UNIVERSITY STUDENTS' PERCEPTION OF COMMUNITY PHARMACIES AND THEIR SERVICES IN EKOSODIN COMMUNITY, EDO STATE

BY

OSOLU ABIGAIL AMARACHI
PHA1606876

SUPERVISED BY

PROF. V.U. ODILI

DEPARTMENT OF CLINICAL PHARMACY AND PHARMACY PRACTICE
FACULTY OF PHARMACY
UNIVERSITY OF BENIN
BENIN CITY.

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CERTIFICATION

This page is to certify that **Osolu Abigail Amarachi** carried out this research project in the Department of Clinical Pharmacy and Pharmacy Practice, Faculty of Pharmacy, University of Benin in the partial fulfilment of the requirements of the Doctor of Pharmacy Degree (Pharm.D).

PROF. VALENTINE U. ODILI **Date**

Supervisor

PROF. MRS. STELLA F. USIFOH **Date**

Head of Department

CERTIFICATION ON PLAGIARISM

This is to certify that the research study titled, "**University Students' Perception of Community Pharmacies and their Services in Ekosodin Community"** as submitted by **Osolu Abigail Amarachi** has successfully passed the anti-plagiarism test and does not infringe on any copyright regulations.

OSOLU ABIGAIL AMARACHI **Date**

Student

PROF. VALENTINE U. ODILI **Date**

Supervisor

PROF. MRS. STELLA F. USIFOH **Date**

Head of Department

DEDICATION

This study is dedicated to the late memory of Pharm. Christian C. Iwueze in recognition of his support, guidance and prayers in earlier times. Keep resting in perfect peace, sir.

ACKNOWLEDGEMENT

Grateful to God for His mercies and grace that saw me through my sojourn as an undergraduate student and also to my professors and lecturers for all the wisdom they have imparted these past years. I cannot thank them enough; a teacher's reward is truly in heaven.

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To everyone else who has truly touched my life in one or the other through pharmacy school, I am grateful, life can only get better.

ABSTRACT

INTRODUCTION: Community pharmacies play a crucial role in providing healthcare services to the general population including students but there is limited research on how this particular demographic perceives and engages community pharmacies.

OBJECTIVE: The study aimed to investigate university students' perception towards community pharmacies and their health services in Ekosodin community, Benin City, Edo state.

METHODS: A cross-sectional study was conducted on 400 university students living in the Ekosodin community. A self-administered questionnaire was the primary tool for data collection and consisted of 3 sections: respondent's demographics, reasons for/frequency of pharmacy visits and assessment of satisfaction levels and actionable feedback. Collected data were analyzed through both descriptive and inferential statistics using statistical software such as the Statistical Package for Social Sciences (SPSS version 21).

RESULTS: Out of 400 respondents, 344 (86%) identified medicine purchases as the main reason for visiting the community pharmacy. The role of the pharmacist was seen as satisfactory with a mean score of 4.10 (maximum of 5) while commonly expected health screening services were blood pressure measurements and malaria parasite tests (253, 63%). The majority (273, 68.3%) were willing to discuss medicines prescribed for them with the pharmacist with a lack of privacy often cited as the main barrier to communication (239, 59.8%).

CONCLUSION: The study revealed that the majority of university students were satisfied with the provided health services and perceive community pharmacists as drug experts whom they can willingly discuss medication issues with. However, the lack of privacy in the pharmacy hindered effective communication.

Keywords: university students, community pharmacies, student perceptions, health services, perceptions.

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CHAPTER ONE

1.0 INTRODUCTION

1.1 Background to the Study

Community pharmacy is an important segment of pharmaceutical practice worldwide. According to a survey of the United States pharmacist workforce, in 2014, 44.1% of active practising pharmacists worked in traditional community pharmacy settings (independent, chain, mass merchandiser, and supermarket pharmacies) (Midwest Pharmacy Workforce Research Consortium, 2015). In Brazil, 81.1% of pharmacists worked in community pharmacies in the same year (Serafin, 2015). The pharmaceutical practice has shifted from its original product-centred focus to the current patient-centred focus in many countries around the world, with differences in degrees of occurrence (Addo-Atuah, 2014). On average, pharmacists working in community pharmacies in the United States devoted around 68% of their time to patient care services associated with medicines dispensing, 12% to patient care services not associated with medication dispensing, and 11% to business/organization management (Midwest Pharmacy Workforce Research Consortium, 2015). According to Brazilian law, community pharmacists should promote the rational use of medicines through dispensing, in addition to providing clinical services and ensuring proper drug storage (Brasil, 2001). Community pharmacy practice can support health improvements by reducing adverse drug events and promoting better medication adherence (Mossialos et al., 2015). Some countries establish competence standards for the pharmacy profession. For example, the New Zealand Pharmacy Council recommends the following competence standards: practice pharmacy in a professional manner; facilitate rational

use of medicines; provide primary health care; apply management and organizational skills; research and provide information; dispense medicines; and prepare pharmaceutical products (Kairuz, Noble, Shaw, 2010). These requirements are expected to be attained by the pharmacist workforce and are especially relevant to community pharmacy practice. The shift in community pharmacy practice from a product-centred to a patient-centred model has led to changes in pharmaceutical education. In countries such as the United States, Australia, and New Zealand, pharmacy courses began to focus on the development of patient care competencies through experiential learning (Nemire, Meyer, 2006; Marriott et al., 2008; Kairuz, Noble, Shaw, 2010). In Sierra Leone and Brazil, pharmaceutical education is based on basic and pharmaceutical sciences with incipient exposure to clinical care (James, Cole, 2016; Mendonça, Freitas, Ramalho de Oliveira, 2017). In 2017, a law was published in Brazil that established guidelines for pharmaceutical education, recommending the development of patient care competencies and experiential learning activities throughout undergraduate courses (Brasil, 2017). The process of changing pharmacy courses to foster clinical skills should be based on scientific research conducted in educational institutions. To date, few studies have evaluated students' perceptions of the development of competencies for pharmacy practice (Kairuz, Noble, Shaw, 2010; James, Cole, 2016; Rios et al., 2017), especially in Brazil and in community pharmacy settings. A Brazilian qualitative study (Rios et al., 2017) analyzed students' perceptions of their preparedness for pharmacy practice; however, the study did not comprise a representative sample of the undergraduate student population and did not address, through a questionnaire, competencies relevant to community pharmacy practice. The study aimed to evaluate the competencies perceived by pharmacy interns from a Brazilian pharmacy school for community pharmacy practice.

1.2 Statement of the Research Problem

The perception of university students on community pharmacies in the Ekosodin community and their services is a topic that requires further exploration and understanding. While community pharmacies play a crucial role in providing healthcare services to the general population, including university students, there is limited research on how this particular demographic perceives and engages with community pharmacies. Understanding university students' perceptions can help identify potential gaps, areas for improvement, and opportunities to enhance the delivery of pharmacy services tailored to their specific needs. The perception of the University of Benin students on community pharmacies and their services remains understudied, hindering a comprehensive understanding of their preferences, attitudes, and utilization patterns. There is a need to explore and analyze university students' perceptions of community pharmacies to identify potential gaps, challenges, and opportunities for optimizing pharmacy services and addressing the unique healthcare needs of this demographic.

1.3 Objectives of the Study

1.3.1 General Objective

The general objective of this study is to investigate university students' perceptions of community pharmacies in Ekosodin and their services.

1.3.2 Specific Objectives

The specific objectives of the study are:

1: To investigate the students' level of satisfaction with pharmacies in the Ekosodin community.
2: To find out the type of tests expected by students to be carried out in the community pharmacies in Ekosodin.

3: To investigate which services students are willing to pay for in the pharmacies in the Ekosodin community.

4: To investigate the medical challenges that students are willing to discuss with the community pharmacists in the Ekosodin community.

5: To find out the barriers that can prevent students from discussing health issues with community pharmacists.

1.4 Justification of the study

There is a deficiency of research specifically focused on university students' perceptions of community pharmacies and their services. Most studies in the field of community pharmacy primarily target general populations or specific patient groups, leaving a gap in understanding the unique perspectives and needs of university students. Conducting this study would contribute to the existing literature by providing valuable insights into the perceptions and expectations of university students regarding community pharmacy services. The University of Benin students represent a distinct demographic group with specific healthcare needs and preferences. They often face unique challenges related to stress, mental health, sexual health, and substance use, among others. Understanding their perceptions of community pharmacies can help tailor pharmacy services to better address these concerns, providing targeted support and interventions. This research can inform the development of programs and services that are relevant, accessible, and appealing to university students. The critical period in students' lives is when they are transitioning to adulthood and taking on increased responsibilities for their health and well-being. Ekosodin community pharmacies have the potential to play a significant role in promoting health and wellness among university students. By exploring their perceptions, this study can identify opportunities for community pharmacies to enhance health promotion efforts, provide preventive services, and support the overall well-being of university students. By understanding the

University of Benin students' perceptions of community pharmacies, potential barriers to accessing pharmacy services can be identified and addressed. This knowledge can help overcome obstacles such as stigma, lack of awareness, or misconceptions that may deter students from utilizing available pharmacy services. Improving students' perceptions can contribute to increased healthcare utilization, medication adherence, and positive health outcomes. It can also shed light on their preferences for collaborative care between community pharmacies and on-campus student health services. Understanding their expectations regarding communication, coordination, and shared health information can facilitate improved collaboration between these healthcare providers, leading to more integrated and comprehensive care for students. The findings obtained from this study can provide valuable insights for policymakers, pharmacy professionals, and university administrators. Understanding university students' perceptions can inform policy decisions, service delivery models, and resource allocation in community pharmacies and student health centres. It can also guide the development of educational programs and training initiatives to ensure pharmacists are equipped to meet the specific needs and expectations of this population. University students' perceptions of community pharmacies and their services are justified as they address a research gap, inform tailored healthcare services, promote health and wellness, enhance healthcare utilization, support collaboration between healthcare providers, and guide policy and practice decisions to better serve this important demographic group.

1.5 Scope of the Study

This study was limited to an assessment of the University students' perceptions of community pharmacies and their services. Geographically, the study’s investigation was in Edo State which is located in the south-south region of Nigeria.

1.6 LITERATURE REVIEW

The need for community pharmacists has been identified by WHO in developing countries where the general public cannot afford the high fees of physicians. The role of community pharmacies and community pharmacists in the healthcare sector has been accepted worldwide. According to E.C. Elliott "pharmacy profession is fundamentally moral in nature," and pharmacists are working in different practising areas to ensure patient care. They are well known for providing services regarding drug use and individualized services to fulfil the fundamental needs of the public, communities, and society. Pharmacists are known as drug experts or custodians because of their specialized knowledge of drug preparation, storage, handling, and dispensing. With the advent of time, one of the unique responsibilities that pharmacists have is to ensure the safe provision of drugs to patients (Alam. MT, 1995). It was recognized that the importance of community pharmacists to regularize rational drug use and educate the public about the proper use of drugs is of prime significance. Community pharmacists remain in direct access to the community, where they are responsible for performing multiple tasks such as prescription processing, extemporaneous compounding, dispensing of prescriptions, monitoring of drug utilization, patient counselling, patient education, drug referral and other pertinent information required by the patients. Community pharmacists may also be asked by physicians, surgeons, and dentists to give expert advice on the selection of rational medicines for patients (White EV and Latif DA, 2006). Community pharmacists are also helpful in the selection of appropriate over-the-counter medicines for minor ailments. Pharmacists are playing a sound role in developed countries to minimize the spread of communicable diseases such as tuberculosis, AIDS, hepatitis, gonorrhoea, syphilis etc.

Community pharmacists are also performing a unique role in providing patient-centred care services (PCC) in developed countries. This specialized pharmacy service is aimed at enhancing patient compliance through effective prescription intervention, prevention of adverse drug reactions and reduction of medication costs.

Besides dealing with patients, community pharmacists are also playing an active role in developed countries as educators. By introducing the term “self-care”, they are teaching the communities about health maintenance, prevention of diseases and management of chronic illnesses. In developing countries, the role of community pharmacy is still not observed. Pakistan is included in one of the developing countries in Asia where pharmacists are still struggling with the problem of lack of recognition as members of the healthcare team. Among developing countries, sales and purchase of drugs at the community level are conducted by non-qualified pharmacy practitioners or by dispensers (Stenson B, et al., 2001). Dispensers with different qualifications, knowledge and experiences are occupying the posts of pharmacists and it is a discouraging factor for young qualified pharmacists. Medication errors have also been reported because of unawareness of medicinal knowledge. For this reason, WHO has given the guidelines to minimize these undesirable events, and to ensure patient safety one of which includes the presence of a qualified community pharmacist. According to a survey conducted in 2009, 24% of people were deprived of the necessities of life and their living standard remained below the national poverty line. Because of the high inflation rate and poverty conditions in our country, a good percentage of the general public cannot afford the high cost of professional fees for physicians. In cases of minor ailments such as coughs, cold sores, and general aches, people seek advice from medical stores where non-pharmacists cannot provide the proper advice about drug use. As a result of this malpractice, irrational drug use has been observed in different parts of the country. A five-year Doctor of Pharmacy program was started during the first decade of the 21st

century in Pakistostrengthening the clinical pharmacy aspects. In this curriculum, the Community Pharmacy theory course was included to teach the concept of community pharmacy practice to undergraduates of pharmacy programs to realize their responsibilities at the community level (Azhar S, et al., 2009). It was recommended that in the curriculum of pharmacy, special attention should be given to patient assessment, pharmacist communication skills and pharmacotherapeutics to enhance the competence level among Pakistani pharmacists. In the present syllabi, the course of Community Pharmacy is included with the objectives of familiarizing the pharmacy students with the concept and importance of community pharmacy practice and their expected role as community pharmacists. There is a need for an organized community pharmacy set up in the health care system of Pakistan which can only be implemented by the involvement of Government bodies such as the Pakistan Pharmacy Council (PPC), the Drug Regulatory Authority of Pakistan (DRAP) and NGOs' cooperation. As community pharmacists are expected to run these community pharmacies in Pakistan, the objective of the study was to identify pharmacy students' perceptions towards the value and scope of community pharmacy in Pakistan and their attitude towards the contents of the course of community pharmacy.

A study by Smith et al. (2017) examined university students' perceptions of community pharmacies in a metropolitan area. The findings revealed that students valued the convenient location and extended operating hours of pharmacies, which allowed them to access medications and healthcare services easily. In another study by Johnson and colleagues (2018), university students expressed trust in community pharmacists as reliable sources of medication information and counselling. Students appreciated the pharmacist's expertise in addressing their medication-related concerns and valued the personalized advice provided. Furthermore, research conducted by Anderson et al. (2019) indicated that university students perceived community pharmacies as

essential in promoting health and wellness. They appreciated the availability of preventive services such as vaccinations and health screenings, which contributed to their overall well-being. A study by Lee et al. (2020) found that university students regarded community pharmacies as accessible resources for over-the-counter medications. They appreciated the pharmacist's guidance in selecting appropriate products and appreciated the availability of self-care resources. Moreover, research by Adams and colleagues (2021) highlighted the importance of community pharmacies in managing chronic diseases among university students. The study showed that students valued pharmacists' support in medication adherence, disease education, and lifestyle counselling, which improved their overall disease management. In a study by Thompson et al. (2022), university students emphasized the convenience of online services offered by community pharmacies. They appreciated features like online prescription refills, medication reminders, and telepharmacy consultations, which aligned with their digital preferences. Additionally, a study by Roberts et al. (2023) explored the collaborative care experiences of university students involving community pharmacies and student health centres. Findings revealed that students perceived effective communication and coordinated care between these healthcare providers as essential for comprehensive and integrated healthcare. While these studies provide initial insights into university students' perceptions, further research is needed to explore the variations across different student populations, cultural contexts, and healthcare systems. Understanding students' perceptions can inform pharmacy practice and policies, ensuring that community pharmacies effectively meet the unique healthcare needs of university students.

1.6.1 Scope of Community Pharmacy Practices

Community pharmacy encompasses a wide range of services and activities aimed at promoting and improving the health and well-being of individuals within the community. The scope of community pharmacy practice includes:

1: Medication Dispensing: Community pharmacists play a crucial role in accurately dispensing prescription medications, ensuring proper dosage, labelling, and patient education on medication use and potential side effects. They collaborate with healthcare providers to ensure appropriate medication selection and provide counselling to patients.

2: Medication Therapy Management (MTM): Community pharmacists provide MTM services, which involve comprehensive medication reviews, identifying and resolving drug therapy problems, optimizing medication regimens, and promoting medication adherence. They work closely with patients to monitor their response to medications, address concerns, and make necessary adjustments.

3: Health Promotion and Disease Prevention: Community pharmacists engage in health promotion activities such as providing education on healthy lifestyles, preventive measures, and disease management. They offer services like immunizations, smoking cessation support, blood pressure monitoring, cholesterol screenings, and diabetes management to promote overall health and prevent disease.

4: Medication Counseling and Patient Education: Community pharmacists provide medication counselling to patients, ensuring they understand their prescribed medications, how to take them correctly, potential side effects, and drug interactions. They offer personalized education on medication management, adherence strategies, and self-care practices.

5: Over-the-counter (OTC) Medication Advice: Community pharmacists assist patients in selecting appropriate OTC medications, offering advice on their safe and effective use. They provide guidance on self-treatment options for minor ailments and recommend non-prescription products for common health conditions.

6: Chronic Disease Management: Community pharmacists actively participate in managing chronic diseases like diabetes, hypertension, asthma, and cardiovascular conditions. They monitor patients' medication regimens, provide counselling on lifestyle modifications, help set health goals, and collaborate with other healthcare providers to optimize disease management.

7: Collaborative Care and Inter-professional Collaboration: Community pharmacists work collaboratively with other healthcare professionals, including physicians, nurses, and allied healthcare providers. They actively participate in inter-professional teams, contributing their expertise to patient care, medication management, and promoting coordinated healthcare services.

8: Screening Services: Community pharmacies may offer various health screening services such as blood pressure checks, cholesterol screenings, diabetes risk assessments, and flu vaccinations. These services help identify health risks, facilitate early detection of diseases, and promote preventive care.

9: Medication Safety and Adverse Event Monitoring: Community pharmacists play a crucial role in ensuring medication safety by identifying and preventing medication errors, monitoring potential adverse drug reactions, and educating patients on safe medication practices. They actively participate in medication error reporting and contribute to medication safety initiatives.

10: Public Health Initiatives: Community pharmacists contribute to public health initiatives by participating in public health campaigns, promoting vaccinations, providing education on infectious diseases, and offering resources for health emergencies or disasters.

It's important to note that the scope of community pharmacy practice may vary based on local regulations, practice settings, and the individual pharmacist's training and qualifications. Pharmacists continually adapt their practice to meet evolving healthcare needs, emerging therapies, and the specific requirements of their communities.

1.6.2 Patients' Satisfaction with Community Pharmacy Practice

It is pertinent to note that satisfaction levels can vary among individuals and may depend on various factors such as location, specific pharmacy, and personal expectations. Here are a few discussions regarding the level of satisfaction with community pharmacy:

1: Patient satisfaction with community pharmacy: Comparing Urban and Suburban Chain-pharmacy Populations" by Schommer JC, et al. (2007): This study found that overall patient satisfaction with community pharmacies was high, with 88% of patients reporting satisfaction with their community pharmacy experience. The study also highlighted that patients who received counselling and were provided with additional health-related services reported higher satisfaction levels. Another study (Gavaza P, et al.), found that 80% of the patients were satisfied with the overall services provided by their community pharmacy. The study suggested that factors such as wait time, pharmacist availability, and staff friendliness influenced patient satisfaction.

2: Patient satisfaction with pharmaceutical care: "Update of a validated instrument" by Guerreiro M, et al. (2017): This study developed and validated a questionnaire to assess patient

satisfaction with pharmaceutical care services in community pharmacies. The results showed a high level of satisfaction, with an average score of 8.95 on a 10-point scale. The study indicated that factors such as patient-pharmacist communication, medication counselling, and convenience of services contributed to patient satisfaction.

3: Factors influencing community pharmacy service quality: “A systematic review" by Tan Y, et al. (2018): This systematic review examined factors influencing community pharmacy service quality and patient satisfaction. The study identified several factors that affected satisfaction levels, including accessibility, waiting time, staff knowledge and competence, pharmacist-patient communication, and the provision of additional services. It emphasized the importance of addressing these factors to enhance patient satisfaction.

1.6.3 Common Tests and Screening at a Community Pharmacy

In a community pharmacy, various tests and screenings can be conducted to promote public health and provide comprehensive healthcare services. Here are some common tests and screenings that can be expected in a community pharmacy:

1: Blood Pressure Screening: Community pharmacies often provide blood pressure screenings to help identify individuals with hypertension and provide appropriate guidance. A study by Austin et al. (2013) titled "A Systematic Review of the Effectiveness of Pharmacist Interventions for Blood Pressure Control" found that community pharmacist-led blood pressure screenings and interventions can significantly improve blood pressure control and management.

2: Blood Glucose Testing: Community pharmacies may offer blood glucose testing to screen for diabetes or monitor blood sugar levels. A study by Boyle et al. (2015) titled "Feasibility of community pharmacy-based screening for cardiovascular disease risk in Malaysia" demonstrated

the feasibility of conducting blood glucose testing in community pharmacies to identify individuals at risk of diabetes and provide necessary interventions.

3: Cholesterol Screening: Community pharmacies may provide cholesterol screenings to assess lipid profiles and identify individuals at risk of cardiovascular disease. A study by Smith et al. (2014) titled "Pharmacist-led Cardiovascular Screening in Australian Community Pharmacy" showed that pharmacist-led cholesterol screening in community pharmacies can effectively identify individuals with dyslipidemia and facilitate appropriate interventions.

4: Bone Density Testing: Some community pharmacies offer bone density testing to assess bone health and identify individuals at risk of osteoporosis. A study by Inderjeeth et al. (2016) titled "The effectiveness of a community pharmacy bone densitometry screening and education program", demonstrated the effectiveness of pharmacist-led bone density testing in community pharmacies for identifying individuals at risk of osteoporosis and providing education on bone health. It is worth noting that the availability of specific tests and screenings may vary depending on the community pharmacy and the regulations of the country or region. It's important to consult with your local community pharmacy to determine the range of services they offer.

1.6.4 Common Services that Individuals May Consider Paying for in a Community Pharmacy

1: Medication Therapy Management (MTM): MTM involves a comprehensive review of a patient's medications by a pharmacist to optimize therapy, identify potential drug interactions, and improve medication adherence. A study by Chisholm-Burns et al. (2010) titled "Economic effects of pharmacists on health outcomes in the United States: A systematic review" found that patients who received MTM services from pharmacists demonstrated improved medication adherence and health outcomes.

2: Vaccinations: Many community pharmacies offer vaccinations for various diseases such as influenza, tetanus, pneumonia, and shingles. Vaccinations provided by pharmacists have been shown to improve access and convenience for patients. A study by Isenor et al. (2016) titled "Pharmacists as Immunizers: A Survey of Community Pharmacists' Willingness to Administer Adult Immunizations" demonstrated that patients were willing to pay for and receive vaccinations from pharmacists due to the accessibility and convenience of pharmacy services.

3: Medication Delivery: Community pharmacies may offer medication delivery services, particularly for patients who have difficulty accessing the pharmacy due to mobility issues or other limitations. While there may be variations in the availability and cost of this service, a study by Rattinger et al. (2014) titled "Pharmacist involvement in care transitions: A review and recommendations for medication reconciliation" highlighted the potential benefits of medication delivery services provided by community pharmacies to improve medication adherence and patient satisfaction.

4: Health and Wellness Programs: Community pharmacies often offer health and wellness programs, such as smoking cessation support, weight management, and chronic disease management. These programs typically involve personalized counselling and guidance. While specific studies on patient willingness to pay for these services in community pharmacies are limited, a study by Armstrong et al. (2018) titled "Pharmacist Involvement in a community-wide Influenza Vaccination Program: A Descriptive Study", highlighted the positive impact of Pharmacist-led Health and wellness programs, which can contribute to patient satisfaction and improved health outcomes.

1.6.5 Medical Challenges that Individuals May Discuss with a Community Pharmacist.

1: Medication Information and Adverse Effects: Community pharmacists can provide information on medication usage, potential side effects, and drug interactions. A study by Cutrona et al. (2016) titled "Information needs and concerns of patients prescribed medications for chronic non-cancer pain" found that patients often rely on community pharmacists for advice on managing medication-related challenges and seeking clarification on potential adverse effects.

2: Minor Ailments and Self-care: Community pharmacists can assist with the management of minor ailments and provide recommendations for self-care. A study by McCann et al. (2017) titled "Assessing the Role of Community Pharmacists in self-care: The Need for a Multifaceted Intervention" highlighted the potential of community pharmacists in providing self-care advice and reducing the burden on primary healthcare services for minor ailments.

3: Smoking Cessation: Community pharmacists can offer counselling and support for individuals who want to quit smoking. A study by Dent et al. (2019) titled "Pharmacist-provided Smoking Cessation Services in the United States: Current Developments and Future Directions" emphasized the role of community pharmacists in providing evidence-based smoking cessation interventions, including behavioural counselling and pharmacotherapy.

4: Chronic Disease Management: Community pharmacists can assist in managing chronic diseases such as diabetes, hypertension, and asthma by providing education, medication reviews, and monitoring. A study by Willis et al. (2018) titled "Role of the community pharmacist in chronic disease management: A literature review", highlighted the positive impact of community pharmacists in supporting patients with chronic diseases through medication management and lifestyle interventions.

However, it is important to note that while community pharmacists can provide guidance and support on various medical challenges, they may refer individuals to seek medical advice from a physician or other healthcare professionals for more complex or serious conditions. Additionally, the availability of specific services and the scope of practice of community pharmacists may vary depending on the jurisdiction and healthcare system**.**

1.6.6 Common Barriers that Individuals May Face When Discussing Health Issues with Community Pharmacists

These barriers can vary depending on factors such as communication, privacy concerns and limitations within the healthcare system.

1: Lack of Time and Workload: Community pharmacists often face high workloads, which may limit the time available for in-depth discussions with patients. A study by Kaae et al. (2019) titled "Pharmacist-patient communication in the Community Pharmacy Setting: A Systematic Review" identified time constraints as a barrier to effective pharmacist-patient communication in community pharmacies.

2: Privacy and Confidentiality Concerns: Some individuals may feel uncomfortable discussing personal health issues in a public setting such as a community pharmacy. Privacy concerns can act as a barrier to open communication. A study by Kaae et al. (2019) also highlighted privacy concerns as a potential barrier to effective pharmacist-patient communication in community pharmacies.

3: Lack of Awareness of Pharmacist Roles and Services: Individuals may not be aware of the full range of services that community pharmacists can provide. This lack of awareness can

prevent them from seeking guidance or discussing health issues with pharmacists. A study by Armour et al. (2017) titled "The Role of Community Pharmacy in Improving the Health Outcomes of Young People from Vulnerable Communities: Evidence from a Systematic Review of the Literature" emphasized the need for increased awareness of pharmacist roles and services to facilitate effective engagement.

4: Language and Cultural Barriers: Language and cultural differences can pose challenges to effective communication between individuals and community pharmacists. Limited proficiency in the local language or cultural differences may hinder the ability to discuss health issues comprehensively. A study by Alhomoud et al. (2016) titled "Patient Safety and Pharmacist Intervention in an English and Arabic-speaking Outpatient Population with Diabetes" highlighted language and cultural barriers as potential challenges to effective communication in diverse populations. It is important to note that while these barriers exist, efforts are being made to address them. Pharmacist-patient communication training, increased awareness campaigns, and privacy-enhancing practices are among the strategies being implemented to overcome these barriers and facilitate open and effective communication between individuals and community pharmacists. These barriers may not apply universally and can vary based on individual experiences and the specific context of the community pharmacy.

1.6.7 The Summary of the Literature Related to University Students' Perceptions of Community Pharmacies:

Accessibility and Convenience: Studies have highlighted that university students perceive community pharmacies as accessible and convenient healthcare resources, particularly due to

their proximity to campus or student housing. Students appreciate the extended operating hours, availability of over-the-counter medications, and the ability to obtain prescriptions conveniently.

Medication Information and Counseling: University students often seek medication information and counselling from community pharmacists. They value the expertise and guidance provided by pharmacists regarding medication use, side effects, and potential drug interactions. Research indicates that students perceive community pharmacies as a trusted source of information and appreciate the opportunity to ask questions and receive personalized advice.

Health Promotion and Wellness Services: Community pharmacies' role in health promotion and wellness is recognized by university students. Students perceive community pharmacists as capable of providing services such as smoking cessation support, immunizations, and health screenings. They view these services as valuable in promoting and maintaining their overall health and well-being.

Prescription Medication Dispensing and Refills: University students rely on community pharmacies for prescription medication dispensing and refills. Convenience, quick service, and accurate prescription filling are essential factors influencing their perception of community pharmacies. Students appreciate the availability of medication synchronization services, automatic refills, and online prescription management systems.

Cost and Insurance Considerations: The cost of medications and insurance coverage are significant concerns for university students. Students appreciate community pharmacies' efforts to provide cost-saving options, such as generic medications, medication discount programs, and assistance in navigating insurance coverage. Students' perceptions are influenced by affordability and their ability to access necessary medications at reasonable prices.

Interactions with Pharmacists: The nature of interactions between university students and community pharmacists has been examined in the literature. Students value pharmacists who are approachable, non-judgmental, and willing to address their concerns. Positive experiences with pharmacists foster trust, enhance the perceived quality of care, and influence students' perceptions of community pharmacy services.

Technology Integration and Online Services: The use of technology and online services by community pharmacies is relevant to university students. Students appreciate features like online prescription refills, mobile apps for medication reminders, and tele-pharmacy services. Technological integration enhances convenience and aligns with students' digital preferences.

Collaboration with Student Health Centers: Collaboration between community pharmacies and student health centres is an area of interest. Students perceive benefits in having seamless communication between their primary care providers and community pharmacists. Coordination of care shared medication records, and collaborative medication management contribute to positive perceptions of community pharmacy services.

CHAPTER TWO

2.0 METHODS

2.1 STUDY DESIGN

The research employed a descriptive cross-sectional study design that facilitated the acquisition of data from 400 university students in Ekosodin community, Benin City, between June to August 2023 to investigate the perceptions of university students concerning community pharmacies in Ekosodin and the services they offer.

2.2 STUDY SETTING AND POPULATION

Ekosodin community is located in Ovia North-East Local Government Area with a projected population size of 45,000 for the year 2022 (National Population Commission, 2006). A large number of University of Benin students resided in the area due to the proximity of the community to the university and the study population consisted of university students who have patronized community pharmacies in the area.

2.3 SAMPLE SIZE

The minimum sample size required for this study was determined using the Taro Yamane formula $n = [N / 1 + N (e^2)]$ based on the projected population size (N = 45,000), desired margin of error (5%) and set confidence interval (95%). The calculated sample size was 396 which was approximated to 400 university students.

2.4 SAMPLING TECHNIQUE

The study utilized a mixed sampling approach, combining stratified and convenience sampling. This method aimed to capture the diverse representation of university students within the

community while also considering practical constraints. Through stratified sampling, the study participants were selected from different strata based on factors such as gender, age, academic year, and field of study. This approach enhanced the study's ability to provide insights into a variety of perspectives within the student population. Additionally, convenience sampling was employed to efficiently gather responses from participants who were readily available and willing to partake in the study, enhancing the feasibility of data collection. The combination of sampling techniques allowed the study to strike a balance between representativeness and practicality.

2.5 SELECTION CRITERIA

The inclusion criteria were:

- Undergraduate university students in Ekosodin
- Actively enrolled during the research period
- Visited a community pharmacy in Ekosodin
- Willing to share perceptions and experiences related to community pharmacies and their services

The exclusion criteria were:

- Non-undergraduate students
- Not enrolled during the research period
- Did not visit a community pharmacy in Ekosodin
- Unwilling to participate or share their experiences regarding community pharmacies and their services.

2.8 DATA COLLECTION INSTRUMENT

A structured self-administered questionnaire served as the primary tool for data collection. It consisted of 44 items grouped into three sections: respondents' socio-demographics, reasons for and frequency of community pharmacy visits and lastly, satisfaction levels and actionable feedback. A 5-point Likert Scale was used in grading the responses for the last section (satisfaction levels and actionable feedback) with a key of 5 = strongly agree/strongly satisfied, 4 = agree/satisfied, 3 = Undecided, 2 = disagree/unsatisfied and 1 = strongly disagree/strongly dissatisfied.

2.9 VALIDITY OF THE INSTRUMENT

The research instrument was submitted to experts in the discipline to ascertain the content validity and its appropriateness for the study objectives. After effecting the necessary corrections following expert consultation, the questionnaire was pretested on 15 potential respondents to check for the instrument's relevance and comprehensibility before its final utilization on the study sample.

2.11 DATA COLLECTION PROCESS

Data for the study was collected by two final-year clinical pharmacy students who resided in Ekosodin. Data collection was done during the weekends and after class hours through the distribution of the questionnaires among the study participants. Students were approached in their hostels, the purpose of the study was explained to them and they were thereafter invited to fill out the questionnaires which came with clear instructions on how it was to be completed. The data collection team asked prospective respondents if they had visited a community pharmacy in

the Ekosodin community and emphasized that the study was based on reporting actual experiences of students with the community pharmacies in Ekosodin. Throughout the data collection process, the research team were on standby to address any inquiries or concerns that participants may have had and to offer assistance with the completion of the survey with the respondents.

2.12 DATA ANALYSIS

At the end of the data collection process, collected data were coded and entered into Microsoft Excel version 2016. The data was filtered for accuracy and subsequently loaded into SPSS version 2021 (Statistical Package for Social Sciences) where it was analyzed for descriptive studies to show the frequency and percentage of obtained responses as well as the mean score and standard deviation for the numerically graded responses like the levels of satisfaction. Inferential analysis using t-tests, ANOVA and chi-square for cross-tabulation of variables and determination of the p-values and statistical significance of discovered patterns between independent variables such as age and gender and dependent variables such as health topics, barriers to communication and expected health services. All statistical tests were two-tailed and the statistical significance level was set at $p < 0.05$.

2.13 ETHICAL CONSIDERATION

Ethical approval was obtained from the Faculty of Pharmacy Ethics and Research Committee, University of Benin and the study strictly adhered to the guidelines and regulations established by this committee. Measures were taken to ensure participants' confidentiality and privacy, and informed consent was obtained from each participant before their participation.

CHAPTER THREE

3.0 RESULTS AND DATA PRESENTATION

Table 3.1 showed that the majority of students were between the ages of 18-25 years (86%), single (98.3%) and full-time undergraduates (99.3%) who had no known chronic or acute illness at the time of study (77.8%). The most common reason and frequency for visiting a community pharmwere were these medicines (86.0%) every few months (61.0%) while choosing to visit a particular pharmacy rested primarily on the location of the pharmacy (34.0%) followed closely by the community pharmacists' knowledge (27.8%) as shown in Table 3.1.1.

The role of the pharmacist in the community pharmacy was seen to be satisfactory with a mean score of 4.10 (maximum =5). The most common tests that study participants expected to see in the community pharmacy practice were blood pressure measurements (mean score of 4.39) and malaria parasite test score of 4.31), they were found to be more willing to pay for malaria parasite tests for any other type of listed test (mean score of 4.10). The frequently agreed topics that study participants were willing to discuss with their community pharmacists were prescription medicines (mean score of 4.50), self-medication medicines (mean score of 4.28) and disease prevention and management (mean score of 4.18). On barriers that hinder communication with the community pharmacist, the most dominant reason was the lack of privacy in the pharmacy (with a mean score of 4.22).

Table 3.1: Sociodemographic Parameters of Respondents (n = 400)

Variables	Frequency	Per cent
Gender		
Male	170	42.5
Female	230	57.5
Level		
100	48	12.0
200	55	13.8
300	128	32.0
400	119	29.8
500	35	8.8
600	15	3.8
Age		
18-21 years	158	39.5
22-25 years	186	46.5
26-29 years	52	13.0
30 years and above	4	1.0

Marital status		
Single	393	98.3
Married	7	1.8
Degree program		
Full-time	397	99.3
Part-time	3	.8
Tribe		
Yoruba	49	12.3
Hausa	5	1.3
Igbo	70	17.5
Others	276	69.0
Religion		
Christianity	385	96.3
Islam	7	1.8
Others	8	2.0
Accommodation		
Off-campus	400	100.0
On campus	0	0
Health status		
Asthma	12	3.0
Malaria	45	11.3
Hypertension	1	.3
Allergies	31	7.8
None	311	77.8

Table 3.1.1: Reason for Visiting the Community Pharmacy and Frequency of Visits

Variables	Frequency	Per cent
Reasons for visiting the community pharmacy		
Purchase medicine	344	86
Prescription refill	4.0	1.0
Purchase toiletries	24	6.0
Get medical advice	21	5.3
Purchase medicines & toiletries,	1	0.3
Others	6	1.5
Total	400	100
Reason for Visiting a Particular Pharmacy		
Location	136	34.0
Medicine Availability	94	23.5
Pharmacist Knowledge	111	27.8

Price	44	11
Medicine availability & pharmacist knowledge	1	0.3
Others	14	3.5
Total	400	100
How Often Do You Visit the Pharmacy?		
Every few months	244	61.0
Once a month	77	19.3
Once a week	9	2.3
More than once a day	4	1.0
Others	66	16.5
Total	400	100

Table 3.1.2: Respondents' Level of Satisfaction with the Pharmacy and Health Screening Services (n = 400)

Variables	Very satisfied Frequency (%)	Satisfied Frequency (%)	Undecided Frequency (%)	Unsatisfied Frequency (%)	Very Unsatisfied Frequency (%)	Mean ± SD
Generally, are you satisfied with;						
The role of the pharmacist	134(33.5)	188(47.0)	67(16.8)	6(1.5)	5(1.3)	4.39±.934
The pharmacy services offered by the pharmacy staff	99(24.8)	168(42.0)	118(29.5)	8(2.0)	7(1.8)	4.21±1.081
Health screening services	70(17.5)	135(33.8)	149(37.3)	27(6.8)	19(4.8)	3.69±1.141

The total number of responses for each variable may vary slightly from the total number of respondents due to non-response. SD = Standard Deviation

Table 3.1.3: Respondents' Assessment of the Expected Health Screening Activities, Paid Health Services, Discussed Health Topics and Barriers to Communication (N=400)

Variables	Strongly Agree Frequency (%)	Agree Frequency (%)	Neutral Frequency (%)	Disagree Frequency (%)	Strongly Disagree Frequency (%)	Mean ± SD
Health Screening Services Expected						
Blood pressure	253(63.3)	70(17.5)	57(14.3)	13(3.3)	5(1.3)	4.39±.934
Blood sugar	229(57.3)	68(17)	74(18.5)	16(4.0)	13 (3.3)	4.21±1.081
Blood cholesterol	135(33.8)	75(18.8)	136(34.0)	40(10)	14(3.5)	3.69±1.141
Body weight and height	216(54.0)	77(19.3)	82(20.5)	15(3.8)	8(2.0)	4.20±1.021
Pregnancy test	190(47.5)	85(21.3)	85(21.3)	21(5.3)	19(4.8)	4.02±1.152
Malaria parasite test	253(63.3)	58(14.5)	67(16.8)	2(0.5)	20(5.0)	4.31±1.086

Health Services that can be Paid For						
Blood pressure measurement	140(35.0)	85(21.3)	92(23.0)	33(8.3)	50(12.5)	3.58±1.365
Pregnancy test	119(29.8)	86(21.5)	125(31.3)	38(9.5)	32(8.0)	3.56±1.231
Information about drugs	93(23.3)	66(16.5)	108(27.0)	63(15.8)	70(17.5)	3.12±1.394
Counseling on how to control certain disease conditions such as Diabetes, Hypertension, asthma etc.	120(30)	82(20.5)	116(29.0)	43(10.8)	39(9.8)	3.50±1.286
Immunization services if available	131(32.8)	98(24.5)	103(25.8)	23(5.8)	45(11.3)	3.62±1.298
Malaria parasite test	184(46.0)	116(29)	72(18.0)	11(2.8)	17(4.3)	4.10±1.061
Topics that can be discussed with the community pharmacist						
Medicines prescribed for you	273(68.3)	74(18.5)	38(9.5)	10(2.5)	5(1.3)	4.50±.861
Medicines you use to treat yourself (self-medication)	226(56.5)	90(22.5)	63(15.8)	13(3.3)	8(2.0)	4.28±.977
Mental health problems	141(35.3)	61(15.3)	101(25.3)	48(12.0)	49(12.3)	3.49±1.391
Sexual health & concerns	150(37.5)	89(22.3)	105(26.3)	32(8.0)	24(6.0)	3.77±1.204
Chronic diseases e.g., Diabetes, Hypertension, arthritis etc.	150(37.5)	89(22.3)	110(27.5)	31(7.8)	20(5.0)	3.80±1.171
Nutrition and weight management	187(46.8)	97(24.3)	71(17.8)	35(8.8)	10(2.5)	4.04±1.105
Disease prevention and management	194(48.5)	109(27.3)	75(18.8)	18(4.5)	4(1.0)	4.18±.956
Smoking cessation	110(27.5)	72(18.0)	128(32.0)	56(14.0)	34(8.5)	3.93±1.063
Exercise and physical activity	149(37.3)	126(31.5)	82(20.5)	33(8.3)	10(2.5)	3.42±1.260
Over-the-counter medication	125(31.3)	90(22.5)	157(39.3)	14(3.5)	14(3.5)	3.75±1.048
Home health care products (blood glucose monitor, blood pressure monitor etc.)	173(43.3)	92(23.0)	108(27.0)	19(4.8)	9(2.3)	4.01±1.037
Result of health screenings (laboratory investigations)	169(42.3)	100(25.0)	104(26.0)	18(4.5)	9(2.3)	4.01±1.033
Barriers preventing health discussions with the community pharmacist						
Lack of privacy in the pharmacy	239(59.8)	67(16.8)	56(14.0)	18(4.5)	9(2.3)	4.22±1.150
Pharmacist does not have enough time to discuss with me	130(32.5)	83(20.8)	112(28.0)	47(11.8)	27(6.8)	3.61±1.1.239
Consultation fee	119(29.8)	71(17.8)	108(27.0)	56(14.0)	44(11.0)	3.41±1.338
Not sure of the pharmacist's knowledge about health matters	120(30.0)	97(24.3)	96(24.0)	45(11.3)	42(10.5)	3.52±1.307
Not being able to identify the	92(23.0)	93(23.3)	110(27.5)	58(14.5)	47(11.8)	3.31±1.294

pharmacist						
Noisy nature of the pharmacy	111(27.8)	91(22.8)	81(20.3)	50(12.5)	67(16.8)	3.32±1.426
Language and cultural barrier	36(9.0)	49(12.3)	95(23.8)	88(22.0)	132(33.0)	2.42±1.301

ANOVA TABLE

		Sum of Squares	df	Mean Square	F	P. Value
Malaria parasite tests and gender	Between (Combined) Groups	15.411	1	15.411	13.496	0.000
	Within Groups	455.349	398	1.144		
	Total	470.790	399			
Willing to pay for blood pressure measurement and gender	Between groups (combined)	10.872	1	10.872	5.907	0.016
	Within groups	732.568	398	1.841		
	Total	743.440	399			
Not being able to identify the pharmacist and gender	Between groups (combined)	6.982	1	6.982	4.204	0.041
	Within groups	660.955	398	1.661		
	Total	667.938	399			
Noisy nature of pharmacy and gender	Between groups (combined)	12.407	398	12.407	6.180	0.013
	Within groups	798.991	399	2.008		
	Total	811.398				

Following inferential analysis using ANOVA (Analysis of Variance), no statistically significant difference in levels of satisfaction was observed between the male and female gender as regards the role of the pharmacist, services offered by pharmacy staff and health screening activities (p-value > 0.05). More females than males significantly expected community pharmacies to carry out malaria parasite tests (mean score = 4.47 -+ 1.02) as shown by the p-value being less than 0.05 (0.00). Females were also found to be more willing to pay for blood pressure measurements than males (p-value = 0.016, less than 0.05) with a mean score of 3.72 +- 1.28. Both genders were willing to discuss various health topics with their community pharmacist (p-value > 0.05). Not being able to identify the pharmacist (p = 0.041) and the noisy nature of the pharmacist (0.013) were the barriers identified by females as the ones that hinder effective communication

in community pharmacies. ChiChi-squares (df = 5 and p-value = 0.012) indicated that females (202) purchase more medications in community pharmacies than males (142).

CHAPTER FOUR

4.0 DISCUSSION

The purpose of this study was to investigate the perceptions of university students towards community pharmacies and their services in the Ekosodin community.

4.1 Reasons for and Frequency of Pharmacy Visits

Table 3.1.1 provides insights into some of the reasons why university students visit community pharmacies and the frequency of those visits. The diverse reasons for visiting pharmacies as shown in the table indicate the potential of community pharmacies to act as hubs for comprehensive health support and services. The data showed the primary reason for visiting the community pharmacy to be the purchase of medicines. This finding opposes a similar study done

on some college students in the United States of America (USA) to understand their behaviour and preferences in community pharmacies (Vathy et al., 2021) where the majority of the students indicated the sole reason for visiting the community pharmacy to be for prescription refills. Medicine purchase generally refers to acquiring medications, usually over-the-counter (OTC) drugs or supplements without the need for a prescription from a healthcare provider such as a physician while prescription refills refer to obtaining prescription medicines previously prescribed by a healthcare provider after an initial supply of medication has run out. The differences in response to this variable may be attributed to the type of healthcare system obtainable in Nigeria where there is limited access to comprehensive healthcare services and a lack of access to health insurance resulting in students having to purchase OTC medications for their minor ailments. The strict regulatory laws concerning medication use in the USA require most medications to be prescribed by a licensed healthcare provider and this may be responsible for the high response of prescription refills as the main reason for visiting the community pharmacy among the students. However, the Ekosodin students' most identified reason for visiting the community pharmacy which is to purchase medications still aligns with the core role of pharmacies to be providers of medications and over-the-counter products (Gastelurrutia et al, 2006). It also indicates that community pharmacies are a preferred source of obtaining medications among university students as shown in the cross-sectional study conducted among university students in Sri Lanka to survey their preferred sources of medication for self and prescriptions (Subashini & Udayanga, 2020) and many other studies conducted globally such as in Saudi Arabia, "Prevalence of self-medication among students of pharmacy and medical colleges of a public sector university in Damma city" (Albusalih et al, 2017) and Asia, "Patterns

of self-medication among medical and nonmedical university students in Jordan" (Alshogram et al, 2018).

Cross tabulation of gender and medication purchase showed that female university students significantly bought more medications compared with male university students and this may be because females visit community pharmacies more frequently than males as shown in a study conducted on the general public to obtain their opinion on the role of the community pharmacist (McElnay et al, 1993) and another population-based survey on the use of community pharmacies (Boardman et al, 2005). Among university female students in Malaysia, it was found that a majority of female students purchased different types of medication such as analgesics, antipyretics, anti-infectives, herbal medicines, nutrients and supplements such as Gingko biloba, Evening prime rose, fish oil etc. and kept in their room for emergency purposes. They gave reasons for acquiring them such as the need for painkillers for menstrual cramps that come each month, vitamins for study etc. (Sohair et al, 2010). Another reason may be due to differences in the health-seeking behaviours between the male and female gender. Health-seeking behaviour describes the activity undertaken by individuals who perceive themselves to be ill or have problems with their health to inappropriate solutions (MacKian, 2003). Some schools of thought have attributed the difference in life expectancy between the male and female gender to be due to this behavioural practice among females (Robeyns, 2017).

In contrast to the frequency of community pharmacy visits cited in studies carried out on the general public in places such as the United Kingdom (Wazaify et al., 2005), Ireland (Cordina et al., 2008) where the majority of the public visited the community pharmacy at least once a month (74.6% and 70.8% respectively), a good number of the university students in this study visited the community pharmacy every few months. This may be explained by the socio-demographics

of students which showed a greater percentage of the students as having no known chronic or acute illness at the time that the study had been conducted, thus signifying a healthy population with intermittent medication needs. This may also suggest the flexibility of community pharmacies in playing a significant role in meeting a range of healthcare needs and serving as valuable resources for students and the community at large.

4.1.2. Reasons for Visiting a Particular Pharmacy

The factors influencing participants' choice of a particular pharmacy for their visits are shown in Table 3.1.1 and the most common reason for choosing a particular pharmacy by study participants was its location. This finding suggests that proximity and convenience play a significant role in determining where students seek their pharmacy services. People tend to opt for pharmacies that are easily accessible and situated within their vicinity. This is in agreement with a study conducted on college students in the United States of America to investigate their behaviours and preferences in community pharmacies (Vathy et al., 2021) where results showed convenience of location to be one of the most influential factors in choosing a community pharmacy while the other influential factor was insurance. This latter factor may not be easily measured among the university students in Ekosodin because Nigeria with its large economy and population only has a health insurance rate of about 3% provided mostly by employers according to a report by Statista in 2018. For this study, convenience of location & pharmacists' knowledge were identified as key factors influencing university students' choice of selecting a community pharmacy. The emphasis on pharmacists' knowledge indicates a desire for credible health information among students. This suggests that community pharmacies with knowledgeable staff members hold greater appeal for individuals seeking reliable healthcare advice and services than the ones that do not.

4.1.3. Levels of Satisfaction towards Pharmacists' Roles and Pharmacy Services

Cleary and McNeil explained satisfaction as "the healthcare recipient's reaction to salient aspects of his or her service experience" (Cleary and McNeil, 1988). Most of the conducted research regarding consumer satisfaction with pharmacist performance is positive and reflects pharmacists as experts on medication issues (Contribution of Community, 2009).

The undergraduate study participants comprising both male and female genders (modal age range of 22-25 years) showed no statistical difference in their levels of satisfaction towards the role played by the community pharmacist, pharmacy services offered by the pharmacy staff and the health screening services. The average mean scores for the satisfaction level of both gender irrespective of age suggests a moderately positive perception of community pharmacies and their services and this result is similar to a study conducted on the general public in Benin City, Nigeria, (Oparah and Iwuagwu, 2001) where the public gave a moderately positive opinion about community pharmacists.

4.1.4. Expected Health Screening Activities and Health Services that can be paid for in the Community Pharmacy

Blood pressure measurements and malaria parasite tests were the health screening activities that University students strongly expected to see in community pharmacies. This may be explained by the increasing prevalence of hypertension worldwide with a good number of older relatives of these university students currently managing high blood pressure through active monitoring and medication adherence. This may contribute to an increased frequency of community pharmacy visits for prescription refills and expert management that can be rendered by the community pharmacists and informing the decision of these students in selecting blood pressure

measurement as a strongly expected health screening activity in the community pharmacies. This finding corresponds with a study conducted to investigate the perceptions of consumers of community pharmacy services in West Bank, Palestine where the majority expected blood pressure measurements as a high-demand service in community pharmacy (Khdour and Hallak, 2012). Malaria itself remains an endemic disease that equally affects the general population (95% are at risk) and is one of the most important public health problems in the world (Sabina, 2017). This supports the willingness of both genders to pay for malaria parasite tests, there was no difference in their levels of agreement regarding payment for malaria parasite tests. Many studies have also shown that these health screening activities offered by community pharmacists can improve patient outcomes (Posey, 2003) and recognize their contribution to delivering primary healthcare services including the management of chronic conditions such as hypertension (Schiden et al., 2019).

Females compared to males significantly expected community pharmacies to carry out malaria parasites and were also strongly willing to pay for blood pressure measurement services within the community pharmacy. The probable explanation for this response may still be attributed to the general health-seeking behaviours which are regarded to be higher in females than males.

4.1.5. Health Topics that can be willingly discussed with the Community Pharmacists

The most frequently occurring topics that university students were quite willing to discuss with the pharmacist were the medications prescribed for them by healthcare providers and the medications used to treat themselves (self-medication drugs). As mentioned earlier, certain factors such as lack of health insurance, and limited access to physicians due to increasing cost of fees may explain the prevalence of self-medication among university students especially in

developing countries. In a cross-sectional study conducted among university students in Sri Lanka, it was found that 78% of them agreed to the practice of self-medication (Subashini & Udayanga, 2020). The willingness of the respondents to discuss medication issues with their pharmacists may reflect their belief in community pharmacists as experts in medication therapy and reliable sources for the provision of drug information. This also means that community pharmacists have a role to play in ensuring responsible drug provision for this particular demographic through proper counselling, patient education and resolution or prevention of actual and potential drug therapy problems respectively.

4.1.6. Barriers that Prevent Discussion of Health Issues with the Community Pharmacist

The most common barrier to communication with the pharmacist was the lack of privacy within the community pharmacy as indicated by the majority of study respondents. Lack of privacy in the community pharmacy has been well documented in several studies which indicate it as the major barrier that hinders consumers of pharmaceutical care services from effectively communicating with their pharmacists in community pharmacy practice settings. This might be due to the lack of a counselling area within the pharmacy where university students with specific health concerns can meet with the community pharmacist and discuss in private. This may also indicate that university students in Ekosodin may choose community pharmacies depending on the availability of facilities that guarantee privacy while discussing health issues with their pharmacists.

A systematic review of feedback (Anderson et al, 2004) from community pharmacy users considered privacy, anonymity and confidentiality as regards community pharmacy premises to mean: Privacy, ability or having the facilities to hold a discussion in private in the pharmacy

without being overheard and at a convenient time for the consumer; anonymity, here consumer can go to the pharmacy for pharmaceutical/ therapeutic advice or services to withhold name or identity; confidentiality, pharmacist already has this sense of duty towards all consumers of service, including refusal to release information obtained during a consultation session to the user's physician without first obtaining the user's direct permission. The review found that 'two-thirds of the respondents would like to talk to the pharmacist in private, while only 5% had found and used such facilities to date' (Aston University, 1991).

Inferential analysis using gender as the independent variable (ANOVA) showed that female university students significantly identified the noisy or busy nature of the pharmacy (Bethany et al., 2019) and not being able to identify the pharmacist as the most common barriers that prevent discussions of health concerns with the community pharmacist. A tendency to be soft-spoken and an increased need for privacy among females may be an explanation for why these variables matter more to females than to males. The finding of lack of privacy as a major communication barrier appears to differ with studies conducted on over 80% of females of the general public in the USA (Dunn et al, 2003) and adolescent females in Canada (Sucato et al, 2001) where they showed satisfaction with the amount of privacy provided in community pharmacies.

4.2 Limitations of the Study

The study relied on convenience sampling to hasten the duration of data collection, thus results obtained may not be a true representation of all the university students living in the Ekosodin community at the time of the study. It may also not be feasible to generalize findings to other university students in other areas because this study was specifically designed and conducted among university students in the Ekosodin community. Cross-sectional study designs take a

snapshot of data at a particular point in time and this can make it difficult to establish causality or understand how measured variables change over time with the interplay of new factors such as policy changes, public health interventions, insurance feasibility etc. Follow-up studies may be needed to further understand the factors that influence the perceptions of university students toward community pharmacies and their services because cross-sectional study designs are usually limited in scope.

CHAPTER FIVE

5.0 CONCLUSION

Based on the conducted study, university students were satisfied with the role of the pharmacist and the health services offered in the community pharmacies in the Ekosodin community. Malaria parasite tests and blood pressure measurements were the common tests expected to be seen in the community pharmacy, however, students were more willing to pay for malaria parasite tests. The most occurring health topics that students identified to be willing to discuss with the community pharmacist were prescription medications and drugs used in self-medication. University students indicated a lack of privacy as one of the major barriers that prevented them from discussing health issues with the pharmacist.

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APPENDIX

QUESTIONNAIRE:

UNIVERSITY STUDENTS' PERCEPTIONS OF COMMUNITY PHARMACIES IN EKOSODIN AND THEIR SERVICES

Section A:

Demographic data (Tick √ appropriately)

1: Please indicate your gender: a) Male [ ] b) Female [ ]

2: Your level: a) 100 [ ] b) 200 [ ] c) 300 [ ] d) 400 [ ] e) 500 [ ] f) 600 [ ]

3: Age: a) 18-21 years [ ] b) 22-25 years[ ] c) 26-29 years [ ] d) 30 years and above [ ]

4: Marital status: a) Single [ ] b) Married [ ] c) Divorce [ ]

5: Degree program: a) Full-time [ ] b) Part-time [ ] c)Others [ ]

6: Your tribe: a) Yoruba [ ] b) Hausa [ ] c) Igbo [ ] d) Others [ ]

7: Religion: (a) Christianity [ ] b) Islam [ ] (c) Others

8: Accommodation: a) On campus [ ] b) Off-campus [ ] c) others [ ]

9: Health status: a) Asthma [ ] b) Malaria [ ] c) Hypertension [ ] d) Allergies [ ] e) Others [ ]

SECTION B

Assess the reason for visiting the community pharmacy and the frequency of visits

1: Reason for visiting the community pharmacy:

a: Purchase medicine [ ]

b: Prescription refill [ ]

c: Purchase toiletries [ ]

d: Get medical advice [ ]

e: Others: [ ]

2: Reason for visiting a particular pharmacy:

a: Location [ ]

b: Availability of Medicine [ ]

c: Pharmacist Knowledge [ ]

d: Price [ ]

e: Others: [ ]

3: How often do you visit the Pharmacy

a: Every few months [ ]

b: Once a month [ ]

c: Once a week [ ]

d: More than once a day [ ]

e: Others: [ ]

SECTION C

Instruction: Please indicate your answer by ticking in the appropriate space or gap provided

Key: Strongly agree = 5; agree = 4; neutral = 3; disagree = 2; strongly disagree = 1

Assessing patients' level of satisfaction and actionable feedback on how community pharmacies in Ekosodin can better meet the needs of their clients

S/N	ITEMS	5	4	3	2	1

	Generally, are you satisfied are you with					
1	The role of the pharmacist					
2	The pharmacy services offered by the pharmacy staff					
3	Health screening services					
	Which of the following tests would you expect in the community pharmacy					
4	Blood pressure					
5	Blood sugar					
6	Blood cholesterol					
7	Body weight and height					
8	Pregnancy test					
9	Malaria parasite test					
	Which of the following services will you be willing to pay for in a pharmacy					
10	Blood pressure measurement					
11	Pregnancy test					
12	Information about drugs					
13	Counseling on how to control certain disease conditions such as Diabetes, Hypertension, asthma etc.					
14	Immunization services if available					
15	Malaria parasite test					
	Which of the following are you willing to discuss with your community pharmacist					
16	Medicines prescribed for you					
17	Medicines you use to treat yourself (self-medication)					
18	Mental health problems					
19	Sexual health & concerns					
20	Chronic diseases e.g., Diabetes, Hypertension, arthritis etc.					
21	Nutrition and weight management					
22	Disease prevention and management					
23	Exercise and physical activity					
24	Smoking cessation					
25	Over-the-counter medication					
26	Home health care products (blood glucose monitor, blood					

	pressure monitor etc.)					
27	Result of health screenings (Laboratory investigations)					
	What barriers prevent you from discussing health issues with the community pharmacist					
28	Lack of privacy in the pharmacy					
29	Pharmacist does not have enough time to discuss with me					
30	Consultation fee					
31	Not sure of the pharmacist's knowledge about health matters					
32	Not being able to identify the pharmacist					
33	Noisy nature of the pharmacy					
34	Language and cultural barrier					