



UNDERSTANDING THE MISUSE OF PAINKILLERS AMONG UNDERGRADUATE FEMALE STUDENTS IN A TERTIARY INSTITUTION IN RIVER STATE, NIGERIA

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Abstract

Background: Analgesic abuse refers to the act of taking analgesic agents without proper prescriptions, thereby misusing the agents, which can be detrimental to health of the individual. The levels of knowledge and attitudes towards the effects of analgesic abuse among University of Port Harcourt undergraduate female students involves the misused habits and practices in other to relief menstrual pain and stress. In the cause of pain relief, the analgesic abuse effects can cause ulcer due to its accumulated acid nature, example of this drug is felvin, ibuprofen, Panadol etc.

Aim of study: This study aims to assess student's levels of knowledge and attitude towards the effects of analgesic abuse amongst female undergraduate students in the University of Port Harcourt, Choba. Descriptive survey design was adopted.

Materials and Methods: The target population for this study comprised 2000 students in Choba campus, and the sample size was 100.

Results: The data obtained from the participants showed that the bio data where majority of students from Health science (31.25%), educational levels of respondents were majority of year 1 and 2 year students (43.75%), students level of knowledge about analgesic abuse is significantly increased (43.8%), there was a moderate preventive practice among the students (56.3%), the sources of information among students about analgesic abuse increased (43.8% and 56.3%), there is an increased level of enlightenment of the causes of analgesic abuse (68.8% and 50%), there is a moderate level of advocates to the preventive measures of analgesic abuse among the female students.

Conclusion: This study highlights the need for training and lectures for the students on the general concept of analgesic abuse. It further underscores the need for government and school management to ensure the provision of health care commodities and regular supportive supervision at all levels of educational status.

Keywords: *Analgesic; Students; Drugs; Misuse; Undergraduate.*

Introduction

The levels of knowledge and attitudes towards the effects of analgesic abuse among undergraduate female students involves habits and practices in other to relief menstrual pain and stress (Barnett, et al., 2012). Analgesics are medications used to relieve pain (Gerard, et al., 2017). In the cause of pain relief, the analgesic abuse effects can cause ulcer due to its accumulated acid nature (Chambers, et al., 2019). These drugs include Non-opioid analgesics like acetaminophen, ibuprofen and aspirin, and opioid analgesics like morphine, codeine and oxycodone (Engle, et al., 2019). Analgesic abuse also known as substance abuse is the use of analgesic in amounts or by methods which are harmful to the individual or others (Gerard, et al., 2017). Analgesics, also described as painkillers, are prescription or over the counter (OTC) medications that relieve pain (Hampton, et al., 2019). Although they are effective pain relievers when used as indicated, analgesic misuse can lead to severe side effects, dependency, and addiction (Jensen, et al., 2019). Understanding the different types of analgesics, as well as their side effects and abuse potential, is essential in ensuring their proper use and avoiding adverse health outcomes. Although highly effective in treating pain, some analgesics have a high risk of abuse, physical dependency, and addiction (Becker, et al., 2016). It is a form of substance-related disorder. Differing definitions of analgesic abuse are used in public health, medical and criminal justice contexts. In some cases, criminal or anti-social behavior occurs when the person is under the influence of analgesic, and long-term personality changes in individuals may also occur. In addition to possible physical, social, and psychological harm, the use of some analgesics may also lead to criminal penalties, although these vary widely depending on the local jurisdiction (Hampton, et al., 2019). As mentioned above, Analgesics include both OTC and prescription medications. They come in a few different forms, including capsule, tablet, liquid, topical cream, and injectable. The two main classes of analgesics are non-opioid analgesics and opioid analgesics. These classes work differently in the body and have different uses and risks (Becker, et al., 2016). The exact cause of substance abuse is not clear, but there are two predominant theories: either a genetic disposition which is learned from others, or a habit which, if addiction develops, manifests itself as a chronic debilitating disease (Jensen, et al., 2019). Analgesic misuse is a term used commonly when prescription with sedative, anxiolytic, analgesic, or stimulant properties are used for mood alteration or intoxication ignoring the fact that overdose of such medicines can sometimes have serious adverse effects. It sometimes involves analgesic diversion from the individual for whom it was prescribed (Ilochi, et al., 2019). Prescription misuse has been defined differently and rather inconsistently based on status of analgesic prescription, the uses without a prescription, intentional use to achieve intoxicating effects, route of administration, co-ingestion with alcohol, and the presence or absence of dependence symptoms. Chronic use of certain substances leads to a change in the central nervous system known as a 'tolerance' to the medicine such that more of the substance is needed in order to produce desired effects (Chuemere, et al., 2019). With some substances, stopping or reducing use can cause withdrawal symptoms to occur, but this is highly dependent on the specific substance in question. The rate of prescription analgesic use is fast overtaking illegal analgesic use in the United States (Walitzer, et al., 2016). According to the National Institute of Analgesic Abuse, 7 million people were taking prescription analgesics for nonmedical use in 2010 (Ilochi, et al., 2018). Among 12th graders, nonmedical prescription analgesic use is now second only to cannabis. In 2011, "Nearly 1 in 12 high school seniors reported nonmedical use of Vicodin; 1 in 20 reported such use of OxyContin,

with both containing opioids (Walitzer, et al., 2016). A 2017 survey of 12th graders in the United States, found misuse of OxyContin of 2.7 percent, compared to 5.5 percent at its peak in 2005 (Ilochi, et al., 2018). Misuse of the combination hydrocodone/paracetamol was at its lowest since a peak of 10.5 percent in 2003. This decrease may be related to public health initiatives and decreased availability. Avenues of obtaining prescription analgesics for misuse are varied: sharing between family and friends, illegally buying medications at school or work, and often "doctor shopping" to find multiple physicians to prescribe the same medication, without knowledge of other prescribers. Increasingly, law enforcement is holding physicians responsible for prescribing controlled substances without fully establishing patient controls, such as a patient "analgesic contract" (Ekwem, et al., 2019). Concerned physicians are educating themselves on how to identify medication-seeking behavior in their patients, and are becoming familiar with "red flags" that would alert them to potential prescription analgesic abuse.

Materials and methods

Ethical considerations

This study was approved by Madonna University Research Ethics Committee (MUREC).

Study design

This study adopted a descriptive survey design. This design is all about the making of inferences about the population under study, using the sample drawn from that study. Survey research equally focuses on people and their beliefs, opinions, attitude, motivations, and behaviors. Students who fall in the inclusion criteria will be selected after obtaining informed consent from them to participate in this study on the knowledge and preventive practices of analgesic abuse among undergraduate students in Choba, Rivers State, Nigeria.

Target population

The target population for this study was comprised of all undergraduate female students in Choba campus, University of Port Harcourt. The people targeted were female students currently studying in the campus at the time of this study. From the student affairs records, the population was put at about 2000 undergraduate female students studying in various Faculties within choba campus; these were adopted as the target population.

The Targeted faculties are as follows;

- ✓ Basic Medical Sciences
- ✓ Pharmaceutical sciences
- ✓ Medicine
- ✓ Natural Sciences

Sample Size

The sample size was determined with a probability that 40% of the total population reflects a population of few hundreds, while 20% of the population represents many hundreds, 10% of the population for few thousands and 5% where the total number is in many thousands.

From this deduction, the sample size stated can be calculated as;

Working with few thousands that is, 10% of 2000=200

Population at the time of study=2000

$10/100 \times 2000$

$= 0.1 \times 2000$

$= 200$

Therefore, due to lack of total submission of questionnaire paper, the sample size for this study was 100 students.

Sampling technique

Stratified sampling technique was used to group the students into faculties and then, simple random sampling was employed in selecting the participants. This was chosen because random sampling involves random selection of study elements in such a way that each member of the study population has an equal chance of being selected into the study. For the purpose of this study, the inclusion criterion includes willingness to participate in the study; availability at the time of data collection; and female students must be studying in Choba campus at the time of the study.

Instruments for data collection

A self-structured questionnaire was used as the instrument for data collection. The questionnaire was administered to the students. The questionnaire contained closed ended questions with multiple choice answers. The questionnaire was divided into two broad sections (section A and B). Section A presented item to obtain the demographic data of the respondents; section B presented items on student's level of knowledge and attitude towards the effects of analgesic abuse among female students in Choba campus, which were developed to address the research questions and objectives.

Validity of instrument

The validity of this instrument will be ensured through face and content validity. This involved submitting the questionnaire to three experts in the field of nursing to provide corrections and approval. Upon satisfaction with the ability of the research question to consistently address the research objectives, the questionnaire was used for the data collection and analysis. In essence, the questionnaire was given a face and content validity by the students in the Departments. Their observations and comments were used to improve on the contents of the instrument.

Reliability of instrument

The researcher made use of the test-retest method of reliability testing. Here, 10 copies of the questionnaire were shared to students who are not part of the sample size in University of Port

Harcourt. After two weeks, the same instrument was being administered to the same set of students and the different scores from both tests will be compared. Further, the two different scores from the pilot test was calculated and the reliability coefficient was obtained using the Pearson moment correlation with 0.7526 as the result.

Method of data analysis

The data which was obtained from the participants, were processed and analyzed by the use of the Statistical package for the Social Science (SPSS version 21). The data were descriptively summarized with the use of frequency, percentages and tables. From 50% was accepted to be positive and significant. In testing the hypothesis, chi square analysis was adopted.

Results

The results of this study are as follows;

Table 1: Faculties of respondents

| Faculties | No of Respondents | Percentage (%) |
|-------------------------|-------------------|----------------|
| Basic Medical Sciences | 45 | 45 |
| Pharmaceutical sciences | 15 | 15 |
| Medicine | 27 | 27 |
| Natural sciences | 13 | 13 |
| Total | 100 | 100 |

From Table 1, it shows that 45% of the respondents were from the Faculty of Basic Medical Sciences, 15% were from the Faculty of Pharmaceutical sciences, 27% from the Faculty of Medicine and 13% from the Faculty of Natural Sciences.

Table 2: Educational level of respondents

| Year of study | No of Respondents | Percentage (%) |
|---------------|-------------------|----------------|
| 6years | 20 | 20 |
| 5years | 30 | 30 |
| 3-4years | 25 | 25 |
| 1-2 years | 25 | 25 |
| Total | 100 | 100 |

From Table 2, the result shows that 20% of the respondent were in their 6th year of study, 30% in their 5th year of study and 25% in their 3-4 and 1-2 years of study.

Table 3: Analgesics ameliorates pain for ease of studying

| SA | A | D | SD | Total | Decision |
|-------------|-------------|-------------|-------------|-------|----------|
| F=55 55% | F=15 15% | F=10 10% | F=20 20% | 100 | Agreed |

Table 4: Analgesics contain bioactive agents whose abuse may adversely affect some vital organs.

| SA | A | D | SD | Total | Decision |
|-------------|-------------|-------------|-------------|-------|----------|
| F=45 45% | F=20 15% | F=25 25% | F=10 10% | 100 | Agreed |

Key: (SA-Strongly Agreed), (A-Agreed), (D- Disagreed), (SD-Strongly Disagreed).

From the findings, in Table 3, it shows that 55% of total respondents are strongly in agreement (SA), 15% agree, 10% are not in agreement, and 20% are strongly against the use of analgesics (SD); which summed to an agreed respondent. In Table 4, it shows 45% respondents strongly agree (SA), 20% agree (A), 25% disagree (D), and 10% strongly disagree (SD); which summed to an Agreed respondent.

Table 5: Analgesics misuse cause metabolic disturbances

| SA | A | D | SD | Total | Decision |
|-------------|-------------|-------------|-------------|-------|----------|
| F=60 60% | F=17 17% | F=13 13% | F=10 10% | 100 | Agreed |

Table 6: Analgesics misuse cause painful regular monthly menstrual cycles

| SA | A | D | SD | Total | Decision |
|-----------|-------------|-------------|-------------|-------|----------|
| F=7 7% | F=13 13% | F=50 50% | F=30 30% | 100 | Agreed |

The table above shows the attitude towards the effect of analgesics drug abuse amongst Madonna University female student From the findings, table 4.4.1 shows 56.3% respondents as Strongly Agreed (SA), 25% as (A), 12.5% as (D), and 6.3% as (SD); which resulted to an Agreed respondent decision in table 4.7.1. table 4.4.2shows 6.3% respondents as Strongly Agreed (SA), 12.5% as (A), 56.3% as (D), and 25% as (SD); which resulted to a Agreed respondent decision in table 4.7.2. Therefore, from the findings, there was equal level of response in table 4.4 which means that there is an increased level of advocates to the preventive measures of analgesic abuse among female students in Madonna University.

Table 7: Student’s enlightenment on the effects of analgesic abuse

| SA | A | D | SD | Total | Decision |
|-------------|-------------|-------------|-------------|-------|----------|
| F=54 54% | F=18 12% | F=16 16% | F=12 12% | 100 | Agreed |

Table 8: Making analgesics prohibited for students

| SA | A | D | SD | Total | Decision |
|-------------|-------------|-------------|-------------|-------|-----------|
| F=15 15% | F=25 25% | F=45 45% | F=15 15% | 100 | Disagreed |

Table 4.5 The table above shows the preventive practices among students in Madonna University. From the findings, Table 4.5.1 shows 54.3% respondents as Strongly Agreed (SA), 25% as (A), 12.5% as (D), and 6.3% as (SD); which resulted to an Agreed respondent decision in table 4.4.1. Table 4.5.1 shows 6.3% respondents as Strongly Agreed (SA), 12.5% as (A), 56.3% as (D), and 25% as (SD); which resulted to a Disagreed respondent decision in table 4.4.2. Therefore, from the findings, there was equal level of response in Table 4.5.2 which means that there was moderate preventive practices among students in Madonna University.

Table 4.6: Preventive practices among students in Choba

| SA | A | D | SD | Total | Decision |
|---------------|---------------|---------------|-------------|-------|----------|
| F=35 43.8% | F=15 18.8% | F=18 22.5% | F=12 15% | 100 | Agreed |
| F=45 56.3% | F=20 25% | F=10 12.5% | F=5 6.3% | 100 | Agreed |

Table 4.6 The table above shows the preventive practices among students in Choba. From the findings, 43.8% respondents as Strongly Agreed (SA), 18.8% as (A), 22.5% as (D), and 15% as (SD); which resulted to an Agreed respondent decision.

Discussion

The findings of the study revealed that majority of the respondents had high knowledge of analgesic abuse, with the knowledge that analgesic abuse neither harm the recipient nor expose the student to any available risk; such as metabolic acidosis/ alkalosis, hepatic toxicity. However, as a large percentage of the respondents from year one to year two were found to have knowledge of analgesic abuse, while a handful of year 4 to 5 only had knowledge. These findings correspond with earlier reports that found majority of student had good knowledge of analgesic abuse issues, while less number of students had fair and poor knowledge respectively (Ilochi, et al., 2019). Also, a comparative study on knowledge, attitude, and practice of analgesic abuse among students revealed that majority had good knowledge about safe oral practice. However, these findings are contrary to some other reports on analgesic abuse practices among nursing staff of mission

hospitals in Benin city, Nigeria, which revealed that knowledge of analgesic abuse was poor among students in mission hospitals in Benin City (Chuemere, et al., 2019).

It is important to state here that Knowledge of analgesic abuse practices among students can never be overemphasized because even a 1% lack of knowledge puts students and the health community at risk. This argument becomes very vital when considering the metabolic acidosis, ulcer and abdominal disturbances, given that even previous studies record high rates of poor knowledge. Therefore, it is the duty of every health care employer to provide adequate training and retraining for staff on analgesic abuse as well as universal safety precautions at large, in order to safeguard the students and the nation in general.

This study has revealed that increase in knowledge promotes good knowledge of analgesic abuse and vice versa. The findings also revealed some students had poor knowledge of analgesic abuse, still some knowledgeable students could not say no to analgesic abuse. This implies that students' knowledge and practice of analgesic abuse can be improved by nurse educators by intensifying their teachings on analgesic abuse to further improve on undergraduate/nursing student's consciousness while the clinical instructors follow up to ensure practice.

Conclusion

The findings of the study revealed that knowledge and practice of analgesic abuse among students in Choba, University of Port Harcourt, were disturbing to the female undergraduate students. Implying that the students are willing to adhere to safety practices despite the lack of enabling enlightenment, this is highly needed. However, the percentage of those with and without knowledge calls for concern. This implies that some students are still unaware that practicing analgesic abuse can lead to ulcer, metabolic acidosis, and abdominal disturbances. The good practice of analgesic intake was as a result of good knowledge and perhaps positive work attitude of some students which is also highly commendable.

Declaration of interest

No conflict of interest regarding this manuscript

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