

**KNOWLEDGE AND PRACTICE OF SELF MEDICATION AMONG WOMEN OF
REPRODUCTIVE AGE (15-49 YEARS) IN USELU COMMUNITY, BENIN CITY, EDO
STATE**

BY

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UNIVERSITY OF BENIN, BENIN CITY**

FEBRUARY 2025

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SUPERVISOR: PROF. (MRS.) C. E. OMOROGBE

FEBRUARY 2025

DECLARATION

This is to declare that this research project titled "**KNOWLEDGE AND PRACTICE OF SELF MEDICATION AMONG WOMEN OF REPRODUCTIVE AGE (15-49 YEARS) IN USELU COMMUNITY, BENIN CITY**" was carried out by **EDOMA EMANNA JOANNA**. It is solely the result of my work except where acknowledged as being derived from other person(s) or resources.

IN THE DEPARTMENT/SCHOOL: NURSING/NURSING SCIENCES, SCHOOL OF BASIC MEDICAL SCIENCES, UNIVERSITY OF BENIN, BENIN CITY.

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CERTIFICATION

This is to certify that this research project by **EDOMA EMANNA JOANNA** with matriculation number BMS1902299 under the supervision of PROF. MRS. C. E. OMOROGBE, has been examined and approved for the award of Bachelors of Nursing Science (BNSc) in the Department of Nursing Science, School of Basic Medical Sciences, University of Benin, Benin City.

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ABSTRACT

Self-medication, defined as the use of medication without medical consultation, is prevalent among women of reproductive age globally and presents notable health concerns. This study assesses the knowledge, practices and influencing factors of self-medication among women aged 15-49 in Uselu Community, Benin City, Nigeria. Using a descriptive cross-sectional design, data were gathered from 323 respondents through a structured questionnaire, with findings analyzed using descriptive statistics. Results revealed that 86.69% of respondents had prior knowledge of self-medication, often acquired from internet/social media, family, and friends. Despite this awareness, 95.67% had engaged in self-medication within the past year, primarily for minor ailments such as headaches, menstrual pain, and other minor ailments. Analgesics (41.17%) and antibiotics (39.32%) were the most commonly used drugs, with many respondents self-medicating frequently. Influential factors included financial constraints, convenience, ease of access to over-the-counter medications, and long wait times at healthcare facilities. Additionally, social and cultural factors played a role, as family influence and traditional beliefs often guided self-medication practices. This study highlights significant risks associated with this practice, including adverse drug reactions, potential for antimicrobial resistance, and complications in pregnancy, thereby underscoring the need for educational interventions. Recommendations include increasing awareness of the dangers of unsupervised medication use and strengthening regulatory frameworks to limit easy access to potentially harmful drugs. This research study contributes to public health by emphasizing the need for targeted health education and accessible healthcare services to mitigate the adverse effects of self-medication within this demographic.

Keywords: Self-medication, knowledge, women of reproductive age, Nigeria, practice

DEDICATION

This research project work is dedicated to my God and Father, Jehovah, for his unwavering support and undeserved kindness to me through the period of this study, to my parents, my siblings, my friends, and the best support system ever.

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CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Self-medication is the unsupervised use of medication to treat illnesses and ailments without medical advice. It involves choosing to use medicine and medicinal products to treat self-recognized symptoms and/or illnesses, as well as the continued use of prescribed medication due to the recurrence of the symptoms of a disease (Zheng, 2023). It also involves getting drugs without a physician's prescription, using old prescriptions to get drugs, sharing medication with family and friends, especially if they are elderly or infirm, and using leftover medication which may be stored at home (Fekadu et al., 2020). Although drugs meant for self-medication have been proven efficacious, the act of improper self-medication has been proven to cause adverse effects including, but not limited to antimicrobial resistance (Edet, 2023).

Around the world, self-medication is a common practice, often seen as a part of self-care. The prevalence of self-medication practices in developing countries ranges from 12.7% to 95%, whereas the prevalence in western countries has been reported to be as low as 3% (Saha et al., 2023). In a study conducted in the United States, it was reported that about 71% of men and 82% of women had self-medicated at least once. In the United Kingdom of Britain and Northern Ireland, 41.5% of people had used medicines without a prescription (Behzadifar et al., 2020). In Africa, the prevalence of self-medication is estimated at 55.7% and 70.1% specifically in West Africa (Yeika et al., 2021). Several studies have also reported a high prevalence of self-medication among women of reproductive age. A study in Nigeria found that 78.7% of women aged 18-45 regularly engaged in self-medication practices (Akande-Sholabi & Akinyemi., 2023). A survey in India has also reported that 85% of women in this age group self-medicated, particularly for common ailments such as headaches, menstrual pain, and gastrointestinal

issues (Rangari et al., 2020). A survey of 740 pregnant women in France revealed that 41.5% of them self-medicated at various times during their pregnancy (Ocan et al., 2021). Also, a systematic review conducted in Ethiopia showed a pattern of self-medication among women with figures ranging from 12.8% to 77.1% (Ayalew, 2022).

Among the most used medications are nonsteroidal anti-inflammatory drugs, and traditional or herbal remedies. Analgesics, antibiotics, antipyretics and antihistamines have not been left out, and their use has been stated to be significantly based on cultural, economic, and educational factors (Paudel, 2021). This behavior is particularly common among women of reproductive age as a result of various factors including, but not limited to: cost, accessibility, time constraint, and the perceived efficacy of such practices (Zafar et al., 2020). Educational level, socioeconomic status, accessibility to healthcare services, and cultural beliefs play major roles as well. A higher level of education also often results in increased self-medication practices due to better access to information and confidence in self-diagnosis (Bennadi, 2022). On the other hand, a lower socioeconomic status may prompt the practice of self-medication as a result of financial constraints and a limited access to professional healthcare (Wazaify et al., 2023). Cultural norms and beliefs about health and medicine also significantly impact self-medication behaviors, with traditional remedies being more common in some regions (Zewdie et al., 2020). Also, the urge to improve personal health as a part of self-care, sympathy towards sick family members, doubt towards medical diagnosis, delay in obtaining appropriate treatment, non-availability of drugs in drug stores and pharmacies, increased advertisements of over-the-counter, ‘quick-acting’ drugs, and the availability of drugs and medication in places other than approved drugstores has fueled the increase in self-medication practices (Bertsche, 2023).

While self-medication can provide immediate relief from several illnesses and ailments, it poses several risks, especially for women of reproductive age. These risks include incorrect self-diagnosis, inappropriate drug selection, dosages, and interactions, leading to potential adverse effects or drug

resistance. For instance, the misuse of antibiotics in self-medication is a significant concern due to the rising threat of antimicrobial resistance (WHO, 2015). Additionally, the use of certain medications during pregnancy without professional guidance can lead to congenital malformations, developmental delays, miscarriages, and even long-term health issues for the child or other complications (Tefera, 2020).

Knowledge and awareness regarding safe medication practices varies widely among women of reproductive age. Studies show that while many women are aware of the basic principles of self-medication, there is often a lack of comprehensive understanding regarding the potential risks and proper usage of medications (Ghosh et al., 2019). Educational campaigns and interventions which are aimed at improving individual knowledge about the safe use of medications are essential in order to reduce the risks associated with self-medication. The high prevalence of self-medication among women of reproductive age emphasizes the need for targeted public health policies and educational interventions. These should aim to increase awareness about the risks of self-medication, promote the rational use of medications, and improve access to professional healthcare services. Regulatory measures to control the sale of over-the-counter medications and ensure proper labeling and information dissemination are also critical to the proper use of self-medication practices (Hughes et al., 2020).

1.2 Statement of the Problem

All around the world, self-medication has become an accepted and widely practiced form of self-care, and is considered an integral part of health services. Both developed and developing countries have recorded an uptake in the act of self-medication, reporting that this practice has become an essential part of daily life (Shah et al., 2021). It is especially rampant among women of reproductive age, a demographic typically defined as women aged 15 to 49, individuals whom are particularly vulnerable due to the unique health needs associated with menstruation, pregnancy, childbirth, and postpartum care (Wegbom, 2021). Despite its prevalence, the practice of self-medication poses significant public health

challenges due to the potential for misuse and the lack of proper knowledge about safe medication practices.

The rising trend of self-medication among women of reproductive age is driven by a variety of factors. These include the ease of access to over-the-counter medications (OTC) medications, cultural practices and norms, economic and financial constraints, convenience in treatment and symptom control, and limited access to healthcare services (Tamil et al., 2021). In many low- and middle-income countries, healthcare systems are often overburdened, making it difficult for women to access timely medical care. As a result, women increasingly turn to self-medication as a convenient and cost-effective alternative (Wazaify et al., 2020). However, this practice is often carried out with insufficient knowledge about the correct dosages, potential side effects, and risks of drug interactions.

The risks associated with self-medication are particularly pronounced in women of reproductive age due to their unique physiological conditions. For instance, the inappropriate use of medications during pregnancy can lead to serious complications such as birth defects, preterm labor, or miscarriage (Akinawo, 2020). Similarly, self-medicating with certain drugs while breastfeeding can pose risks to the infant. The misuse of antibiotics, a common issue in self-medication, also contributes to the global crisis of antibiotic resistance, which can lead to the failure of treatments for bacterial infections (Zheng, 2023).

In spite of these risks, there is a noticeable gap in public health initiatives and educational programs tailored towards improving the knowledge and practices of self-medication among women of reproductive age. Many women lack access to reliable information about the safe use of medications, which in turn, increases the probability of occurrence of these harmful practices. Furthermore, cultural beliefs and misconceptions about traditional or herbal remedies can exacerbate the problem, as these alternatives are often used without proper guidance or evidence of their safety and efficacy (Abay & Amelo, 2020). This poses a distinct challenge. Understanding the extent, motivations, and consequences of self-medication in this demographic is essential for developing effective healthcare policies and

interventions. Hence, this research study examines already existing research on the prevalence, patterns, factors influencing, risks, and knowledge regarding self-medication among women of reproductive age. It assesses the knowledge and practice of self-medication among women of reproductive age in Uselu Community, Benin City, as information obtained will be used to develop interventions which can facilitate and ensure the health and well-being of women in this demographic globally, and mitigate the impacts of unsafe self-medication practices.

1.3 Objectives of the Study

The main objective of this study is to examine the knowledge and practice of self-medication among women of reproductive age in Uselu Community, Benin City.

However, the specific objectives of this study include to:

1. assess the knowledge of self-medication among women of reproductive age in Uselu Community, Benin City.
2. ascertain the practice of self-medication among women of reproductive age in Uselu Community, Benin City.
3. determine the factors influencing the practice of self-medication among women of reproductive age in Uselu Community, Benin City.

1.4 Research Questions

This research seeks to answer the questions:

- i. What is the level of knowledge of self-medication among women of reproductive age in Uselu Community, Benin City?
- ii. What is the practice of self-medication among women of reproductive age in Uselu Community, Benin City?

- iii. What are the factors influencing the practice of self-medication among women of reproductive age in Uselu Community, Benin City?

1.5 Research Hypothesis

H₀: There is no significant relationship between the knowledge and practice of self-medication among women of reproductive age in Uselu Community, Benin City.

H₁: There is a significant relationship between the knowledge and practice of self-medication among women of reproductive age in Uselu Community, Benin City.

1.6 Significance of the Study

This study is expected to help to educate women of reproductive age of the benefits and risks of self-medication. It provides information which will help to improve the knowledge, attitude to and practice of self-medication among women of this demographic globally. This study will also help to reduce the impact and adverse effects which arise as a result of harmful self-medication practices.

This study will also be relevant to healthcare providers such as nurse practitioners, medical doctors, pharmacists, policy makers in the health sector, other researchers and the general public, as it provides information which can enhance care, and the provision of actionable policies which can reduce the harmful practice of self-medication in Benin City, Nigeria, and the world at large.

1.7 Scope of the Study

The scope of this study is delimited to women of reproductive age, of age 15-49 years, in Uselu Community, Edo State. It focused on the knowledge and practice of self-medication among the said demographic. The dependent variables in this study include the socio-demographic variables of females

of reproductive age (such as marital status, level of academic knowledge, ethnicity, religion and socio-economic status), while the independent variable include the knowledge, attitude and practice of self-medication. This research spans the period of six months.

1.8 Operational Definition of Terms

1. **Knowledge:** This is a state of awareness or familiarity, gained by experience or education of a subject, fact, or situation.
2. **Practice:** The application of an idea, belief or method, done repeatedly or as part of an expected way of doing something.
3. **Self-Medication:** The use of any substance, remedy or treatment to treat illness or symptoms of an illness without a medical prescription, or on one's own initiative.
4. **Women of Reproductive Age:** These are women between the ages of 15 and 49, who are able to bear children.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter examined relevant and related literature with focus on the concept of self-medication as well as the knowledge and practice of self-medication. It also reviewed related empirical literature, and the theoretical framework which guides the study is highlighted.

2.1 Concept of Self-Medication

Self-medication is the use of drugs to treat self-diagnosed disorders or symptoms or, the intermittent or continued use of prescribed drugs for chronic or recurrent disease or symptoms (Wegbom, 2021). It is the use of medication, either traditional and/or modern, to treat self-diagnosed ailments or disorders, without consulting a qualified physician for diagnosis, prescription and treatment (Babatunde et al., 2021). It is also the use of medication for recurrent or chronic symptoms intermittently or continuously, with such medication being readily available and accessed, and doing so without a prescription or medical advice (Bassi & Osakwe, 2021). Self-medication with either over-the-counter medications or prescribed medications including antibiotics is a common practice in many developing countries, and partly in some developed countries. The World Health Organization (WHO) acknowledges self-medication as a key component of self-care and universal health coverage but emphasizes that it should be carried out responsibly to avoid risks associated with inappropriate drug use (Zheng, 2023).

Globally, self-medication has been notably on the rise in both developing and developed countries. The WHO has reported that about 70-80% of the world's population rely on self-medication practices as part of their primary healthcare (Siraj, 2022). Prevalence of self-medication practices around the world ranges from 11.2% to 93.7%, depending on the country being analyzed and the target

population, with a higher prevalence in developing countries (Chautrakarn et al., 2021). In developing countries, the prevalence can range from 12.7% to 95%, while in western countries it can be as low as 3% (Saha et al., 2023). Some studies have found that the practice is more prevalent in students than in other people, while others have found that men over 40 are more likely to self-medicate (Rathod & Sharma., 2023).

2.1.1 History of Self Medication

Self-medication was first theorized in the 1980s as a potential reason behind the strong connection between humans and hard drugs like cocaine and heroin. The working hypothesis then was that after individuals discover the effects of certain substances, they begin to rely on it to relieve similar symptoms when they occur. For example, an individual with a mental health disorder may discover the sedating effect of alcohol and consistently use it over time to relieve their emotions (Linskey, 2024).

Self-medication has also been discovered to have evolved over time into various forms. It has manifested itself in various species from arthropods to the first humans, one of which is disease and the symptoms that it presents with. It has been observed in various mammals, such as the great apes of Africa, who use plants to treat or control parasitic diseases. Also, it has been shown in monarch butterflies, who fight parasitic infection by deliberately consuming the plant *Asclepias curassavica*.

The first humans who were able to observe this animal behavior learned the different properties of various plants and began to self-medicate to alleviate their symptoms (Mayor, 2024). Among them, we take as an example the Neanderthals, a species belonging to the Hominidae family and an ancestor to modern humans, who consumed and ingested plants such as yarrow and chamomile, which have little nutritional value and a bitter taste, but have various medicinal properties. The deliberate consumption of these bitter plants is considered as evidence of self-medication in this ancestor species. This adaptive behavior was maintained throughout the evolution of the species, as shown when a fungus (*Fomitopsis betulina*) with purgative and antibiotic properties was found within the belongings of the

'ice man', a specimen of homo sapiens mummified around the year 3300 BC who was infested with the Human Whipworm, *Trichuris trichiura*; it is thought that man used said fungus for the purpose of alleviating the illness (Wilford, 2020). Therefore, it is possible to understand self-medication as a self-care behavior that also doubled as the first origin of health care, passed from generation to generation. Information on the use of different plants and substances for the treatment of various diseases in the ancient world have also been found. In Egypt, papyri from 2000 BC described more than 900 prescriptions of different types of plants and mineral materials for the resolution of various symptoms. Similar documents have been found in China and India (Samorini, 2021). In old times in Europe, self-medication was considered important, as shown in the publication of the popular poem '*Regimen Sanitatis*', in which health advice and treatment for diseases were given. This text appeared around the 13th century, was translated into English in the 16th century, with some editions appearing in our time (Baracaldo-Santamaria et al., 2022).

Among the most commonly used medications are analgesics, antibiotics and antipyretics (44.3%), followed by nonsteroidal anti-inflammatory drugs (36.4%), antacids (11.42%) and antihistamines (8.5%). From studies conducted in Lebanon and Eritrea, acetaminophen-based analgesics (48.7%), NSAIDs (24.6%), and antibiotics (8.8%), were found to be the most commonly used drugs in self-medication (Abdelwahed et al., 2022), while ophthalmic, laxative and cathartic medications were less commonly used. Sources of information about these drugs include family members, previously used prescriptions, friends, classmates and workmates, internet and advert media, and pharmacies and drugstores (Araia & Mesfun., 2021). Others include a wider coverage on health-related issues by focus groups and organizations, petty traders and roadside hawkers, who sell both over-the-counter and prescription drugs (Ojo et al., 2020).

Reasons for engaging in self-medication practice have been reported to include a lack of knowledge regarding the adverse side effects and drug interactions which may lead to even more severe health

issues, convenience and ease related with obtaining drugs from pharmacies instead of consulting with a doctor (Krysinski et al, 2021). Others include the fear of seeking treatment due to social stigma (e.g. individuals with STIs), and lack of funds to access proper medical care.

2.1.2 Self-Medication among Women of Reproductive Age

According to Bassi and Osakwe (2021), responsible self-medication is one which has a certain level of knowledge and health orientation as its basis, and it can have a lot of positive impact on individuals, communities and the world health systems. The World Health Organization has also stated that responsible self-medication can help to control certain medically diagnosed conditions, and can be a safe and effective treatment method for common illnesses, provided that the appropriate doses are taken. The concept of self-medication extends beyond the simple use of over-the-counter drugs; it includes using prescription drugs without a prescription, traditional or herbal medicines, and even vitamins and supplements. Women of reproductive age are considered especially vulnerable due to the presence of their unique needs which are associated with child-bearing such as menstruation, pregnancy and postpartum care (Bello, 2020). This has made unsafe self-medication practices especially rampant among this demographic, posing significant health challenges to their health. Hence, it is imperative that proper and safe self-medication practices are made available to women in this demographic, in order to reduce the risks of health complications.

Evidence has shown that women of all ages regularly self-medicate. Studies have shown that young women aged 16-24 self-medicate after being exposed to knowledge of the practice from family members and friends. Quick relief, saving time, and minor illness were the main reasons for self-medication among health science college students (Loni et al., 2023). The high prevalence may be attributed to the weak enforcement of legislations against uncontrolled sales of drugs, and the poor perceptions of dangers associated with it. Common reasons found were minor ailments such as headache, menstrual cramps, common cold and body pains (Akande-Sholabi et al, 2021). Data pooled

from recent studies also show that female university students self-medicate with over-the-counter medications during exams to increase focus and combat the effect of increased stress levels (Alomaim et al., 2023).

The highest prevalence of self-medication has been found to be those aged 40-49 years. In a study in Tehran, the highest prevalence was among women between the ages of 31 to 40 years. A similar study conducted in the north of Iran reported more self-medication over the age of 40 years (Afshary et al., 2022). Studies in the Mazandaran province (Moayeri et al., 2021) and Nigeria (Osemene et al., 2020) also indicated that women with self-medication were more likely to have academic degrees. In general, women with higher education are likely to be able to obtain sufficient information from drug sources or diagnose a disease for a second time based on the symptoms after a few prescriptions and take medication using the previously prescribed drugs. Among women with children, the highest self-medication occurred in those with 4 or more children, as confirmed by studies conducted in the Semnan province (Jalilian et al., 2023). Since the higher number of children can make it increasingly difficult for some families to pay for professional medical care, self-medication may increase among these families. On the other hand, as the number of children increases and subsequently the mother's experience and awareness of diseases and medications increase, families tend to self-medicate more (Osemene et al., 2020).

In pregnant women, the prevalence of self-medication was found to be higher in studies done in African countries than in European countries, with Ethiopia reporting a high percentage of conventional medication use (Tuha et al., 2020), and Nigeria with a high prevalence of herbal medicine use (Duru et al., 2021). This was due to poor awareness of pregnant women regarding medication and easy access to herbal remedies and self-prepared remedies. Sources of information was found to be families, friends and neighbors. These findings suggest that health education of family members and sensitization on the dangers of self-medication should be given a priority if we must

reduce the rising profile of drug resistance, infant and maternal mortalities. Pregnant women whose distance from the health facility was at least 5-10km are also less likely to self-medicate than those whose distance is larger. This was a causal effect for women in Bangladesh (Ahmed et al., 2022). Statistically, there is a limited association between the level of income and knowledge of pregnant women and self-medication of either herbal or conventional medicine. But it has been seen from studies in Ethiopia (Jambo et al., 2022), that a lower level of income and knowledge increased the practice of self-medication. Medical conditions for which drugs were consumed were found to be of significance. Since pregnancy is characterized by nausea, vomiting, back pain, waist pain, lethargy, bowel irregularity, fever and more, pregnant women tend to self-medicate often to treat these symptoms (Eticha et al., 2020).

2.1.3 Factors Affecting Self-Medication Practices Among Women of Reproductive Age

The practice of self-medication among women of reproductive age is shaped by a variety of factors. These include:

Socio-Economic Status: Socio-economic factors, including income, education, and employment status, play a critical role in self-medication behaviors. Higher educational prowess may correlate with better access to health information and resources, potentially leading to more informed self-medication practices (Afolabi et al., 2020). However, lower income levels can push women towards self-medication as a cost-saving measure, particularly in countries where healthcare is not universally accessible. In a study on pregnant women in Nigeria (Edet et al., 2023), self-medication was reported to be higher among women who earn more than \$100 (about ₦150,000) per month, women who had five or more children, women in their third trimester, women who had a previous abortion and those who had no information about self-medication. There was also a statistically significant relationship

between the prevalence of self-medication and intrapersonal characteristics, such as age, marital status, educational level, and gestational age.

Access to Healthcare: Access to affordable healthcare services significantly influences self-medication practices. In many developing countries, healthcare systems are often under-resourced and overburdened, leading to long waiting times and high costs of medical care. As a result, women may choose to self-medicate as a more convenient and affordable alternative (Kumar et al., 2021). Additionally, in remote or rural areas, where healthcare facilities may be few and distant from residences, self-medication may be the only viable option for managing health issues. A study conducted in rural Ethiopia found that women frequently resorted to self-medication due to the high costs of medical consultations and the distance to healthcare facilities (Belachew & Tadesse, 2021). Even in higher-income countries, healthcare access issues such as long waiting times, the inconvenience of scheduling appointments, and high co-payments can drive women to self-medicate as a more immediate and cost-effective solution (Hawkins et al., 2021). In addition, some women may be more inclined to self-medicate as a result of distrust in medical professionals, which may arise from negative previous experiences, a perceived insensitivity or lack of empathy of their health concerns, especially when it comes to reproductive health-related conditions (Ekpenyong et al., 2021).

Easy Access to Medication: The widespread availability of over-the-counter medications and an increased pharmaceutical marketing has made self-medication more accessible and a new social norm. In many countries, regulations in place to govern the sale and distribution of over-the-counter drugs are lax, making it easy for women to purchase medications without prescriptions. For example, research conducted in Saudi Arabia found that women were more likely to engage in self-medication when they perceived over-the-counter drugs as easily accessible and believed they had sufficient knowledge to use them safely (Alkhaldi et al., 2020). Also, an increase in online pharmacies has increased access to medications, making it possible for women to obtain drugs without leaving their

homes. These online platforms offer a broad selection of drugs, even those sold on prescription in physical pharmacies. This ease of access, combined with the anonymity it provides, can greatly encourage self-medication, especially among women who may find it embarrassing to discuss certain health issues with a doctor, nurse or pharmacist (Salama et al., 2020).

Increased Pharmaceutical Marketing: Pharmaceutical companies often market their products directly to consumers, emphasizing convenience and self-efficacy, which can encourage self-medication even when professional medical advice would be more appropriate (Lozano-Blasco et al., 2021). There is an increased use of direct-to-consumer advertising (DTCA) in order to promote their products, particularly in countries like the US where such practices are legal. These adverts include commercials on TV, print adverts and digital marketing campaigns. This type of marketing can significantly influence self-medication behaviors among women of reproductive age by increasing awareness of specific drugs and encouraging their use for self-diagnosed conditions (Ventola, 2021). Social media platforms have also become a powerful platform for pharmaceutical marketing (Agarwal, 2021). Social media platforms such as Facebook, Instagram, Twitter and Tiktok have seen an increase in influencers and “medical practitioners” who often promote medications, both herbal remedies and over-the-counter drugs, as easy solutions for health issues. A study done on Senegalese women (Khadim et al., 2020), showed a high prevalence of self-medication due to the influence of various Facebook groups where they had received medication advice and addressed health issues. The most commonly used drugs were simple painkillers; other drugs also recommended include central action painkillers, antibiotics, antihypertensive drugs and antidiabetics.

Cultural and Social Norms: Cultural beliefs and social norms also influence self-medication practices among women. In many cultures, traditional or herbal medicines are widely accepted and often preferred over modern medicine (Mansour & Al-Khafaji, 2020). These cultural practices are often passed down through generations, with women using remedies based on the advice of family

members or community elders without necessarily seeking professional guidance (García et al., 2022). For instance, in many African and Asian cultures, the use of herbal medicines and traditional remedies is deeply ingrained and often passed down through generations (Odufuwa et al., 2021). Additionally, in many societies, women are expected to take on the role of caregivers in their families, which can make it difficult for them to prioritize their own health, and may lead them to self-medicate (El-Aziz et al., 2021). In cultures where there is a stigma associated with complaining about one's health problems, such as the African culture, women may choose to self-medicate so as not to appear weak or vulnerable and avoid external judgement (Rahman et al., 2020).

Considering the adverse consequences of taking drugs stored at home by children, healthcare professionals should also think about the risk of accidental intoxication among children. As such, providing adequate counseling to mothers about the potential hazards of drugs stored at home is strongly recommended.

2.1.4 Commonly Used Medications Among Women of Reproductive Age

The types of medications commonly used in self-medication practices among women of reproductive age vary widely but often include analgesics, antibiotics, and hormonal medications.

Analgesics: Analgesics, particularly non-steroidal anti-inflammatory drugs (NSAIDs) like ibuprofen and paracetamol, are among the most commonly self-medicated drugs. A study in Turkey by Erbaydar et al. (2020) found that over 70% of women in their study reported self-medicating with analgesics to manage menstrual pain, headaches, and other common ailments.

Antibiotics: The misuse of antibiotics is particularly concerning due to the global issue of antibiotic resistance. A study conducted in Mexico by Fernández et al. (2021) reported that a significant proportion of women self-medicated with antibiotics for conditions like urinary tract infections and

respiratory infections, often without completing the full course, thereby contributing to the development of resistant bacterial strains.

Hormonal Medications: Hormonal medications, including contraceptives and emergency contraception, are also commonly self-administered by women of reproductive age. A study in Ghana by Boateng et al. (2020) indicated that many women used over-the-counter contraceptives without proper medical guidance, leading to incorrect use and potential side effects.

2.1.5 Consequences of Self-Medication Among Women of Reproductive Age

The consequences of self-medication can be very severe, particularly among women of reproductive age. Improper use of medications can lead to adverse drug reactions, drug interactions, and the potential for teratogenic effects in pregnant women. Even worse, self-medication has been linked to the rise in antimicrobial resistance in recent times.

Adverse Drug Reactions: One of the most immediate risks of self-medication is the potential for adverse drug reactions. A study by Mensah et al. (2020) in Ghana found that a significant number of women who self-medicated experienced adverse reactions, such as gastrointestinal disturbances, allergic reactions, and dizziness.

Drug Interactions: Self-medication can also lead to dangerous drug interactions, especially when multiple medications are used simultaneously without professional supervision. For example, the concurrent use of NSAIDs and certain antihypertensive drugs can reduce the efficacy of the latter, potentially leading to uncontrolled blood pressure, as highlighted in a study by Olowokere et al. (2020) in Nigeria.

Impact on Pregnancy and Fetal Health: Self-medication during pregnancy is particularly risky due to the potential teratogenic effects of certain drugs. A study in Tanzania by Mkoma et al. (2021) found that a significant proportion of pregnant women engaged in self-medication with antibiotics and

analgesics, unaware of the potential risks to fetal health, including congenital anomalies and developmental delays.

Antimicrobial Resistance: Self-medication contributes to antimicrobial resistance by promoting the misuse and overuse of antibiotics. A survey among healthcare students in Ghana indicated that 76.3% of respondents acknowledged that self-medication could lead to antimicrobial resistance (Owosu-Ofori et al., 2021). The inappropriate use of antibiotics can result in pathogens developing resistance, making infections harder to treat, leading to increased morbidity and healthcare costs.

2.1.6 Strategies to Mitigate Self-Medication Practices

To address the issue of self-medication among women of reproductive age, several strategies can be implemented, including public health education, stricter regulation of over-the-counter medications, and improving access to healthcare services.

Public Health Education: Education campaigns that focus on the dangers of self-medication and the importance of seeking professional medical advice can be effective in reducing self-medication practices. For example, a community-based intervention in India by Rani et al. (2022) successfully reduced the prevalence of self-medication among women by 20% through targeted educational programs.

Regulation of Over-the-Counter Medications: Stricter regulation of over-the-counter medications, particularly antibiotics and hormonal drugs, can help reduce self-medication. This could include enforcing prescription-only policies for certain medications and monitoring the sale of these drugs more closely, as suggested by a study in Kenya by Mwangi et al. (2020).

Improving Access to Healthcare: Improving access to affordable and accessible healthcare services is crucial in reducing the need for self-medication. Investments in healthcare infrastructure,

particularly in rural areas, and the implementation of community health programs can make professional medical advice more accessible to women of reproductive age.

2.2 Theoretical Framework

This study was guided by various theories of behavior which were developed to inform interventions for health behavior change. These theories provide a foundation to understanding the factors and attitudes influencing the practice of self-medication by women aged 15-49 years.

2.2.1 Health Belief Model (HBM)

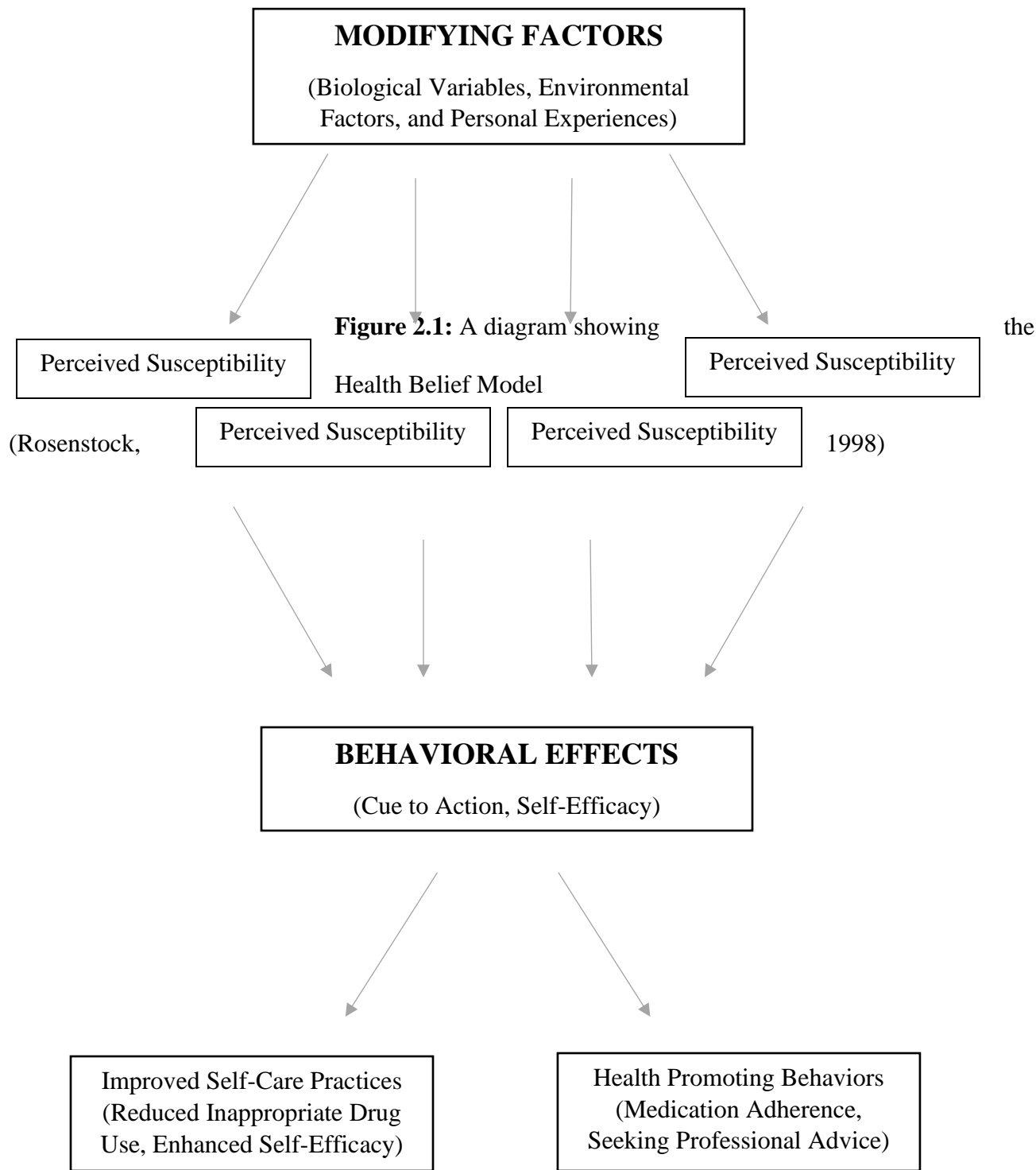
One of such theories is the Health Belief Model (HBM) which was developed in the early 1950s by Irwin Rosenstock, Godfrey Hochbaum, Stephen Kegeles, and Howard Leventhal. It has undergone various revisions since its inception, but the most significant addition to the model was the inclusion of the self-efficacy component in the 1980s, as self-efficacy was recognized as a key factor in whether individuals engage in health behaviors.

The model was initially designed to understand why people fail to adopt disease prevention strategies or fail to detect diseases early when there are clear benefits to doing so (Daniati et al., 2021). Over time, the model has been widely applied to various health behaviors, including self-medication practices, particularly among women of reproductive age. The theory is grounded in the idea that health behaviors are influenced by personal beliefs about a disease and the available remedies that can aid to decrease its occurrence. It proposes that individuals are more likely to take a health-related action if they:

- believe they are susceptible to a condition (perceived susceptibility),
- believe the condition has serious consequences (perceived severity),

- believe taking a specific action would reduce their susceptibility to or severity of the condition (perceived benefits), and
- believe the costs of taking action (perceived barriers) are outweighed by the benefits.

For instance, women may self-medicate for minor ailments if they believe the condition is not severe enough to warrant professional care and that the benefits of immediate relief outweigh the potential risks. Additionally, triggers which aid health-promoting behaviors, and self-efficacy (confidence in one's ability to take action) are important components of the model (Daniati et al., 2021).



2.2.2 Application of HBM to the Study

In the context of self-medication among women of reproductive age, the Health Belief Model raises several considerations. It outlines the impact that personal characteristics and experiences, environmental factors and biological variables have on health-related behaviors, and that perceptions related to health profoundly influences individual actions. It then groups them into modifying factors (biological variables, environmental factors and personal experiences), and individual beliefs (perceptions related to health).

Modifying Factors

Biological variables: These are inherent traits present in an individual. They include body composition, physical attributes and psychological make-up of an individual. They include age, gender, ethnicity and much more. A young woman aged 15, who is still in the throes of puberty and concerned about their weight may want to self-medicate so as to improve their appearance.

Environmental factors: These are external factors which can affect health actions in individuals either positively or negatively. They include the presence of role models (friends or family members), cultural and religious beliefs, attitude of loved ones towards health. All of these can greatly influence a woman's view towards self-medication. For example, if a trusted influence in a woman's life is apathetic towards self-medication and constantly encourages others around them to seek professional medical advice when sick, it can greatly impact on the woman's own behavior towards the practice.

Personal experiences: These are factors which are unique and specific to each individual. They include self-esteem, level of knowledge, personality, socioeconomic level, etc. A woman of reproductive age who has achieved a tertiary level of education will be less inclined to self-diagnose and medicate. However, the reverse may be the case for another woman with a limited range of education. Such an

individual may believe that recurring symptoms of an ailment warrants the use of a particular medication, and may self-medicate without seeking medical advice.

Individual Beliefs

Perceived Susceptibility: This implies the extent to which women believe that they are at risk of experiencing various health issues. A woman who believes that she is highly susceptible to common ailments like migraines may be more inclined to self-medicate in order to prevent the occurrence of such ailments, or to minimize their symptoms. This is especially prominent when women believe that certain conditions are recurrent, and unavoidable (Habib et al., 2020). Conversely, a woman who has adequate information on the dangers of self-medication is more likely to abstain from such practices in order to prevent the outcomes.

Perceived Severity: This refers to the belief which an individual possesses about the seriousness of a health condition and its potential consequences. If a woman perceives a condition to be severe, she may be more likely to seek professional medical care, rather than self-medicate. However, if she perceives the condition as mild, she may opt to self-medicate, as this saves time and finances. This model belies the importance of personal judgement and its impact on health-related actions. It suggests that if the perceived severity of a health condition is low, the likelihood of occurrence of self-medication increases, especially if the condition is deemed manageable without professional intervention (Khawaja et al., 2021).

Perceived Benefits: In the context of this study, this implies that self-medicating relieves the symptoms of ailments and improves health status. A woman may be inclined to self-medicate because it is convenient, cost-effective and has immediate effects. This may encourage her to continuously partake in the practice, leading to a continued preference for self-management and a disinterestedness in conventional healthcare (Lam et al., 2021).

Perceived Barriers: These refer to an individual's assessment of the obstacle (s) involved in seeking health actions. Some of these barriers include concerns about potential side effects, lack of knowledge about appropriate dosages and fear of drug interactions. A woman of reproductive age who is aware of these barriers to self-medication might be less likely to engage in it and opt to consult healthcare professionals. However, the perception of these barriers has to be high in order for this to happen.

The model also outlines variables which form the major significance for interventions regarding self-medication in women of reproductive age. It outlines the effects of behaviors which occur as a result of the individual beliefs. They include:

Cues to Action: Cues to action are events, people, or things which trigger the decision to engage in healthy behaviors. For women of reproductive age, cues to action for self-medication might be the onset of symptoms, advice from peers or family members, or adverts for over-the-counter drugs. These cues play a great role in encouraging women to self-medicate, especially when the perceived severity of the condition is low, and the benefits of self-medication are seen as high (Yankov & McMahon, 2020).

Self-Efficacy: Self-efficacy refers to the confidence in one's ability to perform a behavior. In the context of self-medication, self-efficacy involves a woman's belief in her ability to correctly diagnose her symptoms and choose the appropriate medication. High self-efficacy can lead to increased self-medication practices, as women begin to feel qualified enough to manage their health. Conversely, low self-efficacy may result in an increase in reliance on healthcare professionals (Gurung et al., 2021).

Applying the Health Belief Model to the study of self-medication practices among women of reproductive age can greatly help in understanding the factors which drive the behavior. By examining its components, researchers can identify and formulate policies which will help in developing targeted interventions to enhance knowledge, address barriers and perceptions that significantly influence self-

medication. This will be a step forward in promoting safe self-management practices and reducing the risks associated with inappropriate medication use. For example, interventions can focus more on increasing awareness on the risks of self-medication, while also providing education on safe medication practices. This action will simultaneously address the problem of perceived severity and barriers, and enhance self-efficacy among women. Also, healthcare providers, particularly nurses, can use cues to action to encourage women to seek professional advice when needed, instead of relying solely on self-medication. They can do this by providing educational materials when needed and by health education sessions which are aimed at providing better insight to safe self-management practices.

2.3 Empirical Review

This section is concerned with the review of empirical studies in the area of knowledge and practice of self-medication among women of reproductive age, and the demographic factors influencing the practice of self-medication among women of this demographic.

2.3.1 Knowledge of Self-Medication Among Women of Reproductive Age

Knowledge is defined as a belief or awareness of facts, individuals, situations or a practical skill. Babbie and Mouton (2022) defined knowledge as a theoretical or practical understanding of a subject, a familiarity gained by experience with said subject. Knowledge is often purported as a state of mind of an individual, but it can also refer to a collective state of a group of people on a particular subject. This is referred to as social knowledge (Lackey, 2021). Some philosophers believe that knowledge is based on belief which are true and justified, implying that while it is possible to believe something which is false, one cannot know something which is false (Hetherington, 2022). This implies that a belief that is incorrect or false does not qualify to be called knowledge. Furthermore, being correct is not enough. To be called knowledge, the belief must not only be correct, but also must be justified.

Some authors claim that these conditions are not sufficient, as Babbie and Mouton (2022) allegedly demonstrate. Acquiring knowledge follows complex cognitive processes such as perception, communication, and reasoning.

A study by Atmadani and Nkoka (2020) investigated the prevalence of self-medication among pregnant women in Malang, Indonesia. In the study, respondents were assessed about their knowledge of self-medication, using a cross-sectional research design with a sample of 333 female participants. The study revealed that the effects of a higher level of knowledge on higher self-medication were significant among women with lower levels of education (11.7%), whereas the correct knowledge of potential risk effects was associated with a lower likelihood of self-medication among women with higher education. Women with a higher level of knowledge of OTC medication were more likely to self-medicate compared with women with lower knowledge.

Babatunde and Adeoye (2021), conducted a hospital-based cross-sectional survey among 347 pregnant women who received antenatal care in Ogbomosho, Nigeria. The study demonstrated that self-medication practices were mostly related to poor knowledge, as the majority of the respondents (76.6%) had a poor knowledge of the dangers of self-medication, while 23.4% had good knowledge of self-medication. A study conducted in Ethiopia by Wondimeneh et al. (2021) found that the prevalence of self-medication among women in this age group was approximately 64.8%. Similar trends were observed in studies conducted in other regions, such as Nigeria, where Ajibola et al. (2020) reported a prevalence of 58.4%. These studies suggest that self-medication is a common practice among women of reproductive age, particularly in low- and middle-income countries.

In a study conducted by Nark (2021) on the knowledge of self-medication among university students in Portugal, results were gotten from 840 respondents, 55.4% (465 respondents). It was a cross-sectional research, aiding the discovery that the female students had a higher knowledge of self-medication and its effects than the male students. This coincided with the results of the study

conducted by Mitra and Imtiaz (2023) among students from universities in Kuwait, where 69.8% (814) of its participants were female and showed a higher perception of self-medication. This was attributed to the cautious and vigilant nature of females compared to males.

Bouqoufi and Lahlou (2024) conducted a study on 420 pregnant and postpartum women in the Sous Massa region of Malaysia. The study was aimed at determining the incidence of self-medication and the factors which contributed to it. Its findings showed that 95.9% of the participants reported that they knew the dangers of self-medication and 96% of them were well-informed about the dangers of self-medication during pregnancy.

2.3.2 Practice of Self-Medication Among Women of Reproductive Age

Empirical evidence from several studies has signified that women of reproductive age normally practiced self-medication due to a variety of factors. Alnefaie and Alanazi (2023) conducted a study on 213 first-year students of the Health Colleges at PNU in Riyadh, Syria, aged 18-21 years. The study was aimed to examine the use of over-the-counter medicines during examination times. The study was a descriptive, cross-sectional study, with a self-administered, online questionnaire used as the data collection instrument. It was found that more than 50% of the students self-medicated during exam periods. 67.6% of the students confirmed using over-the-counter medications during exams for headache relief ($p < 0.0001$). A higher percentage (90.6%; $p < 0.0001$) mentioned that the excessive use of analgesics were safe, while 67.6% ($p < 0.0001$) of them stated that the use of nonsteroidal anti-inflammatory drugs (NSAIDS) would not cause or induce ulcers.

Abdessadek and Khabbal (2023) conducted a study on pregnant women in Morocco using the cross-sectional study design. Statistical analysis was performed using Jamovi Software. The logistic regression analysis was used to determine the significance of the association between the outcome and independent variables. The study showed that 24.8% of the women used self-medication to manage

symptoms ranging across anemia, vomiting, and UTIs. Out of 95.9% of the participants reported that they knew the dangers of self-medication and 96% of them were informed and received information about the dangers and contraindications of self-medication during pregnancy. This was significantly statistically associated with self-medication respectively with p -value = 0.031 and p -value = 0.005. This study also found that pregnant women who were self-medicated before pregnancy were more likely to self-medicate during pregnancy, with a significant associated p -value of 0.001.

Shokrzadeh and Jafari's (2020) study aimed to determine the frequency and associated factors related to self-medication among women of reproductive age in Gorgan City, Iran. The cross-sectional study done included 800 women between the ages of 15-49 years, with the sampling process done using a randomized multi-stage clustering method. Data was collected via home visits and interviews, using an observational checklist as the data collection tool. Majority of the women were aged between 30-39 (47.9%), married (69.6%), with high school education (35.9%), housewives (39.5%), and with one or two children (85.6%). Results of the study showed that 68.9% of the women had self-medicated during the last three months. The highest rate was seen in: those aged between 40-49 years (78.5%), divorced women (85.7%), married (73.8%), those with high school educations (74.6%), women with a family size of 5 or higher (72.3%) and the employed (86.1%). Also, women with a monthly household income of about \$214 had a higher self-medication (84.6%) than women with lower monthly incomes.

2.3.3 Factors Influencing Self-Medication Practice Among Women of Reproductive Age

Loni and Alzahrani's (2023) study sought to assess the prevalence of self-medication and its contributing factors among female undergraduate students in health science colleges at Majmaah University, Saudi Arabia. They conducted a descriptive, cross-sectional study with 214 female students of the university in their health science college (82, 38.31%) and their applied medical science college (132, 61.68%). Non-probability sampling was done to obtain their sample population. Results of the study revealed that out of the 214 female participants, 173, 80.84 % (medical: 82,

38.31% and applied medical science: 132, 61.68%) were actively self-medicating. The majority, between the ages 20-21.5 stated that their main reasons for self-medicating were to get quick relief from the illness (77.5%) followed by saving time (76.3%), self-confidence (56.7%), and laziness (56.7%). The source of information was found to mainly be family members (67.1%), personal knowledge (64.7%), social media (55.5%), and friends (31.2%). It was recommended that awareness programs, workshops and seminars should be held to educate individuals more on the benefits and risks of self-medication. .

In the study done by Ibrahim and Bulbanat (2020), it was found that some reasons people preferred to self-medication included having minor ailments, wanting to get quick relief from illnesses, having to spend long waiting times at the hospitals, low cost of over-the-counter medication, and having little to no time for medical consultations. The study was conducted among 736 single female students of Kuwaiti nationality, with an average family income of about \$6,600 per month. For the study, convenience sampling and snowball technique were used to enroll participants on a first-come, first-serve basis. A pretested questionnaire was used to collect data.

Agbesanwa et al. (2024) study was aimed at assessing the prevalence, practice, determinants, and adverse effects of self-medication among young people living in a suburban community of Ekiti, Nigeria. Among the 602 young people aged 16-24 years, 71.4% were female, totaling 430 female participants. The study followed a descriptive and cross-sectional design, with the sample population randomly selected. A questionnaire was used as the instrument for data collection. The independent variables measured include the sociodemographic characteristics, while the dependent variables are the practice of self-medication and factors that predisposes to self-medication. The general characteristics of the participants were analyzed using descriptive statistics. The categorical variables were reported as frequency distribution and proportions with 95% confidence intervals and were compared using the Chi-square test or Fisher's exact test. A *p*-value of <0.05 was considered

statistically significant. The most common reasons found from the study for self-medication was the presence of minor ailments, busy academic schedules, and high cost of medical consultation. This was similar to findings of Akande-Sholabi et al. (2021), which reported that minor conditions such as headaches, menstrual pain and cough were common reasons for undergraduate healthcare students in a Nigerian University to self-medicate.

2.4 Summary of Relevant Literature

The reviewed literature identified several factors which influence the practice of self-medication among women of reproductive age, including pre-existing knowledge gained from family and friends, social media platforms, workshops and outreaches etc. Despite awareness and education on the risks and negative impacts of the practice, utilization was found still at a high, particularly due to the usage of medication to treat minor illnesses, and the high cost of treatment at medical facilities. This study is hinged on the Health Belief Model (HBM), which served as its main framework.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This section discusses the methods and procedures that were employed in this research study. The various components of research methodology employed were outlined into the follow headings: research design, research setting, target population, sample size, sampling technique, instrument for data collection, validity and reliability of the instrument, method of data collection, method of data analysis and ethical considerations.

3.1 Research Design

This study employs a quantitative, non-experimental research design, using a descriptive, cross-sectional research method. The quantitative design method was aimed at assessing the levels of knowledge and practice among the sample population and exploring the underlying factors which influence these practices. The descriptive survey approach aimed to observe, describe and document the characteristic phenomena under review. This design has been successfully used to assess self-medication practices among undergraduates in a private university in Nigeria (Bassi et al., 2021). Therefore, this design was considered appropriate for this study because it allowed for a proper assessment of the phenomenon as they exist in their natural settings.

3.2 Research Setting

This study was carried out in Uselu Community, Benin City. Uselu Community is located in Egor Local Government Area, Benin City, Edo State. Egor LGA has a population of 445,800 as at 2016 (National Population Commission).

3.3 Target Population

The target population in this study comprises of 2321 women of reproductive age ranging from 15-49 years of age in Uselu Community, Benin City. This population figure was gotten from the community town hall in Uselu.

3.4 Sample Size

The sample size for this study was determined using the Cochran's Formula for sample size determination. This formula is used in research studies which deal with large populations where the prevalence of a condition or a practice is unknown or based on estimates.

$$n = \frac{Z^2 \times p \times (1-p)}{e^2}$$

$$n_{adj} = \frac{n}{1 + \left(\frac{n-1}{N}\right)}$$

where:

n is the required sample size

Z is the Z-score (the number of standard deviations which a point is from the mean). For a 95% confidence level, $Z = 1.96$.

p is the estimated proportion of women of reproductive age practicing self-medication. Without a prior estimate, 50% ($p = 0.5$) is often used.

e is the margin of error (typically 0.05 for 5% precision).

Working with the estimated population of 2321 women in Uselu Community, and with the prevalence expected to be 50% ($p = 0.5$), with a 95% confidence level ($Z = 1.96$), and a margin of error of 5% ($e = 0.05$):

$$n = \frac{385}{1 + \left(\frac{385-1}{2000}\right)} = \frac{385}{1+0.192} = 323.01$$

Thus, a sample size of approximately 323 women was used for the study.

3.5 Sampling Technique

The respondents were selected using a convenience sampling technique. This is a basic sampling technique which involves randomly selecting a subset of individuals from a larger population. It is done to create a sample which provides an accurate representation of the larger population, and is also free from researcher's bias. This method was chosen as there is a readily available and easily accessible population of women of reproductive age in the community; the method is also inexpensive and easily applied.

Inclusion Criteria:

Women between the ages of 15-49 years in the community.

Pregnant women and lactating mothers.

Young women and mothers who consent to participate in the study.

Exclusion Criteria:

Women not within the stated age group (15-49 years)

Women too ill to participate.

Women who do not consent to participate in the study.

3.6 Instrument for Data Collection

A self-structured questionnaire was developed and used for the study. A questionnaire was chosen as the data collection instrument as they are efficient tools for collecting standardized data from a large

sample population. It comprises of questions which were crafted in a bid to get in-depth information that is useful and relevant to the study from the respondents' understudy. Both closed and open-ended questions were used. The questionnaire constructed comprised of four sections:

SECTION A: DEMOGRAPHIC DATA OF PARTICIPANTS

SECTION B: KNOWLEDGE OF SELF-MEDICATION

SECTION C: PRACTICE OF SELF-MEDICATION

SECTION D: FACTORS INFLUENCING SELF-MEDICATION

3.7 Validity of the Instrument

Validity refers to the degree to which a research instrument measures what it intends to measure. To ensure the validity of the instrument, the questionnaire was assessed by the supervisor in charge of the research work, as well as a qualified data analyst. It was assessed in line with the stated research objectives, and any critiques and observations made were used to modify and correct the questions in order to obtain the best possible results.

3.8 Reliability of the Instrument

Reliability refers to the degree to which an assessment tool produces stable and consistent results. The reliability of a measuring tool can be assessed in various ways, Reliability for this study was obtained by conducting a pilot study which was determined by taking 10% of the total sample size and sharing questionnaires to the number gotten in another research setting. Cronbach's formula was used to determine the reliability of the instrument.

3.9 Method of Data Collection

Data was collected in the community of Uselu, from individuals at home and working in the area.

Questionnaires were distributed to women of ages ranging from 15-49 years of age within a period of

two weeks in order to make sure that all the respondents were reached, and those who participated in the study were asked to return the questionnaires folded and submitted to ensure confidentiality. Measures were taken to ensure the quality of data. Detailed explanations were given about the aims of the study and the procedures to be followed to ensure adequate information is gotten.

3.10 Method of Data Analysis

The research study analysis was done using descriptive analysis. The International Business Machine (IBM) Statistical Package for Social Sciences (SPSS) V. 25 was used to analyze the data gotten from the participants and data gathered was organized, analyzed, and interpreted to give meaning to the research findings. A brief description of the findings was then given in tabular formats to give a much easier understanding and interpretation of the data received.

3.11 Ethical Considerations

The ethical principles of research instructs that information given by participants, voluntary and autonomous participation and that participants should be informed of the possibility of withdrawal at any time they wish. The participants in this study were not coerced to participate in the study and their views and interests were handled with utmost confidentiality. Ethical approval was sought from the Chairman of the Local Government Area where the community is situated, and due consent and permission was taken from the respondents before the study begun. A written permission was obtained from the Head of Department, Department of Nursing Science, University of Benin to go with the research study.

The following ethical considerations were maintained during the research exercise:

Confidentiality: The information that was provided by the respondents was handled with utmost confidentiality, hence no name, address or personal identifier was requested in the questionnaire.

Respondents were informed that their responses would remain confidential and that observations are intended to be used only for scientific research purposes solely.

Voluntary participation: The respondents had the right to decide whether to participate in the study or not without the risk of incurring any penalty or prejudicial judgement. They were given the right at any point during the study to withdraw their participation or refuse any information on any point that is not clear to them.

Plagiarism: All authors used in this study were properly cited and referenced both in the body of the work and the references page.

3.12 Limitations of the Study

The timeframe for data collection was limited for the amount of extensive work which was needed for the research study. The information given by respondents limited the study since it was a questionnaire-based survey. Also, some respondents were not conversant with the topics and subject matter of the study.

CHAPTER FOUR

DATA ANALYSIS

4.0 Introduction

The data analysis, hypothesis testing and answering of the research questions were done in this chapter using responses obtained from the questionnaires administered to females of the study demographic ranging from 15-49 years at Uselu Community, Benin City, Edo State.

4.1 DEMOGRAPHIC DATA OF PARTICIPANTS

The demographic data of the participants which were assessed were age, marital status, educational level, religion, and ethnicity. Table 4.1 shows the demographic distribution of the respondents with respect to the afore-listed demographic variables.

Table 4.1: Socio-demographic data of respondents**(N=323)**

VARIABLE	CATEGORIES	FREQUENCY	PERCENTAGE
Age	15-19	50	15.48
	20-24	70	21.67
	25-29	60	18.58
	30-34	50	15.48
	35-39	43	13.31
	40-44	32	9.91
	45-49	18	5.57
Marital Status	Single	160	49.54
	Married	140	43.34
	Divorced	2	0.62
	Widowed	21	6.5
Educational Level	No formal education	20	6.19
	Primary education	50	15.48
	Secondary education	150	46.44
	University/College	90	27.86
	Postgraduate	13	4.03
Religion	Christianity	264	81.73
	Islam	57	17.65
	Others (Traditional)	2	0.62
Ethnicity	Yoruba	65	20.12
	Igbo	57	17.65
	Hausa	12	3.72
	Others	189	58.51
Employment Status	Student	153	47.37
	Unemployed	27	8.36
	Employed (Part/Full-Time)	61	18.88
	Self-employed	82	25.39
Monthly Income	Less than 50,000	47	14.55
	Between 50,000-100,000	127	39.32
	Between 100,000- 200,000	113	34.98
	200,000 and above	36	11.15

Table 4.1 showed the socio-demographic data of the study's respondents. Majority of the respondents, 70 (21.67%) are aged between 20-24 years, and 160 (49.54%) are single. 150 (46.44%) have completed their secondary education, and most of the respondents (81.73%) practice Christianity. In

terms of ethnicity, the distribution showed that most of the respondents, 189, (58.51%) are of other ethnic groups other than the three main ethnic groups in Nigeria, and most of them are students, 153 (47.37%), with most 127 (39.32%) earning between 50,000-100,000 naira monthly.

4.2 RESEARCH QUESTION ONE: What is the level of knowledge of self-medication among women of reproductive age in Uselu Community, Benin City?

Table 4.2: Knowledge of self-medication among women of reproductive age. (N=323)

S/N	Knowledge	Frequency(Yes)	Frequency(No)	Percentage % (Yes)
1	Have you ever heard of Self-Medication?	280	43	86.69
2	Self-medication includes taking drugs without consulting a doctor or a pharmacist.	312	11	96.59
3	Self-medication is taking more than the prescribed dose of medication as treatment for an illness.	269	54	83.28
4	Do you know the risks associated with self-medication?	250	73	77.4
	MEAN:			86.07%

From Table 4.2, we find that 280 (86.69%) of the respondents have heard of self-medication, while 43 (13.31%) have not, with the majority (62.85%) getting their information from the internet/social media. Majority (96.59%) believed that self-medication includes taking drugs without consulting a doctor or a pharmacist, while another majority (83.28%) believed that self-medication is taking more than the prescribed dose of medication as treatment for an illness. Two hundred and fifty, 250 (77.4%) are aware of the risks, while 73 (22.6%) are not. The mean percentage of correctly answered items by the respondents as computed in Table 4.2 was 278 (86.07%), and that of incorrectly answered questions was found to be 45 (13.93%). Comparing the mean percentages with the McDonald's standard of learning outcome measurement criteria for knowledge and practice:

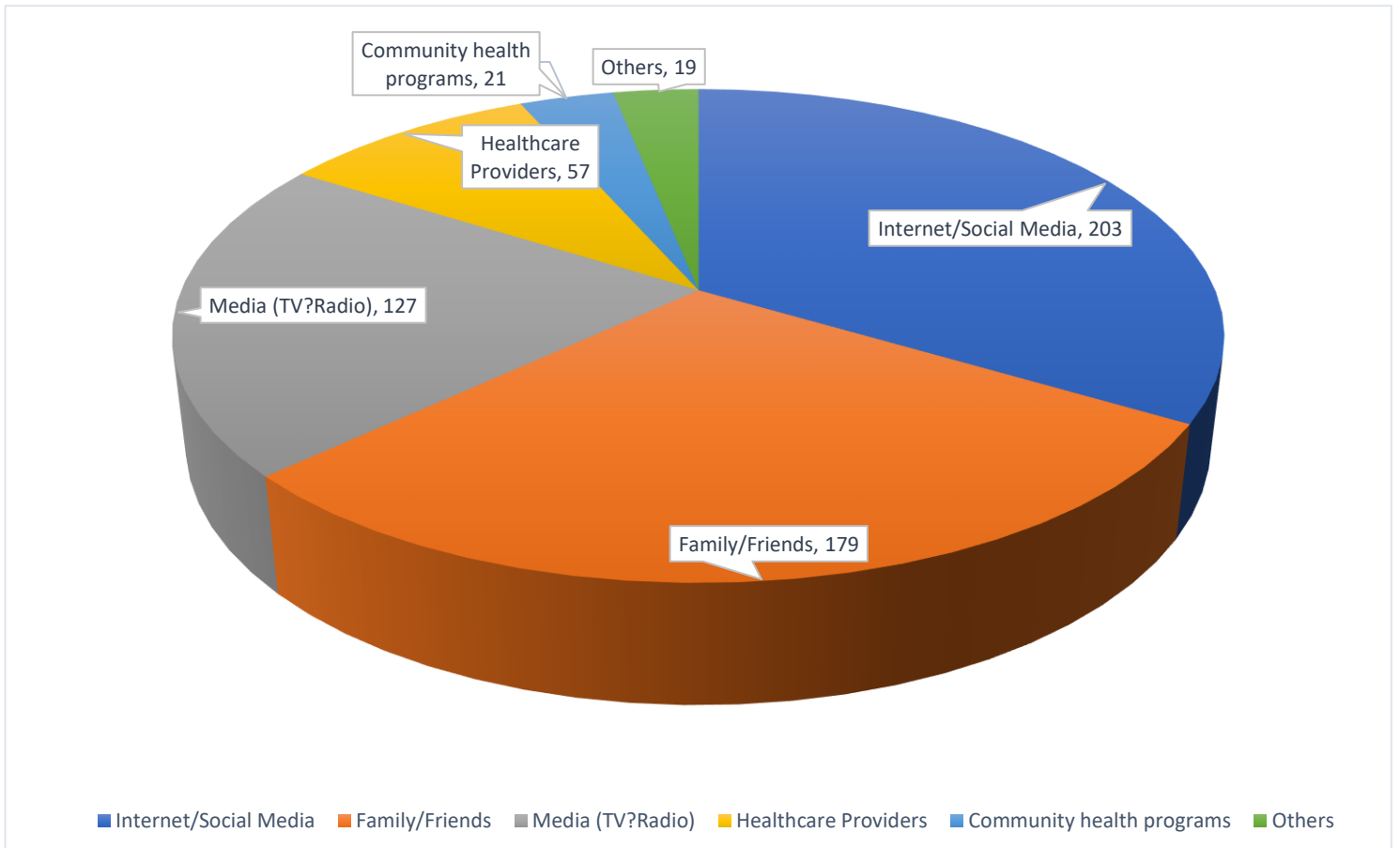
Level of Knowledge	Composite of scores (%)
Very low	Less than 60%
Low	60% – 69.99%
Moderate	70% – 79.99%
High	80% – 89.99%
Very high	90% – 100%

Therefore, with 86.07% of the respondents exhibiting knowledge of self-medication in comparison with the McDonald's standard, it indicates a high level of knowledge of self-medication. Thus, the respondents can be said to have a high knowledge of self-medication.

Table 4.3: Sources of knowledge of self-medication among women of reproductive age.

S/N	SOURCE OF KNOWLEDGE	FREQUENCY	PERCENTAGE
1	Healthcare providers	57	8.82
2	Family/Friends	179	27.71
3	Community health programs	21	3.25
4	Media (TV/Radio)	127	19.66
5	Internet/Social Media	203	31.43
6	Books and Magazines	40	6.19
7	Others	19	2.94

Figure 4.1: Sources of Knowledge of Self-Medication



The figure above shows the sources of information about self-medication. Majority of the respondents (34%) get their information about self-medication from the Internet/Social Media, (30%) get their information from their Family/Friends, (21%) get their information from Media such as Television and Radios, (9%) get their information from healthcare providers, (3%) from community health programs, and (3%) got from other sources.

4.3 RESEARCH QUESTION TWO: What is the practice of self-medication among women of reproductive age in Uselu Community, Benin City?

Table 4.4: Practice of self-medication among women of reproductive age (N=323)

S/N	PRACTICE	FREQUENCY	PERCENTAGE
1	Have you self-medicated in the past 12 months?		
	Yes	309	95.67
	No	14	4.33
2	How often do you self-medicate?		
	Rarely	32	9.91
	Occasionally	68	21.05
	Frequently	129	39.94
	Regularly	94	29.1
3	Do you complete the full course of medication when self-medicating?		
	Always	93	28.79
	Sometimes	163	50.47
	Never	67	20.74

Table 4.3 shows that a majority of respondents (95.67%) have self-medicated in the past 12 months. One hundred and twenty-nine, 129 (39.94%) frequently self-medicate more than five times a year, while 94 (29.1%) regularly self-medicate monthly. Only 68 (21.05%) self-medicate occasionally, about three to five times a year, and 32 (9.91%) rarely self-medicate, about once or twice a year. Majority of the respondents, 163 (50.47%) affirmed that they sometimes complete the full course of medication when self-medicating, while 93 (28.79%) claimed they always complete the full course of medication when self-medicating.

Table 4.5: Medications used in self-medication among women of reproductive age

S/N	Medications Used	FREQUENCY	PERCENTAGE
1)	Painkillers and Analgesics e.g. Paracetamol	133	41.17
2)	Antibiotics e.g. Amoxicillin	127	39.32
3)	Antimalarials	103	31.89
4)	Antihistamines e.g. Loratidine	56	17.34
5	Multivitamins	79	24.46
6)	Contraceptives e.g. Postinor-2	85	26.32
7)	Slimming pills	21	6.50
8)	Herbal medicines	42	13.00

From the responses in Table 4.4, we find that painkillers and analgesics, 133 (41.17%) was the most commonly used class of medication, followed by antibiotics 127 (39.32%), antimalarials, 103 (31.89%), contraceptives, 85 (26.32%), multivitamins, 79 (24.46%), antihistamines, 56 (17.34%), herbal medicines, 42 (13.00%) and slimming pills, 21 (6.50%).

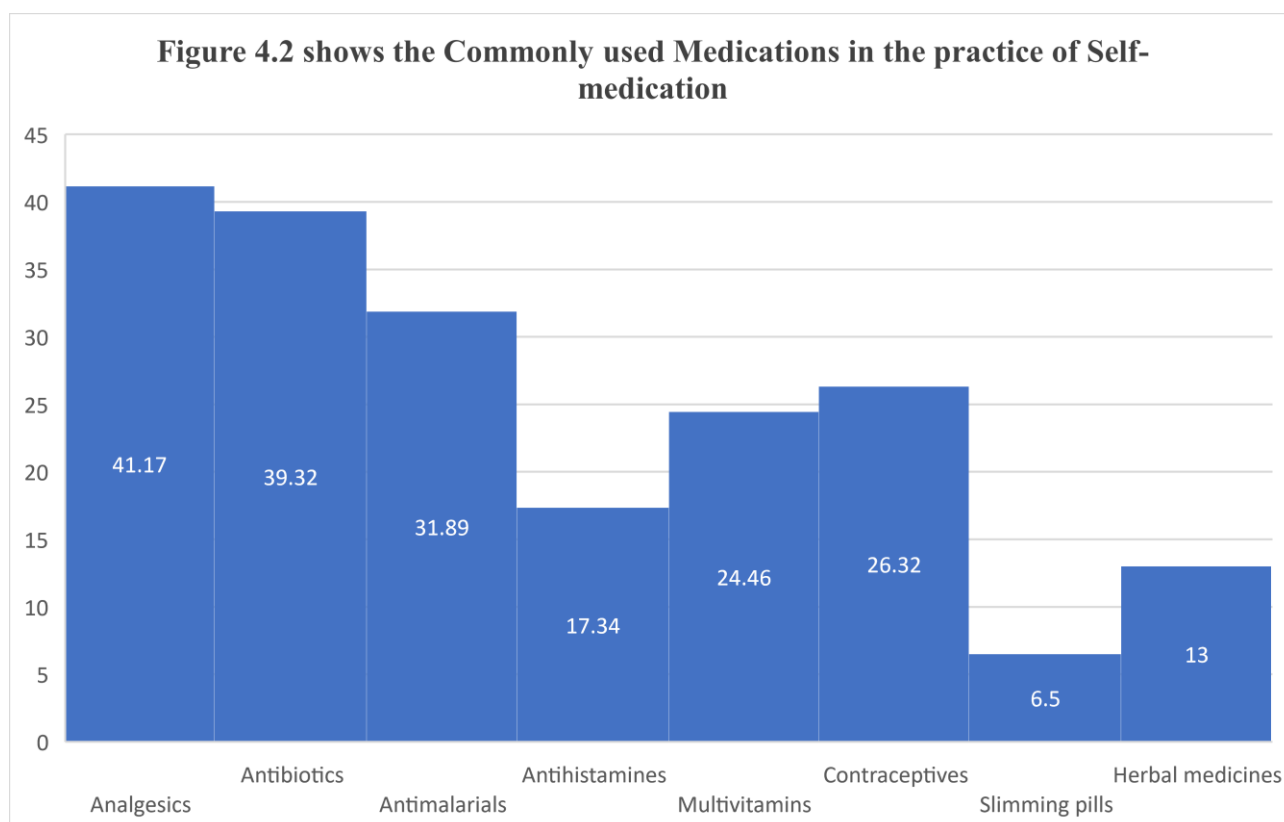


Table 4.6: Reasons for self-medication among women of reproductive age

S/N	Reasons for Self-Medication	SA	A	U	D	SD	Mean
1)	To save time, because going to the hospital takes time.	128 (39.63%)	112 (34.67%)	57 (17.65%)	17 (5.26%)	9 (2.79%)	4.03
2)	To treat a minor ailment e.g. Headache, Cough	157 (48.61%)	109 (33.75%)	34 (10.52%)	13 (4.02%)	10 (3.1%)	4.20
3)	To save costs of obtaining medical care	133 (41.18%)	141 (43.65%)	27 (8.36%)	12 (3.7%)	10 (3.1%)	4.16
4)	I already have knowledge of what to use from old prescriptions for the same condition.	168 (52.01%)	64 (19.81%)	43 (13.31%)	30 (9.3%)	18 (5.57%)	4.03
5)	The healthcare facility is far from my house	107 (33.13%)	83 (25.69%)	60 (18.57%)	43 (13.31%)	30 (9.3%)	3.60
6)	To treat pain e.g. Menstrual pain	211 (65.32%)	98 (30.34%)	5 (1.55%)	7 (2.17%)	2 (0.62%)	4.57

GRAND MEAN = 4.10

INDEX MEAN = 4.05 (Mean value > 4.05 indicates that the item is a strong reason)

Responses to the items in Table 4.5 showed that the mean score to each of the items lies between 3.60 and 4.57. Responses to items 2, 3, and 6 in table 4.5 had mean scores which were all above 4.05, indicating that they were considered strong reasons for self-medication by the respondents. On the other hand, items 1, 4 and 5 had mean scores which were below 4.05, indicating that they were not considered strong reasons for self-medication by the respondents. However, the grand mean of all six items was computed as 4.10, indicating that cost, treating minor ailments, saving time, and using medication for pain relief were considered as valid reasons for the practice of self-medication.

4.4 RESEARCH QUESTION THREE: What are the factors influencing the practice of self-medication among women of reproductive age in Uselu Community, Benin City?

Table 4.7: Factors influencing self-medication among women of reproductive age

S/N	Factors Influencing Self-Medication	SA	A	U	D	SD	Mean
1)	Cost of healthcare services	148 (45.82%)	97 (30.04%)	16 (4.95%)	43 (13.31%)	19 (5.88%)	3.97
2)	Availability of over the counter medications	134 (41.49%)	96 (29.72%)	15 (4.64%)	43 (13.31%)	35 (10.84%)	3.78
3)	Long waiting times at healthcare facilities	179 (55.42%)	77 (23.84%)	21 (6.5%)	36 (11.14%)	10 (3.10%)	4.17
4)	Influences of family and friends	85 (26.31%)	76 (23.53%)	58 (17.97%)	85 (26.31%)	19 (5.88%)	3.38
5)	Convenience	139 (43.03%)	90 (27.86%)	12 (3.72%)	36 (11.15%)	46 (14.24%)	3.74
6)	Previous successful experience with the medication	143 (44.27%)	87 (26.94%)	45 (13.93%)	21 (6.05%)	27 (8.36%)	3.92
7)	Trust in information gotten from the internet and social media	55 (17.03%)	33 (10.22%)	76 (23.53%)	86 (26.62%)	73 (22.60%)	2.72
8)	Community and societal beliefs in traditional medicine	35 (10.84%)	27 (8.36%)	18 (5.57%)	110 (34.06%)	133 (41.17%)	2.14

GRAND MEAN: 3.48

INDEX MEAN = 3.16 (Mean value > 3.16 indicates that the item greatly influences self-medication practice)

Responses to the items in Table 4.6 showed that the mean score to each of the items lies between 2.14 and 4.17. Responses to items 1, 2, 3, 4, 5, and 6 in table 4.6 had mean scores which were all above 3.16, indicating that they are factors which greatly influence the practice of self-medication among the respondents. On the other hand, items 7 and 8 had mean scores which were below 3.16, indicating that they do not really have a strong influence on the practice of self-medication. However, the grand mean

of all eight items was computed as 3.48, indicating that cost of healthcare, availability of over the counter medications, long wait times at healthcare facilities, influence of family and friends, convenience and previous experience with the medication are factors greatly influences the practice of self-medication.

TABLE 4.8: Barriers to accessing healthcare services which influence self-medication practice among women of reproductive age

S/N	Barriers Influencing Self-Medication Practice	SA	A	U	D	SD	Mean
1)	Cost	90 (27.86%)	86 (26.63%)	24 (7.43%)	51 (15.79%)	72 (22.29%)	3.22
2)	Distance	98 (30.34%)	76 (23.53%)	27 (8.34%)	81 (25.08%)	41 (12.70%)	3.59
3)	Lack of trust in healthcare providers	73 (22.60%)	65 (20.12%)	52 (16.10%)	73 (22.60%)	60 (18.50%)	3.06
4)	Cultural / Religious beliefs	50 (15.48%)	48 (14.86%)	41 (12.70%)	91 (28.17%)	93 (28.79%)	2.60
5)	Language barriers	79 (24.46%)	76 (23.53%)	64 (19.81%)	55 (17.03%)	49 (15.17%)	3.25
6)	Long waiting times	103 (31.89%)	95 (29.41%)	38 (11.77%)	45 (13.93%)	42 (13.00%)	3.53

GRAND MEAN: 3.21

INDEX MEAN: 3.10 (Mean value > 3.10 indicates that the item is a barrier to accessing healthcare services, thus influencing the practice of self-medication)

Responses to the items in Table 4.7 showed that the mean score to each of the items lies between 2.60 and 3.59. Responses to items 1, 2, 5, and 6 in table 4.6 had mean scores which were all above 3.10, indicating that they are considered barriers to accessing healthcare services by the respondents, which influences their decision to self-medicate. On the other hand, items 3 and 4 had mean scores which

were below 3.10, indicating that they were not considered active barriers to the access of healthcare services. Also, the grand mean of all six items was computed as 3.21, indicating that barriers to accessing healthcare has a great influence in the practice of self-medication among the respondents.

4.5 HYPOTHESES TESTING

The researcher used analysis of Chi-square statistics to test the stated hypotheses at a significance level of 0.05. The decision rule was based on the p-value that is associated with the chi-square test. Thus, if the p-value is less than 0.05 (significance level), the null hypothesis (H_0) will be rejected, but if the p-value is greater than 0.05, the null hypothesis (H_0) will be accepted.

The following hypotheses was tested using Chi-square statistics:

H₀: There is no significant relationship between the knowledge and practice of self-medication among women of reproductive age in Uselu Community, Benin City.

H₁: There is a significant relationship between the knowledge and practice of self-medication among women of reproductive age in Uselu Community, Benin City.

Table 4.9: Relationship between Level of Knowledge and Practice of Self-medication

Table 4.8 below contains the chi-square test used for the hypothesis testing:

		Practice			TOTAL	χ^2	P
		Poor	Fair	Good			
Level Of Knowledge	Low Level	20	15	10	45	4.49	0.106
	High Level	80	114	84	278		
TOTAL		100	129	94	323		

Since the p-value (0.106) is greater than the significance level of 0.05, we do not reject the null hypothesis. This suggests that there is no statistically significant relationship between the level of knowledge and the practice of self-medication among the participants.

CHAPTER FIVE

DISCUSSION OF FINDINGS

5.0 Introduction

This chapter provides a discussion of the findings of this study, its implications to nursing, summary, conclusions, recommendations and suggestions for further studies.

5.1 Discussion of Findings

Research Objective 1: Knowledge of Self-Medication among Women of Reproductive Age

Findings of this study revealed that a majority (86.07%) of females of reproductive age in this study have a high level of knowledge of self-medication. The sources of knowledge of self-medication was revealed to be prominently the Internet/Social Media (62.85%), closely followed by Family and Friends (39.32%) as seen in Figure 4.1. This is in line with the results of the study conducted by Mitra and Imtiaz (2023) among students from universities in Kuwait, where 69.8% (814) of its participants were female and showed a higher perception of self-medication. This is similar to the study conducted by Atmadani and Nkoka (2020) on pregnant women in Malang, Indonesia, which revealed a high level of knowledge among women of this demographic, even with lower levels of education. Contrary results were found however, in the study by Babatunde and Adeoye (2021) who conducted a study on pregnant women in Ogbomosho, revealing that only 23.4% of the respondents had a good knowledge of self-medication.

Research Objective 2: Practice of Self-Medication Among Women of Reproductive Age

Results of this study revealed that in the past 12 months, a majority of respondents (95.67%) have self-medicated, with some frequently self-medicating more than five times a year, while others regularly self-medicate monthly. Only (21.05%) self-medicate occasionally, about three to five times a year, and

32 (9.91%) rarely self-medicate, about once or twice a year. Majority of the respondents, affirmed that they sometimes complete the full course of medication when self-medicating, while 93 (28.79%) claimed they always complete the full course of medication when self-medicating. This was in line with Shokrzadeh and Jafari's (2020) study on women in Gorgan City, Iran, which revealed that a majority of the women had self-medicated recently.

This study also revealed that medications commonly used in the practice of self-medication among the respondents were predominantly painkillers and analgesics, antibiotics, antimalarials and contraceptives. This was supported by the study by Alnefaie and Alanazi (2023), which affirmed the use of painkillers such as NSAIDs and analgesic medication for pain and headache relief during examination periods.

Research Objective 3: Factors Influencing Self-Medication Practice Among Women of Reproductive Age

This study had findings which revealed that cost of healthcare, availability of over the counter medications, long wait times at healthcare facilities, influence of family and friends, convenience and previous experience with the medication are factors greatly influences the practice of self-medication. This was supported by the study done by Ibrahim and Bulbanat (2020) on single female students in Kuwait, which listed the factors also found in this study as reasons why the respondents practiced self-medication. Also, in Agbesanwa et al. (2024) study, it was found that majority of respondents listed busy academic schedules, high cost of medical consultation and presence of minor ailments as reasons for the practice of self-medication.

HYPOTHESIS ONE: Hypothesis one revealed that there is no significant relationship between the level of knowledge of self-medication and the practice of self-medication among women of reproductive age (15-49 years) in Uselu Community, Benin City.

5.2 Summary of Key Findings

This study sought to assess the knowledge and practice of self-medication among women of reproductive age in Uselu Community, Benin City. The objectives of the study were to determine the level of knowledge and practice of self-medication and the factors influencing the practice of self-medication. Three research questions were raised as a result, and two research hypotheses were put forth. A descriptive, cross-sectional study design was adopted in this study, and the study's population comprised of two thousand females of this demographic in Uselu Community, Benin City. The simple, random sampling technique was used as the sampling technique for 323 female respondents in Uselu Community, aged between 15-49 years, who made up the subject of the study. A self-structured questionnaire was administered and used to collect data from the respondents, said questionnaire which was validated by the researcher's supervisor. Descriptive statistics such as frequency distribution, percentage and mean were used to analyze the data retrieved, while Chi-square statistics was used to test the stated hypotheses of the study. The major findings of this study is that females of reproductive age (15-49 years) in Uselu Community, Benin City, have a high knowledge of self-medication and also highly engage in the practice of self-medication. It was also established that there is no relationship between the level of knowledge of self-medication and its practice, and that various factors including convenience and ease of access to over the counter medication influence the practice of self-medication among women of this demographic in Uselu Community, Benin City.

5.3 Implications for Nursing Practice

With the aid of findings from this study, nursing professionals can better address gaps in patient knowledge, particularly regarding the risks of improper self-medication practice. This insight enables nurses and other healthcare practitioners to develop targeted educational programs, improve patient counseling, and promote safer health practices within communities. Furthermore, it emphasizes the need for nurses to advocate for policies that enhance access to healthcare, thereby reducing the

reliance of women of this demographic on self-medication. Ultimately, this study supports nursing efforts to improve patient safety, enhance community health literacy, and contribute to more informed healthcare decision-making among women in this demographic.

5.4 Conclusion

This study assessed the knowledge and practice of self-medication among women of reproductive age in Uselu Community, Benin City. Findings from this study have provided empirical evidence that females of this demographic have a high knowledge of self-medication and also display a high level of practice of self-medication. It was also established that the internet and social media, family and friends, media such as television and radio are sources of knowledge of self-medication, and that preexisting knowledge of old prescriptions and the urge to save time in treating minor ailments were major reasons why the respondents engaged in self-medication practices. Also, cost of healthcare services, availability of over the counter medications and convenience were shown to be factors which influence self-medication. From the hypothesis testing, it was ascertained that there is no significant relationship between the level of knowledge and practice of self-medication among the respondents. In conclusion, females of reproductive age (15-49 years) in Uselu Community, Benin City, have a high knowledge of self-medication and are actively involved in the practice.

5.5 Recommendations

Based on the study findings, the following recommendations are made:

1. Agencies such as the Ministry of Education, Ministry of Health, National Primary Healthcare Development Agency and other relevant bodies should collaborate and intensify efforts in improving the knowledge about the risks and benefits of self-medication, so as to reduce the practice among the women of this demographic.

2. Inter-departmental collaboration between physicians, nurses and pharmacists should be improved, so as to reduce the misuse of medications by clients.
3. Policies which can curb the use of medications without a prescription should be made and implemented, so as to reduce the risk of dangerous self-medication practices. Over-the-counter medications should be strictly monitored in terms of sales and distribution, especially among the younger female demographic.
4. Service delivery in the healthcare facilities, especially in the antenatal and postnatal clinics should be scaled-up, and enough resources should be provided to ensure comprehensive healthcare delivery, so as to diminish the impact of the influencing factors on self-medication practices among women of reproductive age.

5.6 Limitations of the study

The timeframe for data collection was quite limited, due to the amount of academic workload on the researcher at the time of the study. This was overcome however, by the creation of a workable timetable which the researcher stuck to, thus ensuring that the study was completed in due time. The information given by respondents limited our study since it was a questionnaire-based survey. Also, it was difficult for some subjects to mention the names of the drugs which they used for self-medication. To reduce this problem, the researcher made sure to properly explain the classes of medication on the questionnaires at the time of data collection.

5.7 Suggestions for Further Studies

Since the study was conducted in Uselu Community, Benin City, it is suggested that further studies may be carried out in other communities across Benin City for a comparative observation.

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APPENDIX I

**DEPARTMENT OF NURSING SCIENCE
FACULTY OF BASIC MEDICAL SCIENCES
UNIVERSITY OF BENIN, BENIN CITY**

**QUESTIONNAIRE ON SELF MEDICATION PRACTICES AMONG WOMEN OF REPRODUCTIVE
AGE (15-49 YEARS)**

Dear Respondent,

Thank you for taking part in this study. The purpose of this questionnaire is to determine the level of knowledge, attitude towards, and practice of self-medication among women aged 15-49 years (women of reproductive age). Your participation is completely voluntary and all information provided will be kept confidential.

INSTRUCTIONS: Please tick as appropriate in all the boxes provided.

SECTION A: DEMOGRAPHIC DATA OF PARTICIPANTS

Age: 15-19 () 20-24 () 25-29 () 30-34 () 35-39 () 40-44 () 45-49 ()

Marital status: Single () Married () Divorced () Widowed ()

Educational level: No formal education () Primary education () Secondary education () University/ College () Postgraduate ()

Religion: Christianity () Islam () Others (please specify) _____

Ethnicity: Yoruba () Igbo () Hausa () Others (please specify) _____

Employment Status: Student () Unemployed () Employed (Part-time/ Full-time) () Self-employed ()

Monthly Income: Less than 50,000 () Between 50,000-100,000 () Between 100,000- 200,000 () 200,000 and above ()

SECTION B: KNOWLEDGE OF SELF MEDICATION

1. Have you ever heard of Self Medication? Yes () No ()
2. If yes, where did you hear about it? (Select all that apply): Healthcare providers () Family/Friends ()
Community health programs () Media (TV/Radio) () Internet/Social media () Books and Magazines ()
() Other, please specify: _____
3. Self-medication includes taking drugs without consulting a doctor or a pharmacist: Yes () No ()
4. Self-medication is taking more than the prescribed dose of medication as treatment for an illness: Yes ()
) No ()
5. Do you know the risks associated with self-medication? Yes () No ()

SECTION C: PRACTICE OF SELF MEDICATION

1. Have you self-medicated in the past 12 months? Yes () No ()
2. How often do you self-medicate? Rarely () Occasionally () Frequently () Regularly ()
3. Do you complete the full course of medication when self-medicating? Always () Sometimes () Never ()
4. Medications used for self-medication (Select all that apply): Painkillers and Analgesics e.g. Paracetamol () Antibiotics e.g. Amoxicillin () Antimalarials () Antihistamines e.g. Loratidine ()
Multivitamins () Contraceptives e.g. Postinor-2 () Slimming pills () Herbal medicines ()

S/N	Reasons for Self-Medication	SA	A	U	D	SD
a)	To save time, because going to the hospital takes time.					
b)	To treat a minor ailment e.g. Headache, Cough					
c)	To save costs of obtaining medical care.					

d)	I already have knowledge of what to use from old prescriptions for the same condition.					
e)	The healthcare facility is far from my house.					
f)	To treat pain e.g. Menstrual pain					

Please indicate the extent of your agreement to the following items in the tables below:

KEY: Strongly Agree = SA; Agree = A; Undecided = U; Disagree = D; Strongly Disagree = SD

SECTION D: FACTORS INFLUENCING SELF MEDICATION

Please indicate the extent of your agreement to the following items in the tables below:

KEY: Strongly Agree = SA; Agree = A; Undecided = U; Disagree = D; Strongly Disagree = SD

S/N	Factors Influencing Self Medication	SA	A	U	D	SD
i.	Cost of healthcare services					
ii.	Availability of over the counter medications					
iii.	Long waiting times at healthcare facilities					
iv.	Influence of family and friends					
v.	Convenience (medication is easy to get)					
vi.	Previous successful experience with the medication					
vii.	Trust in information gotten from the internet and social media					
viii.	Community and societal beliefs in traditional medicine					

2. What are the main barriers to accessing healthcare services in your area? (Select all that apply)

S/N	Barriers influencing Self-medication Practice	SA	A	U	D	SD
a)	Cost					
b)	Distance					
c)	Lack of trust in healthcare providers					
d)	Cultural / Religious beliefs					
e)	Language barriers					
f)	Long waiting times					

APPENDIX II

CONSENT FORM

KNOWLEDGE AND PRACTICE FO SELF-MEDICATION AMONG WOMEN OF REPRODUCTIVE AGE (15-49 YEARS) IN USELU COMMUNITY, BENIN CITY, EDO STATE

This research is a project work by **Edoma Emanna Joanna**, a student of the Department of Nursing, University of Benin, Benin City, under the supervision of Prof. (Mrs.) C. E. Omorogbe.

There is no known risk to participants, neither is there any compensation for participation.

Please tick this box if you are willing to participate.

APPENDIX III
RELIABILITY TEST
RESULTS PRESENTATION

SCALE: Knowledge and Practice of Self-Medication

SCALE	NUMBER OF ITEMS	PILOT STUDY (n=32)	MAIN STUDY (n=323)	RELIABILITY LEVEL
Knowledge of Self-Medication	5	0.75	0.82	Acceptable-Good
Practice of Self-Medication	4	0.71	0.79	Acceptable
Factors Influencing Self-Medication	8	0.78	0.85	Good
Overall Cronbach's Alpha	17	0.80	0.86	Good

The reliability of the research instrument was tested using Cronbach's Alpha. The pilot study yielded an overall reliability coefficient of 0.80, indicating good internal consistency. In the main study, the reliability increased to 0.86, confirming that the instrument is highly reliable. Section-wise analysis showed that all three domains (Knowledge, Practice, and Influencing Factors) had acceptable to good reliability, ensuring consistency in responses.