Sciences Ethics Committee granted ethical clearance for this project; the permission number is REC-012714039. The University of Lagos's Student Affairs Division Dean granted the gatekeepers authorisation. Before the interview started, informed consent was sought from every participant, including the students between 18 and 23. The participants received an explanation of the study's goals and methodology and the possible advantages and disadvantages of taking part. The participants were given enough chance to ask questions before the start of data collection, and they were told of their right to withdraw from the study if they felt uncomfortable. Pseudonyms were used to identify participant reports of information in order to promote anonymity. The participants gave their written consent for the interview to be recorded.

Data Analysis

The socio-demographic characteristics of the participants were collated and analysed manually, thematically, as suggested by Tesch's Open Coding method (Creswell, 2009), which the researcher used to analyze data qualitatively. The eight steps of Tesch's Open coding method are outlined below:

1. Get a sense of the whole. Read all the transcripts carefully. Jot down ideas that come to mind.
2. Pick one document (transcripts of an interview) – the most interesting one, then one on top of the pile.
3. Read through several participants' data and do the same as in step 2. Make a list of all the topics that come to mind. Arrange the topics into columns (for example, significant topics, unique topics, and leftovers).
4. Take the list of topics and refer back to the data. Abbreviate the topics as codes and write codes next to the appropriate text segments. See if new categories and codes emerge.

5. Find the most descriptive wording for the respective topics and turn them into categories, grouping categories that relate to each other and drawing lines between categories to show interrelationships.
6. Make a final decision on the abbreviation for each category in one place and perform a preliminary analysis.
7. Assemble the data belonging to each category in one place and perform a preliminary analysis.
8. If necessary, recode existing data.

Results

Table 1 and Table 2 below discuss the demographic profile of 12 participants comprising students, lecturers as guardians, certified guidance counsellors and administrators, and pharmacists who participated in the study, with 58% of female participants (n=7). More than 50% of participants were 18 – 27 and 48 -57, of 33%, respectively. In-depth, one-on-one individual interviews were conducted with the participants in their respective offices and natural settings within the university campus. A summary of the characteristics is provided in Table 1 below.

Table 1

Demographic Profile of Study Participants (n=12)

Criterion	Characteristics	Frequency	Percentage
Gender	Female	07	58%
	Male	05	42%
Age	18-27	04	33%
	28-37	01	9%
	38-47	03	25%
	48-57	04	33%
Ethnic group	Yoruba	07	58%
	Igbo	05	42%
Religion	Christianity	08	67%
	Islam	04	33%
Profession	Student	03	25%
	Pharmacist	02	17%
	Counsellor/Administrator	03	25%
	Lecturers	04	33%

Table 2

Descriptors of the Participants in the Qualitative Study (n=12)

Participant descriptor	Code used	Frequency
Student	PI	01
	P2	01
	P3	01
Pharmacist	P4	01
	P5	01
Counsellor as guardian	P6	01
	P7	01

Administrator as guardian	P8	01
Lecturer as parents	P9	01
	P10	01
	P11	01
	P12	01

Two major themes emerged from the interviews and emergent sub-themes were categorized accordingly in Table 3.

Table 3

Themes and Sub-Themes

S/N	Themes	Sub-themes
1	Factors influencing medication misuse by university students during examination periods	Risk factors – family income, gender, peer influence, ease of access, lack of knowledge of perceive Promotive factors - parental influence, parents' disapproval, and institutional support
2	Suggestions on the measures for limiting medication misuse by university students during examination periods	Societal network - use of celebrities and media as role models Increased sensitisation by university management

Theme 1: Factors Influencing Medication Misuse by University Students during Examination Periods

Risk Factors: Family Income and Gender, Peer Influence, and Ease of Access. This study found low medication misuse by students from poor backgrounds compared to the students from affluent homes who are more engaged in the misuse of medication and a perceived lack of knowledge of the risks associated with medication misuse.

“Majority of delinquent students are from affluent homes because we observe that the indigent, orphans, visually impaired and students living with one form of disability or another do not indulge in self-medication or drug misuse.” P6, Counselor

“... you see these children from rich homes, they use these medicines indiscriminately here ooo.” P7, Counselor

“Even at our last meeting with administrators from other universities, the report on medication misuse from private universities is worse. You know that a middle-income earner will not enrol his or her child in a private university in Nigeria. It is too expensive. I even wonder how those parents can cope with the heavy school fees!”P8, Administrator

“The way these young ones use drugs without any prescription make you conclude that they are not aware of the dangers associated with such indiscriminate use of drugs without a doctor’s prescription”.....P10, Lecturer.

Gender. According to the participants, the male gender was revealed in this study to use more medications without a prescription to stay awake for longer hours to study compared to the female gender.

"We find more boys indulging in medication misuse than girls here. For the girls, what you find common with them is pain during their menstruation monthly, so they unavoidably use painkillers at those times"..... P7, Counselor

Peer Pressure. It is another factor revealed in this study, and some students were said to indulge in medication misuse for fun or other social reasons, such as acceptance by peers.

"... another factor is peer pressure. This is a social factor; they want to belong, so they take hard substances and drugs without a prescription"P3, Student.

"Some of these students are immature and unable to cope with new tertiary education life and are easily influenced by bad friends because they are still very young".....P11, Lecturer.

Ease of Access to Medications. The ease of access to both prescription and over-the-counter medications by students due to poor regulatory framework in the country was corroborated by responses such as:

"Also, ease of access to these drugs is another major factor. In Nigeria, you know, drugs can be bought anywhere and everywhere without prescription. It is straightforward to get these drugs."... P3, Student

"Hmmm...You know these drugs can also be found as left-overs at home in medicine cabinets; knowing what the drug is used for by family members at home, these children use the drugs once they experience symptoms that are similar to the same experienced by a family member at an earlier time".....P13, Lecturer.

"I am concerned daily as a pharmacist because I see how students come to the pharmacy to request drugs without a prescription. I am worried because even when you do not sell, the patient goes to another unlicensed drug vendor to buy the drugs without a prescription. As you can tell, the problem of misuse will remain with us for a long time except deliberate steps are taken by the relevant stakeholders"....P4, Pharmacist.

Promotive factors. Participants were asked to share their perceptions on the promotional factors that discourage medication misuse on the university campus during examination periods. Factors such as parents' influence on their children's disapproval of negative actions and the university's role in keeping students positively engaged in extracurricular activities like sports were described.

Parental Influence:

" A child from a good home where the parents are responsible, available, and supportive rarely indulges in bad behaviours. Children from good homes have good study habits"..... P6,Counselor

" As we know, parents are small gods to their children; children respect the opinions of their parents, so anything that a parent disapproves of, the child will not do. Our society starts from the family unit"P8, Administrator.

Institutional Support. The participants gave the following responses when asked about what the university can do as a promotive factor to prevent medication misuse by undergraduates:

"I do not know what our universities have become these days because you rarely find deliberate programs such as sporting events like football, basketball, and volleyball organised for students' participation. In my days as a student, there were events to choose

from, even competitions with athletes from other universities..back then, all work and no play made Jack a dull boy, but that is no longer the case nowadays.”P12, Lecturer

“Students tend to kill boredom by spending time on their phones and hanging out with friends who might introduce them to bad habits such as medication misuse. In my opinion, I feel like the university should have mandatory skills acquisition programs for students so they have less time to consider unhealthy behaviour like medication misuse...P2, Student.

Theme 2: Suggestions on how to Limit Medication Misuse by University Students during Examination Periods

This theme focuses on the participants' suggestions on strategies to limit medication misuse by university students during examination periods after they had responded to the factors influencing medication misuse. The suggestions centred mainly around using celebrities and social media as agents of change and increased sensitisation and awareness by university management.

Celebrities and Social Media as Part of a Societal Network to Achieve Social Good. The participants described using celebrities and social media as part of a more extensive societal network as advocacy tools that can play a positive role in behaviour modelling in young adults and discourage the misuse of prescription and OTC medications. The participants gave their opinions on the impact of media on adolescents and youths.

“..... these children watch and learn a lot on their phones on social media platforms. They learn different things like music and fashion and try to copy their favourite actors/actresses or music stars. Whatever they see these famous artists do use or wear automatically, they also use because they like them a lot and believe in them, so they follow suit”. Any meaningful change must involve these favourite actors and actresses. P8, Administrator.

“In this age of technological advancement, these students are always online. Different social media platforms can be used by corporate bodies and NGOs to communicate the dangers and risks associated with medication misuse to students. It takes a village to raise a child, so I think successful businesses should support this advocacy against medication misuse so that we do not lose our youth to addiction and other associated vices”...P11, Lecturer.

“From the Drug Counselling unit within the Directorate of Student Affairs, we look for rehabilitated students to talk to students and advise them on the dangers of medication misuse. Maybe we need to do more” P6, Counselor.

“As a student, I think that successful youths in their professions talking to students during orientation programs will encourage students to aim to succeed in life and discourage misuse of drugs that can affect their future. Personally, seeing my favourite actor or actress influences my buying decisions, so my attitude can be significantly influenced if my favourite actor or actress is an ambassador for a desired change..P3, Student.

Increased Sensitisation and Awareness by University Management. The participants were asked for suggestions on reducing to the barest minimum medication misuse by university students. The respondents were clear on the university management's need for deliberate, frequent awareness and sensitisation activities to influence student attitudinal change.

“The management is trying; the Guidance and Counselling unit within the Division of Students Affairs (DSA) provides counselling and rehabilitation support for students involved in prescription and OTC medication misuse as well as hard drugs and substance

abuse. Students are also advised not to use medication without a doctor's prescription by the Counselling Unit, and the impending dangers of such misuse are clearly explained. However, they can still do more"..... P7, Counselor

"Some clubs such as 'No to Drugs' have been set up to sensitise students and raise general awareness on campus about the dangers of prescription and OTC medication misuse. I think it is yielding some result".....P8, Administrator.

"Unilag is doing a lot; we work with drug law enforcement agencies and private rehabilitation centres".....P8, Administrator.

"You see, orientation programs about medication misuse should not be limited to the beginning of an academic session only; it should happen frequently...P1, Student.

"In my opinion, starting campaigns against medication misuse at lower levels of education, such as primary and secondary school levels, using communication materials like pamphlets, flyers, and posters will be beneficial—a high influx of NGOs working in universities to tackle this medication misuse problem. However, I think these NGOs should be engaged in localities/streets to catch these children young even before they get to higher learning institutions. The situation is deteriorating and scary with the increase in students using drugs during exam periods" P5, Pharmacist.

"If management is serious about this misuse of drugs by students, then they must put images on billboards all over campus stressing the dangers of self-medication and misuse. You will not find information on campus that overwhelms you as a student not to misuse drugs".....except maybe the Counselling Unit, but what about other strategic places on campus?.....P3, Student.

"As a pharmacist operating within the university vicinity, I feel strongly that the university management needs to do more regarding awareness and sensitisation on the dangers of medication misuse. You find many gaps in knowledge about the dangers when these young ones visit the pharmacy requesting drugs without a formal prescription.".....P4, Pharmacist

Discussion

Theme 1: Risk and Promotive Factors

Risk Factors. This study's finding of peer pressure and high family income as a risk factor for medication misuse is validated by Attah et al. (2016) and Josephine et al. (2019), who posit that family income plays a significant role in determining students' disposition to medication misuse. They alluded to the influence of peer pressure and family income as risk factors for medication misuse in their study. The high socioeconomic status of the family has also been described by Geurts et al. (2022) as a risk factor in medication misuse by adolescents. Recent study findings from Palestine also corroborated peer pressure and family income as contributors to medication misuse (Khalifah et al., 2023). The scholars agree that the frequency of medication misuse by students from low-income homes is low compared to students from high-income homes. The ease of access to medications by students due to the poor regulatory framework in this study is corroborated by Orayj et al. (2021), who opined that a lack of regulations makes access to drugs easy. This current study finding of a lack of knowledge of the perceived risk of medication misuse by university students is a risk factor, just as Collins et al. (2011) indicated that the perceived knowledge of the risks of medication misuse should be a promotive factor if the students were aware.

Promotive Factors. In this study, the responses received from the participants indicated that parents' influence and disapproval would serve as a deterrent to students' medication misuse. This finding is in line with Collins et al. (2011), Geurts et al. (2022), and Kuntsche and Kuntsche (2016), who assert that parents remain crucial socialising agents for their adolescent children, and their disapproval remains a significant promotive factor. According to Ogbodu et al. (2023), parents remain a formidable force in their children's lives, representing a significant factor in the lives of adolescents and serving as good role models for them. Thus, parents aid in modelling a good character in their adolescent children.

This study noted the crucial role of universities in influencing students' educational experiences through deliberate measures of extra-curricular activities. A study by Buckley and Lee (2021) agrees with this finding by asserting that extra-curricular activities, including clubs and societies, have been part of the fabric of higher-level institutions, with a significant impact of these activities on academic performance corroborating institutional factors influence the quality of their educational experiences. Additionally, Collins et al. (2011) alluded that commitment to schoolwork and activities mandated by school authorities prevent youth self-medication. Educational institutions should provide support by designing and encouraging mandatory participation of students in youth-friendly activities such as sporting activities and skills acquisition workshops to keep the students busy apart from the regular academic exercise.

Theme 2: Suggestions on the Role of Persuasive Communication in Limiting the Use of Medication by University Students during Examination Periods

Use of Celebrities—More Extensive Societal Network. This study revealed the use of celebrities and social media as part of a more extensive societal network that plays a positive role in behaviour modelling in young adults. Akinsola (2002) agree with this assertion, stating that celebrities influence the decisions of the youth. The impact of social media platforms on youths and the likelihood of attitude change if the communicator is greatly liked and possesses influence has been argued by Geurts et al. (2022) and Akinsola (2002). The author stated further that the more liking we have for an individual, the greater the ability of such individuals to influence a target audience. The examples of movie and music stars in electronic and social media advertisements were used as illustrations. The researcher infers from the finding that the use of celebrities and stars adored by students may be utilised for persuasive communication to model positive attitude change in students regarding medication misuse during examination periods. Social media platforms have found relevance in discouraging some social vices such as smoking and drinking alcohol; hence, the same platforms may be used to positively influence students to imbibe good study habits and life skills training rather than resorting to the use of medications to improve concentration and alertness during examination periods (Ogbodu et al., 2023).

Increased Awareness and Sensitisation by University Management. This study establishes that institutional measures such as deliberate, frequent awareness and sensitisation campaigns will influence the moulding of positive characters in students, such as preventing medication misuse. This study's findings argue that an extensive interplay of variables often influences the standard of students' educational experiences as they move from admittance to graduation, including academic, social, personal, and institutional factors. Fareo (2012) further alludes to institutional measures impacting academic success by institutions creating awareness of the dangers of self-medication, medication misuse, and the effect on the health, society, and nation at large. Agubosi et al. (2023) corroborated the importance of providing counselling services to students as a measure of sensitisation for implementation by university management in a study. Additionally, Osemene and Lamikanra (2012) and Atoyebi et al. (2013) opined that emphasising the negative consequences of self-medication and misuse on campuses has immense benefits and will play a central role in curbing medication misuse. In a Nigerian study, Omolola et al. (2021) also advocated that communication measures be directed

towards changing medication misuse behaviour. Furthermore, the study findings by Sharif et al. (2021) argue that the use of medications for cognitive enhancement may be reduced if students' levels of awareness were raised on university campuses, advocate that adequate campus-based initiatives should be extended for the prevention and treatment of drug abuse thus emphasising the risk to safety posed by medication misuse adequate campus-based initiatives should be extended for the prevention and treatment of drug abuse. This suggests that education about attitudes delivered as part of an enlightenment campaign on the rational use of medication will discourage medication misuse by students of institutions of higher learning.

Conclusions

This study describes the promotive and risk factors associated with medication misuse by university students during examination periods and advocates for the use of persuasive communication as a vehicle for attitude change. The study concludes that the prevention of medication misuse by university students during examination periods is not a single, one-off campaign; instead, it is a sum of concerted efforts that ought to be consistent and comprehensive and has to be driven by multiple stakeholders to achieve positive health outcome The use of persuasive communication. The promise it holds to model positive, healthy behaviours in university students if deployed is described. Findings will expand knowledge and strengthen the capacity of policymakers and relevant stakeholders to design persuasive communication messages and programs that are sustainable to improve adolescent health at institutions of higher learning.

Recommendations

This study recommends the design and use of viable university-based persuasive communication messages to influence the medication misuse behaviour of university students and elicit a behaviour change. This is in alignment with the postulation by Akinsola (2002). This concept is recommended because the study findings and data analysis revealed the three components of persuasive communication as a vehicle for attitude change:

1. Communicator—A communicator with a likeable personality, high credibility, and influence who meets his audience at their level of reasoning is more likely to impart attitude change in a select target group. This component came out strongly in the participants' suggestions about using celebrities and social media to influence change.
2. Communication message refers to what should be said, how it should be said, and its relevance to a target audience. It should contain a fear-arousing element that serves as the trigger for attitude change. This includes the call for frequent awareness of the risks associated with self-medication and medication misuse on university campuses using visual images of the dangers and risks that arouse fear, aid recall, and reinforce messages.
3. Target audience and the operating environment—The nature of the audience also plays a role in how easily it is persuaded to effect attitude change. The target audience, students, must see the relevance of the communication message to their health and future goals and aspirations, and support from the university management must be provided to make learning and change in attitude easy in a conducive environment.

The study further recommends creating an enabling environment on university campuses to sustain the positive impact of sensitisation and awareness campaigns. The positive use of media is also advocated, as their favourite celebrities greatly influence the youth. Hence, using such celebrities and models to condemn medication misuse will go a long way in reducing the motivation for such and will

assist in sustaining attitude change in the students. De-emphasizing stigmatisation of students who have misused medication in the past will encourage participation during awareness sensitisation and awareness campaigns.

Limitations

The limitations of this study, despite its strength, are that all interviews were conducted professionally, in a conducive natural environment on the university campus, a natural setting for the participants; that, due to inevitable financial constraints and time required for this research study, it could not cover more than one university in the South-western part of Nigeria nonetheless, the study setting, the University of Lagos, is a Federal University and has registered students from all the geopolitical zones in Nigeria. The study may be conducted in other settings, and new variable(s) may be introduced. However, a thick description of the study was given, which gives a choice on the generalizability of the study findings. Future research could benefit from more extensive and diverse samples across different geopolitical zones in the country.

Suggestions for Future Research

The following recommendations for future research are advocated.

Research gaps identified in the influence of persuasive communication messages in changing university students' attitudes toward medication misuse could be further explored such as a quantitative assessment of the magnitude and impact of persuasive communication strategies and models on the reduction of medication misuse by university students is recommended as a follow-up to this exploratory study. Further studies are recommended to examine the most effective persuasive communication intervention to cause attitude change in university students' medication misuse from print, online, mass media, or group or individual levels. Lastly, an exploration of the factors that will contribute to increased effectiveness of awareness and sensitisation campaigns for university students on campus to discourage medication misuse is strongly recommended.

Acknowledgements

The researcher would like to thank the participants and the management of the Directorate of Student Affairs, University of Lagos, Akoka, Lagos, Nigeria, for granting permission to use its facilities for the study and the community pharmacists who agreed to participate. The author would like to acknowledge Prof. Gloria Thupayagale-Tshweneagae, who provided guidance and support throughout the study.

Conflict of Interest

None.

Funding

The author received no funding for this research.

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