Perception of Patient Safety Culture among Healthcare Professionals and Patient Satisfaction in Ibadan South-West Region, Oyo State. Nigeria.

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Certification

This is to certify that Abel Nnamdi Chukwuemeka with matriculation number LCU/PG/001229 carried out this research work titled "Perception of Patient Safety Culture among Healthcare Professionals and Patient Satisfaction in Ibadan South-west Region, Oyo State, Nigeria." in the Department of Public Health, Faculty of Basic Medical and Applied Sciences, Lead City University, Ibadan, Oyo State, for the Award of Master's Degree (MPH) in Public Health and that this has not been previously submitted.

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Dedication

This research work is dedicated to my wife Matilda Adedoyin Chukwuemeka Esq., who has supported me through this academic journey.

Acknowledgement

It is my pleasure to acknowledge and thank the entire management of Lead City University for giving me the opportunity and approval to conduct this research, the Ministry of Health, Ibadan, Oyo State for their swift response in granting the ethical approval, and all the healthcare professionals, patients and other staff of the primary and secondary hospitals where data was gathered for this research.

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"Even though the above-mentioned institutions and persons have assisted in the process of this research work, I alone stand responsible for the errors, if any, found in the work".

Abstract

Globally, patient safety culture and patient satisfaction are considered vital components to improve care, reduce adverse events, and understand patients' needs in order to deliver quality healthcare/medical services. However, these are still emerging concepts in Nigeria and other developing countries. The main objectives of this study were to assess patient safety culture among healthcare professionals, and patient satisfaction among patients in primary and secondary healthcare facilities in Ibadan South-west local government area of Oyo State, Nigeria. In this cross-sectional study, investigators collected data with the English versions of the Hospital Survey on Patient Safety Culture (HSOPSC) version 2.0 questionnaires and the Short-form Patient Satisfaction Questionnaire (PSQ-18). Investigators analyzed data using the Statistical Package for the Social Sciences (SPSS) software with descriptive statistics, Pearson Correlation Analysis, and One-way analysis of variance (ANOVA). A total of 271 healthcare professionals and 387 patients participated in the study. Study findings showed the overall perception of Patient Safety Culture to be 72.1% which was slightly above the 2021 SOPS hospital 2.0 database report. Among patient safety dimensions, Teamwork (88.5%) and Reporting Patient Safety Events (47.4%) were the highest and lowest percentage of positive responses (PPR) respectively. Overall satisfaction among patients was 67.9%, where Communication (84.5%) and Financial Aspect (54.9%) were the highest and lowest percentage of positive responses respectively. Furthermore, findings showed no significant correlation between patient safety culture and patient satisfaction. Patient safety culture and patient satisfaction are emerging concepts in Nigeria. The assessed dimensions showed the need to improve safety culture among healthcare professionals and provide quality healthcare service that meets the expectations of patients. Therefore, stakeholders, policymakers, and managers should not ignore the significance of patient safety culture and patient satisfaction regarding healthcare service delivery. They should employ policies, strategies, and programs that improves safety culture across all healthcare institutions.

Keywords: Patient Safety, Patient Safety Culture, Patient Satisfaction, Percentage of Positive Responses (PPR), Healthcare Institution, Healthcare Professional, Hospital Survey on Patient Safety Culture (HSOPSC), Short-form Patient Satisfaction Questionnaire (PSQ-18), Ibadan South-west Local Government Area (LGA).

Word Count : 296

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List of Acronyms

Abbreviation		Meaning
AHRQ	-	Agency for Healthcare Research and Quality
HCP	-	Healthcare Professionals
HIV/AIDS	-	Human Immunodeficiency Virus/ Acquired Immune Deficiency Syndrome
HSOPSC	-	Hospital Survey on Patient Safety Culture
IOM	-	Institute of Medicine
LGA	-	Local Government Area
PPR	-	Percentage of Positive Responses
PSC	-	Patient Safety Culture
PSCI	-	Patient Safety Culture Indicator
SAQ	-	Safety Attitude Questionnaire
U.S.A	-	United States of America
WHA	-	World Health Assembly
WHO	-	World Health Organization
WPSD	-	World Patient Safety Day
PSQ	-	Patient Satisfaction Questionnaire

Chapter One

Introduction

1.1 Background to the Study

Hospitals and other health care facilities are considered places where people seek the utmost medical services to diagnose, alleviate or cure their respective medical conditions. This means that whenever patients enter health facilities to receive medical care, they need and expect to get precise and professional forms of medical care to improve their medical conditions, and reduce additional need for medical services [1]. Sadly, this has not been the case for a vast majority. Over the years, more harm has befallen patients while receiving care in several health care facilities globally. These catastrophes are known as medical errors, harmful medical practices, and adverse events. The pain of adverse events during patient care has plagued many health care facilities since 1900, causing millions of injuries and deaths recorded worldwide [2].

Nations and policymakers paid more attention to patient safety after the Institute of Medicine (IOM) treaty in 1999 titled “To Err is Human” reported about 98,000 deaths per year from preventable medical errors US hospitals[3]. This discovery drew the attention of the various health sectors in countries to the dangers, unknown debacle regarding patient safety, and its need to be closely monitored across all health care settings. In recent studies, adverse events occur in 4 out of 10 patients in both primary and outpatient and 1 in 10 hospitalizations resulting from such situations[4]. “Quality of care” in health care is a wide concept that resists easy definition since it depends on the diverse viewpoints and interests of different stakeholders as well as different aspects of health care facilities. It is sometimes conflated with the idea of patient safety. As a result, the term "quality of care" has been described in relation to a number of factors, including

reliability, efficacy, effectiveness, empathy, safety, and affordability[5].

Patient safety plays an immense role in diminishing patient harm in health care institutions and is required to deliver quality health care services. Without a high degree of patient safety, patients are prone to harm during care. WHO explains patient safety to be the nonexistence of avoidable harm in the course of health care and the mitigation of perils related to health care to a tolerable minimum. Acceptable minimum means, common opinions derived from existing information, accessible resources, and how health care is given compared to the danger of non-treatment and other treatment[6]. Patient safety culture or environment is a broad, multifaceted notion that includes both organizational and individual behavior, beliefs, perceptions, and values. By minimizing risk, raising quality of service, boosting performance, and enhancing efficiency, health care institutions may protect the safety of their patients, staff, and visitors[7].

Recently, WHO, policymakers, and health care professionals globally acknowledged patient safety as a vital component in delivering quality health care. These led to the continual implementation of policies and measures to address the menace of patient harm caused by harmful medical practices and errors in health care[8]. The World Health Assembly initiated the World Patient Safety Day (WPSD) in 2019 to increase global knowledge about patient safety and work with stakeholders to mitigate patient harm in numerous medical facilities globally[9]. This initiative currently aims to address poor work environments in health care facilities, which will enable health care professionals to deliver safe and quality care to patients.

To reduce patient harm in hospitals and other health care facilities, a culture of safety among health care professionals should be strong[10]. A safety culture among health care professionals signifies the norms, attitudes, perceptions, and conclusions on actions in medical care[11]. It also

outlines how to deal with actions, inactions and errors in medical care. health care policymakers and managers revamp patient safety culture (PSC) by assessing its components to identify weaknesses and areas that need improvements. A significant portion of the effort to enhance patient safety has focused on individualized adjustments to particular areas of care. These improvement initiatives focus on parts of care that health care professionals fear could be harmful to patients. These initiatives frequently lead to increased safety for the care procedures on which they are concentrated. Applying a more fundamental strategy to safety, such as encouraging a culture of safety, is another strategy for enhancing patient safety. The safety of many areas of care may be impacted in this way by significant systemic changes. High Reliability Organizations (HROs) is one model for this kind of work. In fields like nuclear power and aviation, high dependability companies are typical. Aiming to become HROs may be a goal for health care institutions with a sustained dedication to patient safety[12].

In order to ensure wise use of public resources, cost savings and efficiency are becoming more and more important in hospital management today. Furthermore, the society expect health services to be secure and trustworthy[13]. Morbidity and mortality meetings have been organized in a variety of settings by many hospitals nowadays. These discussions, as the name implies, usually focus on the more serious situations that lead to patient harm or mortality. The meeting environment and debate mood are critical, and there is an inherent risk that the sessions may be seen as compromising for the doctors engaged in the incident, according to specialized literature regarding these types of meetings. Such perceptions can motivate efforts to conceal upcoming events[14].

In addition, patient satisfaction and perception of care received are also vital towards quality health care delivery. The inception of patient-focus health care revamps made the perception of

patients integral to quality health care assessment[15].

Studies describe patients' satisfaction as the level at which expectations of patients are satisfied regarding care received by health care professionals (HCPs)[16]. It means that patients have a predetermined notion and expectation of health care delivery. Various factors such as doctor-patient interaction, quality of medical care, transparency and communication between health care professionals and the patient, cost and financial aspect of care, access to physicians, and other HCPs influence patient satisfaction regarding health care services[17]. PSC and patient satisfaction assessments estimate the number of medical errors or adverse events, identify patient needs, identify factors that may or may not contribute to the occurrences of adverse events, and identify areas where these professionals see patient safety as the strongest and weakest in their respective health care facilities[18,19].

The evaluation of PSC and patient satisfaction is usually carried out through descriptive cross-sectional studies to assess perceptions of HCPs and patients in health care facilities. Validated data collection tools commonly used to assess PSC in health care professionals are the Hospital Survey on Patient Safety Culture (HSOPSC) questionnaire, and the Safety Attitude Questionnaire (SAQ)[20]. The HSOPSC tool was developed by the Agency for health care Research and Quality (AHRQ) in 2004 and updated in 2019 to assess PSC in hospitals[21]. The tool was validated, pilot-tested, and translated into different languages[22]. It was adapted in over 20 countries to measure the dimensions of PSC in various hospitals[23,24,25]. It assesses PSC within the clinical units and across units in hospitals. Furthermore, the HSOPSC questionnaire focuses on assessing HCPs' perception of the dimensions of PSC. These dimensions include; Teamwork (within and across hospital units), Feedback and Communication about the error, Communication Openness, Non-Punitive Response to Error, Staffing and Work-Pace,

Organizational Learning - Continuous improvement in organizational learning, supervisor/manager/clinical lead support for patient safety, leadership support for patient safety, reporting of patient safety events[26].

Studies assess patients' satisfaction and perception with the Hospital Consumer Assessment of health care Providers and Systems (HCAHPS) survey tool developed by AHRQ,[27] Patient Safety Questionnaire (PSQ) survey tool developed by Hays,[28] and other self-administered questionnaires.

The results of patient safety and patient satisfaction surveys are justified if they can prove that the majority of HCPs and patients in the study sites participated in the study. It means a high response rate, calculated by the proportion of actual participants to invited participants. More also, the minimum response rate acceptable to validate the result of patient safety surveys is a 60% response rate[29]. Therefore, it is significant to inform participants about the study to encourage participation.

Conclusively, many countries record medical errors, adverse events, and harmful health care practices in health care facilities. These events, do not only cause physical harm, but psychological harm that causes lack of trust, lack of belief in health care system and low motivation among staff. Therefore, making them barriers that prevent the delivery of quality health care service[30]. Adverse events, medical errors and other harmful health care practices have resulted in millions of injuries and deaths in health care settings, therefore mandating the urgent need to curb them. However, with initiatives such as the Global Action on Patient Safety by the WHO, policymakers, and health care professionals, promoting and ensuring safety during patient care has become a global priority to achieve the continual delivery of quality health care

services[31]. To meet these goals, health care managers must disseminate knowledge about patient safety. Furthermore, assess patient safety in health care facilities and patients' satisfaction to identify the incidence rate of adverse events and patient harm, strength, and weakness of patient safety culture in various health care settings globally.

1.2 Statement of the Problem

Medical errors, adverse events, and harmful medical practices occur to 1 in 300 patients globally and account for more deaths than automobile accidents, breast cancer, and HIV/AIDS[32]. Although studies to assess PSC are conducted continually in various health care settings in different countries, the lack of knowledge and data on the incidence rate of these occurrences remains vastly unknown on a global scale. Studies attributed it to a few factors such as fear of blame and punishment, which reduces error reporting whenever medical errors occur, and the low number of studies conducted, especially in middle-income and low-income countries[33].

The onus of patient harm is a huge one to bear. In 2016, the U.S accounted for more than $146 billion in patient harm expenditures[34]. It was alarming, considering a majority of those events were avoidable. Other health care systems around the globe also accounted for billions of dollars in expenses and costs like loss of trust and efficiency of the health care systems[35]. It showed the global need for rectifications to patient safety. Although, some studies have assessed patient safety and patient satisfaction in the various health care settings in Nigeria, they do not provide sufficient data on the rate of adverse events, level of satisfaction among patients, and patient safety culture degree among health care professionals in the country[36]. There is need to conduct more studies to incidence and expenses of patient harm and the level of patient satisfaction regarding health care service delivery in Nigeria. These studies will help resolve the lacuna in

knowledge to be bridged and unanswered questions like the level of patient safety culture among health care professionals in Nigeria, the incidence rate of adverse events in Nigeria, error reporting systems made available in health care institutions in Nigeria, factors affecting patient safety in Nigeria, programs put in place to curb patient harm in health care institutions in Nigeria, and level of satisfaction among patients receiving care in Nigeria[37]. Researchers should conduct studies to ascertain areas that need improvement to provide a safe environment for both patients and health care professionals alike.

The city of Ibadan in Oyo state ranks as the third city with the most population in Nigeria. It comprises eleven (11) Local Government Areas (LGA's) with an estimated population of three million, five hundred and sixty-five thousand, one hundred and eight (3,565,108) people in the year 2021[38]. It consists of 345 PHCs, twenty-five (25) secondary public hospitals, two hundred and fifty-five (255) private hospitals, and two (2) Tertiary hospitals distributed across the city to enable the delivery of quality care[39]. This, however, gives rise to a need to ensure that all health care institutions in the city ensure that patients do not experience harm of any form while receiving care. However, no estimated cost of harm has been accounted for in Oyo state, particularly in Ibadan.

There aren't enough studies to adequately determine the degree of culture of safety, the level satisfaction of patients, and incidence of adverse events among HCPs and patients in Ibadan south west LGA of Oyo State. However, this raises the question of the severity of the harm suffered by patients in the city's health facilities, factors contributing to patient harm in health care institutions, and safety of work environments for HCPs and patients' opinions about the level of care in the city.

1.3 Justification of the Study

The incidence of patient harm during care is widely under-reported in Nigeria[40]. Therefore, it has exposed a lack of evidence-based information on patient harm, unethical medical practices, and adverse events. Investigators conducted this study to fill the void of knowledge about the current level of PSC in primary and secondary health care facilities in Ibadan South-west LGA. Furthermore, the results of this study will assist stakeholders, policymakers, and health managers in Ibadan, Oyo State address key areas of development to improve work environments for HCPs and patient care.

The study will benefit HCPs regarding error reporting by encouraging a blame-free environment and encouraging support from health managers and other support systems. A flawless environment is encouraged for patient safety as required by the AHRQ. In this context, investigators perceived errors as a fount for improvement rather than an opportunity for blame[41]

Furthermore, it will benefit to provide patients information regarding their satisfaction, perception, and attitudes towards care received at the various study sites. Results will be properly disseminated to respective HCPs, managers, and policymakers to implement changes and improvements to meet their expectations.

Study findings should be a baseline status of PSC among HCPs and patients' satisfaction levels in primary and secondary health care facilities in Ibadan South-west LGA[42]. The state government, policymakers, and health managers can initiate a plan of action and interventions to improve PSC in hospitals. HCPs will benefit from this study by disseminating the results of their perception, opinions, and attitudes to policymakers, health managers, and stakeholders to effect change and improvement toward safe work environments[43]. This study posed no risk of harm or

danger to its participants. All protocols, designs, methodology, and data collection tools used in this study are valid and scientifically proficient to execute this study[44].

1.4 Aim and Objectives of the Study

This study assessed the level of patient safety culture in primary and secondary health care facilities in Ibadan South-west LGA, Oyo State, Nigeria. Furthermore, it compared the results of this study with the 2021 AHRQ benchmark data.

This study assessed patients' satisfaction with health care services in primary and secondary health care facilities in Ibadan South-west LGA, Oyo State, Nigeria.

The objectives of this study are to:

I. determine the relationships between HCPs' perception of patient safety dimensions and outcomes of patient safety in each study site
II. identify the factors related to overall PSC perception by study participants
BI. identify the factors related to the overall perception of patient satisfaction across study sites IV. identify interventions needed to improve patient safety across study sites
V. identify the correlation and relationship between PSC among HCPs and patient satisfaction among patients in Ibadan, Oyo State, Nigeria

These objectives are aimed at contributing to the body of work regarding patient safety and patient satisfaction.

1.5 Research Questions

1. What is the baseline status of PSC among HCPs in primary and secondary health care facilities in Ibadan South-west LGA, Oyo State, Nigeria?

2. What is the level of satisfaction among patients regarding care received in primary and secondary health care facilities in Ibadan South-west LGA, Oyo State, Nigeria?
3. What factors influence PSC among HCPs in primary and secondary health care facilities in Ibadan South-west LGA, Oyo State, Nigeria?
4. Are there differences in perception of PSC among HCPs, and patient satisfaction among patients in primary and secondary health care facilities in Ibadan South-west LGA, Oyo State, Nigeria?
5. Are there any correlations between PSC results among HCPs and patient satisfaction results among patients?

1.6 Hypotheses

This study was conducted based on the following hypotheses:

H_o1 There will be no significant relationship between patient safety dimensions and patient safety outcome in primary and secondary health care facilities in Ibadan South-west LGA.

H_o2 There will be no significant relationship between demographic characteristics and patient safety outcomes in primary and secondary health care facilities in Ibadan South-west LGA.

H_o3 There will be no significant difference in PSC perception among HCPs in primary, public secondary and private secondary health care facilities in Ibadan South-west LGA.

H_o4 There will be no significant correlation between PSC results among HCPs and patient satisfaction results among patients in Ibadan South-west LGA.

H_o5 There will be no significant difference in patient satisfaction results among patients in primary, public secondary, and private secondary health care facilities in Ibadan South-west LGA.

1.7 Significance of the Study

Investigators conducted this study in Ibadan, Oyo State, Nigeria; to bridge the gap in the unavailability of sufficient studies, baseline status of PSC among HCPs, and level of satisfaction among patients to identify and assess the culture of safety in the numerous health care institutions within the city.

Studies showed that several factors hinder the improvement of patient safety. Factors such as poor workforce, inadequate infection control methods, deplorable infrastructure, fake medicines, poor health care delivery systems, policies and their implementation, unavailability of funds, poor support mechanisms, and unsafe surgical practices (because only a few African countries use the Safe Surgery checklist recommended by WHO) and lack of collaboration with patients and communities to improve patient care. These factors, when properly implemented, do not stop the occurrences of patient harm. Therefore, constant evaluation of PSC is needed among HCPs and satisfaction among patients to generate data and information to continually improve the culture of patient safety in health care institutions in Ibadan.

Another reason for carrying out this study was to help bridge the gaps in knowledge by providing evidence-based data on the incidence rate of patient harm and the level of patients' satisfaction with care in the selected study sites. It will assist policymakers and managers in implementing strategic plans to prevent adverse events and improve health care delivery and patient safety in correlation with WHO's mandate to promote safe working conditions for HCPs and reduce

patient harm to a tolerable minimum. Furthermore, this will help generate awareness about the safety culture among HCPs, policymakers, and stakeholders in Ibadan, Oyo State, Nigeria.

1.8 Scope of the Study

While PSC is becoming a trend in developed countries, developing nations such as Nigeria are yet to fully incorporate PSC into their health care settings. This study assessed PSC among health care practitioners and patient satisfaction in Ibadan South-west LGA, to identify the level of PSC, number of adverse events and the various aspects of health care that has left patients unsatisfied.

This study focused on English speaking participants that comprised of 271 health care practitioners who were on duty on weekdays from 9 a.m to 1 p.m, and 386 outpatients who were at the hospital at the same period of time.

1.9 Limitations of the Study

Investigators excluded health care practitioners who worked evening and night shifts which might have affected the results on PSC among health care practitioners.

Investigators did not include in-patients as participants in patient satisfaction survey. This was due to their presumed inability to participate in the study while being admitted in the hospital.

Investigators excluded patients that were not literate in the English language from the study. It was due to the lack of translated versions of the survey tools to a dialect. Investigators could not transcribe the survey tools because:

1. Ibadan is a Yoruba city, where the Yoruba language predominates, patients who attended the selected hospitals were all be assumed to be literate in the Yoruba language, as patients may

have been from any of the numerous ethnic groups in Nigeria.

2. Translated versions of the survey instruments required validation (Linguistic Validation and Cultural Validation). Therefore needed more time which was a limited resource in this study.

1.10 Operational Definition of Terms

Hospital: The term 'hospital' refers to any establishment managed for the reception, care, and treatment of persons who require medical, surgical, or dental attention and is not operated for profit[45]. A hospital can be defined as " a residential institution providing short and long-term medical care consisting of observational, diagnostic, therapeutic and rehabilitative services for those suffering or suspected to be suffering from a disease or injury and for childbirth. It may or may not also provide services for outpatients on an out-patient basis"[46].

Health: Health is defined as "the extent to which an individual or group is able to realize aspirations and satisfy needs, and to change or cope with the environment. Health is a resource for everyday life, not the objective of living; it is a positive concept, emphasizing social and personal resources, as well as physical abilities"[47].

Health care Professionals: health care professionals maintain the health of human beings by applying the principles and procedures of evidence-based medicine and care. health care professionals study, diagnose, treat and prevent human illness, injury and other physical and mental disabilities based on the needs of the populations they serve. They advise or apply preventive and curative measures and promote health with the ultimate goal to meet the health needs and expectations of individuals and populations and improve population health outcomes. They also conduct research and improve or develop concepts, theories and operational methods to advance evidence-based health care. Their duties may include supervising other health care

professionals[48].

Primary health care: Primary health care is the essential care based on practical, scientifically sound and socially acceptable method and technology made universally accessible to individuals and families in the community through their full participation and at a cost they and the country can afford to maintain in the spirit of self-reliance and self-determination. It reflects and evolves from the economic conditions and the socio-cultural and political characteristics of the country and its communities. It addresses the main health problems in the community providing preventive, curative and rehabilitative services. It includes education concerning prevailing health problems and the methods of preventing and controlling them. Apart from the health sector, it involves all sectors and related aspects of national and community development, e.g. agriculture, education, housing, etc[49].

Secondary health care: Secondary health care means health care, other than Primary health care, including admission to hospital, acute care, and mental health support and specialist (e.g. cancer, coronary or psychiatric treatment)[50].

Patient Safety: Patient safety is defined by the IOM as "the prevention of harm to patients"[51]. Patient safety is a health care discipline that has emerged with the evolution of complexity in health systems and the consequent increase in harm suffered by patients in health care facilities. It aims to prevent and reduce the risks, errors and harm suffered by patients during the delivery of health care. A cornerstone of the discipline is continuous improvement based on learning from mistakes and adverse events. Patient safety is central to providing quality essential health services. Indeed, there is a clear consensus that quality health services around the world should be effective, safe and people-centered. Moreover, to reap the benefits of quality health care,

health services must be timely, equitable, integrated and effective. To ensure successful implementation of patient safety strategies, clear policies, leadership capacity, data to drive safety improvements, skilled health care professionals and effective involvement of patients in their care, are all needed[52].

Patient Satisfaction: Patient satisfaction is an important and commonly used indicator for measuring the quality in health care. Patient satisfaction affects clinical outcomes, patient retention, and medical malpractice claims. It affects the timely, efficient, and patient-centered delivery of quality health care. Patient satisfaction is thus a proxy but a very effective indicator to measure the success of doctors and hospitals[53].

Endnotes

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Chapter Two

Literature Review

2.1 Conceptual Review:

Concept of Organizational Culture: A Paradigm for Understanding Patient Safety Culture

In several countries, a body of evidence highlighting the lack of quality in health care has developed since the early 1990s. It has catapulted the issue of health security to the top of the political agenda and into the spotlight of public debate around the world[1]. Studies reveal that not only does quality fail, but it also causes damage and wastes resources on a large scale[2]. Experts in risk management, both inside and outside the healthcare profession, place a greater emphasis on system failures and system-induced errors versus direct human error and highlight the importance of organizational culture in ensuring safety. The link between organizational culture and safety reveals that organizational interactions impact both culture and safety, and that good two-way communication is critical to the establishment of a corporate "safety culture"[3].

Adverse incidents in health care are not a new phenomenon. The law allowed for heavy consequences for ill health effects as long back as Babylon, approximately 4,000 years ago, under the time of Hammurabi, King of Babylonia. The loss of a physician's hand or fingers would occur from the death of a citizen of the country at the hands of a physician[4]. The Institute of Medicine (IOM) projected that "medical errors" end up causing around 44,000 and 98,000 annual deaths in hospitals in the United States of America, almost as much as the cumulative number of fatalities and injuries from motor and air crashes, suicides, falls, poisonings, and drownings in the United State, and that the number could be even higher as the underestimation of medical adverse events is estimated to be between 50% and 96% per year[5]. In its 2000 study,

An organization with a memory, the United Kingdom Department of Health reported that adverse events occurred in around 10 per cent of hospital admissions, corresponding to about 850 000 adverse occurrences each year[6]. The Quality in Australian Health Care Study (QAHCS), published in 1995, discovered a 16.6 per cent adverse event rate among hospital patients, which extrapolates to nearly 38 unintentional victims every day, more than the number of deaths on roads, industries and falls combined[7]. According to the study of Adverse Events in New Zealand Public hospitals, one in every eight admissions 12.9 per cent was connected with an adverse event in 1998[8]. The review of quality studies from the United States found that for much of the care that has been investigated, there are huge gaps between the care that individuals should receive. This applies to all three forms of care: acute, chronic, and preventive. Whether one considers it as excess or under use, this is true. It holds for various sorts of health care institutions as well as various forms of health insurance. It applies to people of all ages, from children to the elderly and this is true whether one is looking at the country as a whole or just one city[9].

Such investigations reveal not only that quality is compromised, but also that harm is caused and money is squandered on a wide scale. Additional hospital admissions in the United Kingdom cost almost £2 billion per year, while hospital-acquired illnesses cost nearly £1 billion per year, with 15 per cent of them potentially preventable[10]. As at year 2000 entire yearly cost of preventable adverse medical events in the United States of America is estimated to be between US$ 17 billion and US$ 29 billion, including lost income, disability, and medical bills. However a recent forecast showed that negative patient safety incidents like healthcare associated infections (HAIs), sepsis, medication safety, pressure ulcers, diagnostic mistakes, antibiotic resistance, and hand hygiene non-compliance will be responsible for an estimated $383.7 billion

in healthcare costs over the next four years in the United States and Western Europe[11]. In Australia, preventable adverse occurrences are expected to cost in the region of AUS$1.2 billion yearly, excluding expenses such as litigation and cost productivity, the cost equivalent to all other types of injury in Australia combined[12]. The erosion of trust, confidence, and contentment among healthcare customers is also significant.

The concept of organizational culture was thought of as a model of basic assumptions created, found and raised by a group as it strives to adapt to external problems and internal integration that has worked well enough to be considered valid which therefore taught new members the way to perceive, think, and feel about such problems[13]. Organizations are mini-communities that share collective ideas and perceptions about choices and other behavioral attributes[14]. Organization structure is referred to as the common system of activities, values, and beliefs that develops in an organization and directs the conduct of its members[15]. Over the years, researchers proposed definitions to describe organizational culture. For example, some researchers defined organizational culture or corporate culture as “the shared philosophies, ideologies, values, assumptions, beliefs, expectations, attitudes and norms” that bind an organization to the outside world and to future expectations[16]. Other researchers defined it as “the human invention that creates solidarity and meaning and inspires commitment and solidarity[17]. An organization's vision, values, standards, leadership styles, interpersonal behaviours, and behavioral expectations and conventions are all examples of organizational culture. The way an organization's power, responsibility, rewards and incentives, and information systems are established will drive most people's behaviours and have a direct impact on the culture. As a result, it is considered that organizational culture contributes to organizational performance by socializing personnel in a way that improves commitment to the entity's goals, notably safety. Although scholars reached

no consensus about the best definition for organizational culture, one can summarize these definitions as "the accepted form of behavioral attitude, practice, norm and values in an organization"[18].

Every organization, including healthcare organizations, has distinctive qualities and approaches to achieve its respective goals. Healthcare organizations provide services to prevent diseases, promote quality health, and prolong life. Healthcare organizational culture is a comparison of some of the less obvious features of healthcare organizations and how they emerge in care patterns. The study of organizational practices is similar to how social anthropologists study indigenous peoples where both aim to understand the dynamics of unpopular "cultures". Through the reapplication of cultural ideas to organizations, the beliefs that culture can be verified to correct past shortcomings and achieve desirable future outcomes are often sneaked in. Although this opinion requires some critical examination, one that examines a more complex picture of healthcare organizational culture[19].

Organizational culture consists of three levels in healthcare system[20]. These are visible manifestations (include recognized division of duties among healthcare facilities; healthcare workers also dress codes, the layout of healthcare facilities, and reward systems). Shared ways of thinking (includes the principles and beliefs used to affirm and preserve visible manifestations above their corresponding practices). Deeper shared assumptions (unconscious everyday behaviour, and perception towards roles and authority of healthcare professionals[21].

a. Visible Manifestations: The distribution of services and roles between service organizations such as the long-established divide between secondary and primary care and health and social care, the physical layouts of facilities such as receptionists behind

desks and doctors in consulting rooms, the established pathways through care including the ubiquitous outpatient's appointment, and the demarcation between staff groups in activities that are performed, dress code, reward systems are all visible representations of healthcare culture.

b. Shared Ways of Thinking: Shared ways of thinking in healthcare organizational culture contain the values and ideas that are utilized to explain and perpetuate the above-mentioned apparent manifestations and behaviours, as well as the justifications for doing things differently. This might include common perceptions of patient needs, autonomy, and dignity, as well as notions about what constitutes evidence for action and expectations for protection, reliability, clinical outcomes, and quality improvements.
c. Deeper Shared Assumptions: The (mostly unconscious and unexamined) basis of day-to-day activity is deeper shared assumptions. These include notions about proper professional duties and delineations, expectations about patients' and carers' knowledge and dispositions, and assumptions about healthcare professionals' relative authority in the health system, both collectively and individually.

In essence, it is important to note that these three levels are connected, however, not in a direct way. Some of the more fundamental principles and assumptions are instilled in early professional education, reinforced by continued professional contact, and subsequently made evident as accepted practice. Other cultural expressions are externally formed or controlled, for example, by the macro policy environment (for example, service configurations or incentive systems), yet they can impact common ways of thinking and even deeper assumptions over time (about who or what is valued, for example). National, ethnic, and religious cultures may be key shapers of the cultural components of care as healthcare becomes increasingly global, with the regular

movement of care professionals across national boundaries. Thus, organizational culture encompasses how things are organized and completed, as well as how they are discussed and justified, that is, the explanations and narratives about what is done and why, as well as the assumptions that support them. These patterns of care, safety, and risk, when taken together, can reflect a common and well-understood vision of hospital life exhibited in patterns of care, safety, and risk. Even though we place more emphasis on the hospital environment here, these arrangements and narratives are found (albeit in different forms) across all healthcare organizations from general practices to community trusts[22].

Healthcare organizations are famously diverse, with specialties, occupational groups, professional hierarchies, and service lines all contributing to the complexity. Some cultural characteristics may be universal and durable, whereas others may be shared only among subgroups or held on a shaky basis. As professional groupings, important subcultures are most clearly defined, and fault lines are most visible as these groups struggle for resources and position[23]. Over time, new subcultures may arise. Some professional groups, such as special teams or centres of excellence, may excel at expressing and executing desired beliefs and behaviours that are beneficial to organizational goals. Other subgroups may actively attempt to oppose improvements supported by external sources, which is arguably less beneficial and often construed as countercultures[24].

2.1.1 Patient Safety Culture:

Universally, the term “safety culture” does not have any established definition, however, there has been a repeating trend in the literature that organizations with successful safety cultures share a consistent commitment to safety as a top priority and that this commitment is throughout the

whole organization as explained by the International Nuclear Safety Advisory Group[25]. The acknowledgement of the high-risk, error-prone nature of an organization's activities; a blame-free environment in which individuals can report errors or close calls without fear of retaliation; the expectation of collaboration across ranks to find solutions to vulnerability; and the organization's willingness to allocate resources to address security issues[26]. It has also been noticed that some common cultural characteristics in reliability-enhancing companies are accorded with the foregoing beliefs, based on extensive research in different firms: interpersonal responsibility, personal centeredness, helpful and supportive coworkers, pleasant, open and sensitive interpersonal relationships, high sentiments of credibility and interpersonal trust.

The culture of patient safety is part of the organizational culture of health care. The European Society for Quality in Health Care provided a dynamic and active definition of patient safety culture in 2006, which depicts a safety culture in which activities are performed to prevent risk or harm to patients along the care path. The European Society for Quality in Healthcare defines it as "an integrated model of individual and organizational behavior based on shared beliefs and values that continuously seek to minimize patient harm that may result from care delivery processes[27].

According to research, the five fundamental criteria for establishing a good safety culture and include leadership initiation of safety culture, responsible maintenance of safety culture, accountability, Ethics and morality, and safety expectations[28]. Using these concepts, it becomes clear that safety culture must reach all levels of an organization without being twisted by the segregation that most organizations have. It has to be a culture of involvement, in which every member has a role to play and feels accountable actively, freely, and with principle prioritizing

safety in shaping collective behaviour. It must also foster the many interrelationships and exchanges that occur during the different phases of the organization's operation.

Employees are strongly discouraged from reporting errors or near calls in an organization that has a strong safety culture. For instance, in the aviation business, confidential near-miss reporting has been demonstrated to be beneficial to increasing air safety, and when 'cracks' occur in the framework of trust among stakeholders, there is a corresponding decline in reporting. Given the traditional culture of health care which places a premium on professional autonomy and collegiality, organizations must establish a strong safety culture to support a reliable reporting system[29].

However, many experts contend that safety quality is not the product of a single method and that culture- or value-based safety systems are difficult to create and sustain over time[30]. Since the dynamic relationship between management and workers, as well as their environment, is essential in the development and maintenance of a safety culture, leaving the complex issue of health-care quality improvement to the professions alone is unlikely to result in the desired safety outcome[31]. While recognizing the need for medical professionals to change, and to achieve the necessary level of safety, everyone in an organization should focus on the system, the processes, and the needs of the customers, the investment in people and the development of new knowledge, skills and innovative approaches[32].

Despite the rate of unsafe medical practices, Patient Safety did not gain much attention until the 1900s, especially after the Institute of Medicine publication. There have been efforts by world governing bodies and agencies to ensure safe care, such as interventions by the World Health Organization (WHO) and the US Agency for Healthcare Research and Quality (AHRQ) to

improve the culture of safety in healthcare facilities globally[33]. The menace of adverse events in healthcare dates back to the 1900s. During this time, millions of patients died due to poor safety culture in healthcare institutions[34]. Although safety culture originated out of healthcare, it has grown to be a global imperative for healthcare institutions to deliver quality healthcare, reduce adverse events and patient harm, promote a safe environment for healthcare workers and meet the demands and expectations of patients regarding healthcare. However, patient safety is still an evolving concept because patient harm is still widely under-reported globally, and insufficient data on the number of patient safety events in numerous countries[35].

Patient safety comprises numerous areas of professional performance, including healthcare and management, with the goal of not only delivering appropriate treatment but also preserving health and preventing health-related issues[36]. In this regard, the development of the patient safety culture is significant support for quality improvement initiatives[37] as its components allow for the remodeling of work processes and the implementation of safe healthcare techniques[38]. Patient safety is known to be a serious worldwide public health challenge, and considering the importance of the roles and responsibilities of healthcare professionals, their research, knowledge, theories and experiences on the challenges affecting the culture of patient safety are observed to facilitate the development and implementation of better strategies. Patient safety as a new and emerging phenomenon with historical evidence shows that concerns for patient safety have been in existence for a long time before the existence of modern healthcare[39]. As stated by Florence Nightingale, "the very first requirement in a hospital is to not harm patients"[40]. This requirement is "in tandem" with the Hippocratic Oath which is one of the oldest binding documents in history. Written in antiquity, its principles are held sacred by healthcare professionals to this moment: to treat the sick to the best of one's ability, preserve patient privacy

and teach the secrets of medicine to the next generation among others[41]. Patient safety according to the World Health Organization (WHO) is defined as the reduction of risks associated with unnecessary harm that is associated with healthcare. Thus, patient safety is defined as the prevention of harm to patients with an emphasis on the system of the delivery of care that prevents errors, learns from the errors that do occur and is built on a safety culture that involves the health care professionals, organizations, and patients[42]. Studies have shown that millions of patients globally suffer disabilities, injuries or death every year due to unsafe medical care[43].

Similarly, safety culture is seen as the sum of values, attitudes, competencies, and patterns of individual and group behaviour that influence the management's dedication, style, and competency in maintaining a healthy and safe workplace[44]. The development of patient safety, with an emphasis on learning, continuous improvement, and non-punitive response to errors necessitated research studies on the assessment of the safety culture and its influence on health management. The patient safety environment may be characterized as a quantitative aspect of the corporate culture at a given time, as measured by individuals' perceptions and attitude[45]. In this context, it highlights the need of understanding the corporate safety culture to avoid, detect, and analyze mistakes and adverse events, as well as to develop and execute improvement strategies that would improve patient safety[46]. Understanding the components involved in the work process that affect patient safety is feasible by studying the hospital's safety culture. In this regard, doing a study on the subject can help to improve the effective transmission of scientific data, experiences, and suggestions targeted at improving patient safety in health care.

Patient safety culture is a known concept to have originated outside of healthcare. It originated from high-reliability organizations that regularly minimized adverse events regardless of carrying out innately risky work[47]. These organizations maintained a culture of safety that

included values that acknowledged high-risk operations and the desire to prevent harm. They created safe work environments where healthcare professionals report errors without fear of punishment and collaborated across ranks to find answers to safety problems. Also, these healthcare professionals mobilize resources for patient safety concerns[48].

Patient safety culture has been defined as the values that are shared among the members of an organization about what is significant, their beliefs about how things operate in the organization, and their interactions within work units and organizational structures and systems, which in total produce behavioral and attitudinal norms in the organization and finally results in promoting safety[49]. To achieve a safe culture, it requires an understanding of the values, beliefs, norms, and ethics about what is important in an organization and the attitudes and behaviours related to patient safety that is expected and appropriate because, safety culture is known to promote staff happiness, improve the quality of treatment, improve the overall reputation, and ensure the financial security of the institutions[50].

The Institute of Medicine (IOM) has emphasized healthcare safety and that patients should be free of danger or risk caused by the healthcare system[51]. Modern advancements and the complexity of healthcare have resulted in severe flaws in healthcare quality and patient safety. The growing occurrence of clinical hazards and safety accidents significantly exacerbated healthcare systems' worries and problems[52]. Although specific estimates of the scope of the problem are difficult to come by, millions of individuals are expected to suffer debilitating disabilities[53] or death as a result of clinical risk and safety accidents[54]. The WHO patient safety report of 2009 shows that one of every ten patients in developed countries' hospitals is harmed while receiving unsafe care, according to estimates. Furthermore, the danger of injury in developing countries is substantially larger than in developed countries. For example, in certain

developing countries, the risk of healthcare-associated infection is twenty times higher than in developed countries[55].

The African region is especially challenged by a lack of creative evaluations, comprehensive policies, and strategies for patient safety and Africa's health systems are in desperate need of quick transformation[56]. The research was carried out in eight developing countries and according to the result of this research, 8.2 per cent of the 15,548 records examined had at least one adverse event, ranging from 2.5 per cent to 18.4 per cent depending on the country. Also, 83 per cent of the negative outcomes might have been avoided, and 30 per cent were linked to the patients' deaths[57]. In Ethiopia, patient safety culture was linked to working hours, staffing levels, teamwork, communication openness, event reporting, and error feedback exchange[58]. According to the circumstantial evidence, almost all errors committed during patient treatment have traditionally been dealt with by blaming and shaming[59]. Furthermore, the majority of medical mistakes are unreported and/or unnoticed[60].

However, by creating and planning safety processes and practices, the majority of injuries and safety-related deaths may be avoided. As a result, healthcare institutions are under increased pressure to build an effective safety culture to meet these difficulties and enhance quality and safety. Organizational culture is characterized as a component of patient safety culture. The commitment of a health organization to patient safety management is determined by individual and group values, beliefs, attitudes, perceptions, norms, procedures, skills, and patterns of behaviour. Teamwork, leadership support, communication, and fair culture, as well as a reporting and learning culture, have been recommended as important components of safety culture by safety experts. Communication in organizations with a positive safety culture is founded on mutual trust, shared perceptions of the importance of safety, and belief in the

efficacy of preventative measures and worker assistance. Preventive or predictive safety measures are prioritized above retrospective safety measures in the safety culture. Furthermore, the safety culture places a greater emphasis on the system approach, or "why" unsafe actions happened, rather than the person approach, or "who" caused the unsafe acts. Hospitals and healthcare professionals should encourage a continuous learning environment by reporting and addressing clinical risks and safety occurrences without fear of penalty by adopting a system approach[61].

The Institute of Medicine emphasized the development of clear healthcare patient safety programs, the use of non-punitive systems for reporting and analyzing safety incidents, the incorporation of well-established safety principles such as standardized and simplified equipment, supplies, and work processes, and the establishment of interdisciplinary team training safety programs to promote a safety culture and ensure safer healthcare systems. However, the Institute of Medicine has said that the most difficult aspect of moving toward a safe culture is transforming the culture from one that places responsibility on individuals to one that places blame on the system[62].

All healthcare professionals in the healthcare system have responsibilities for institutionalizing a safety culture. The healthcare professionals play a critical role in strengthening patient safety culture, they are ideally positioned to protect patients' safety or hurt them with dangerous practices when faced with the problems of healthcare systems. As a result, both patients and healthcare professionals will be safeguarded, a safe environment for them will be established, and the distress caused by safety accidents will be reduced.

Developing a better safety culture, on the other hand, is difficult for healthcare organizations, and some research suggests that healthcare personnel have more problematic attitudes to patient safety culture. According to research conducted in Iran, hospitals did not reach the required level of patient safety, and the workplace was controlled by a punitive culture. Hospitals underestimate organizational resources, according to a systematic evaluation of six qualitative studies, and assistance is needed to implement patient safety programs and change the culture. Researchers attempted to examine the strategies used to create a safety culture in healthcare in another systematic review, but they did not analyze the problems of safety culture.

The World Health Organization (WHO) asserted that, due to the general multifaceted nature of safety culture, developing a better understanding of the factors influencing patient safety culture and addressing interventions to improve patient safety are research priorities in developing and transition economies. It has also been observed that safety culture changes over time and that this change is connected to an organizational setting like hospital laws and size, as well as human resource characteristics like educational background. In this regard, healthcare professionals' experiences as the most valuable human resources may assist in building relevant theories and give particular guidelines for healthcare workers in both developed and developing nations to facilitate safe practice[63].

More emphasis must be given to addressing the differences in the quality of care as the barriers of the current system may get worse if efforts made fail to narrow the gaps as safety and quality of safety have been observed as key issues in the establishment and delivery of accessible, efficient and responsive healthcare systems. Studies have also shown that unsafe patient care is associated with significant morbidity and mortal rates throughout the world, much of which may be amenable to a timely intervention[64]. However, there is a lack of patient safety awareness in

Africa, as well as statistics to estimate the severity of patient safety concerns and their impact on healthcare organizations.

Many adverse events occur in healthcare facilities globally that seem never-ending, as the report by the Institute of Medicine report not only revealed the state of patient harm. It showed the potential disaster that awaited the world. This inadvertent forecast necessitated the need to constantly assess the culture of safety practices in healthcare systems to reduce and prevent patient harm to the barest minimum and improve healthcare services[65].

Similarly, the World Health Organization's Patient Safety Report describes the African continent's general patient safety problems as alarming[66]. Most countries lack national policies and plans on safe and quality healthcare practices; there is inadequate funding for healthcare systems and the absence of essential support systems detailing the essential strategy for healthcare safety/quality standards; weak healthcare delivery systems with sub-optimal infrastructure, poor management capacity, and under-equipped healthcare facilities; overuse, under-use, and misuse of medicines; black-market medicines; and overuse, under-use, and misuse of medicines; Inadequate data on patient safety concerns; lack of human resources; and a lack of collaboration including patients and the wider population in improving patient safety. It was also reported that one out of every ten patients in developed nations is endangered while receiving medical care. This type of injury is unlikely to be produced by a variety of faults or unpleasant occurrences.

Over the years, researchers have assessed the patient safety culture in healthcare facilities using different tools and methods. To efficiently assess safety culture in healthcare facilities, survey tools such as the Safety Climate Survey (SCS) tool, Stanford Patient Safety Culture Instrument

(Stanford PSCI), and Modified Stanford Instrument (MSI)[67]. Safety Attitude Questionnaire (SAQ)[68]. Furthermore, the Hospital Survey on Patient Safety Culture (HSOPSC) developed by the Agency for Healthcare Research and Quality (AHRQ)[69].

Nevertheless, there is still very insufficient data on patient safety in Sub-Saharan Africa, especially Nigeria, which may also signify that patient safety and quality of care information from the region is still "limited and constrained in nature". For example, it is uncertain whether safety measures like the WHO Guidelines on Hand Hygiene in Healthcare, which aim to reduce healthcare-associated infections at the point of service, or the Surgical Safety Checklist, which aims to enhance surgical safety, have been applied, as there is also little evidence of local activities in healthcare organizations to provide effective, appropriate, and safe patient care[70]. As a result, there is still a glaring discrepancy in practice in the country when it comes to best practices, safety culture, quality improvement, and patient safety and quality of care measures. Furthermore, factors such as unfocused stakeholder agendas, limitations of the health care system's infrastructure, a lack of capacity (in terms of healthcare staffing, time, etc.) for improvement, and a lack of data to inform improvement priorities are obstructing patient safety and quality improvement initiatives in parts of Nigeria. Adverse drug incidents, inappropriate transfusions, surgical injuries or fatalities, falls, burns, pressure ulcers, and patient identity confusion are all examples of patient harm. The report shows that 75% of African healthcare workers thought that unfavourable occurrences were caused by individual practitioners' mistakes, resulting in personal shame, despair, and remorse. Fear of being blamed, prosecuted, and even imprisoned for medical errors may prevent patient damage from being reported in African healthcare settings, as well as in other nations. The inability to gather incident reports or receive open and transparent information about probable adverse occurrences is further complicated by

this dread of reporting. Furthermore, medical records in many developing African healthcare settings are not adequately structured or completed, resulting in dissatisfaction, disagreement, and clinical misjudgments[71]. Healthcare facilities have a high proportion of medical mistakes on a regular or irregular basis as observed. Any healthcare system lacking reliable statistics to reflect the occurrence of medical mistakes and adverse events, which is crucial in identifying the underlying issues and potential remedies, would confront significant and difficult hurdles in improving patient safety.

2.1.2 Patient Satisfaction

Patients have been more curious and apprehensive about the delivery of healthcare services as a result of global competition in a developing sector. Growing health concerns and rising income levels in modern civilization have significantly increased healthcare demands and moved demographic patterns toward a healthier lifestyle and an increase in worldwide rivalry for service supply has generated a tense scenario that has an impact on the inhabited business, notably medical services[72]. As a result of the increased competition among hospitals, the healthcare relationship has come to emphasize outstanding healthcare service delivery. This demonstration has persuaded patients to make the best decision when choosing a hospital[73].

Patient care has become a top concern for all healthcare organizations, with the ultimate goal of obtaining high levels of patient satisfaction[74]. At the same time, effective healthcare service delivery, when compared to their competitors, allows enterprises or public trusts to set themselves apart in a competitive sector. Currently, hospitals are required to provide superior healthcare services to patients and to meet their demands as a result of increased expectations for routine services and greater consumer needs[75]. In recent decades, healthcare services and their

related services were one of the few issues studied in developing country service studies. Although the demand for improvement in healthcare services has received substantial academic research, it has become a challenging endeavor for academics, government officials, therapeutic professionals, and hospital administrators to address the needs of clients to develop satisfaction.

Satisfaction is one of the most important aspects of government policy or a successful organization, and it can only be maintained by providing exceptional service quality, which leads to increased satisfaction. Effective service delivery, cost allocation, and management techniques are required to implement these improved provisions[76]. In terms of providers, there are two types of service providers that function exceptionally effectively in both commercial and governmental hospitals in developing countries. Choosing the correct health centre and the competent healthcare professional is critical for achieving the goal of patient satisfaction since it has a strong effect on the patient's treatment[77]. In the process of improving a healthcare delivery system, the patient's perspective is becoming increasingly relevant. The condition of pleasure or enjoyment that patients feel when utilizing a health service is referred to as patient satisfaction. As a result, every healthcare provider's primary responsibility is to offer patient care. It is one of the benchmarks used to assess a hospital's efficiency and effectiveness, with the efficiency of a hospital being linked to the delivery of services and the provision of high-quality treatment. Patient satisfaction is the best indicator of how good the healthcare services administration is[78].

Patient satisfaction is a well-known statistic for assessing the effectiveness of hospital health services. Patient satisfaction is a key measure used to assess the quality of healthcare services delivered[79]. Patients' opinions are now regarded as a major role in treatment decisions and delivery of health care services. As a result, patient assessment of health care delivery has gotten more attention and has become a key element of any health system, as it acts as a vital indication

to monitor the performance of a service supply, particularly in public sector hospitals. Since the government exclusively supports public hospitals, public sector hospitals operate under government rules, whereas private sector hospitals are founded as businesses that can provide more effective treatment and services to their clientele. Patients at private hospitals must spend extra money to receive the desired service quality. Currently, before employing any type of health care organization's services, specific and comprehensive details are essential to meet the patient's needs. As they are spending more money for treatments, patients have grown more inquisitive and anticipate additional services to obtain the quality of services beyond their expectations, and simply any incidence of discontent tends to compel them to seek treatment from other rivals[80]. The quality of service delivery, on the other hand, is seen as a critical aspect in ensuring overall patient satisfaction with hospitals. It has been recommended that healthcare professionals and hospital employees (medical and non-medical) should all work together to improve and increase service delivery quality.

Patient satisfaction with the healthcare system has been widely researched and utilized to evaluate and improve service quality[81]. As a result, more statistics on the elements that influence satisfaction can help healthcare providers, public policy analysts, healthcare managers, practitioners, and planners enhance the entire healthcare system and the quality of services they give to consumers.

From the standpoint of patient experience, health systems must react to people's expectations. The growing relevance of patient experience can assist to capture the health system's 'responsiveness', which refers to how and where individuals are handled while seeking treatment[82]. Improving the health system requires constant monitoring and management of its responsiveness to the needs and preferences of the people. As a result, taking into account the

public's perspectives, population's experiences, and perceptions can lead to a more accurate and suitable appraisal of the healthcare system[83].

The measurement of patient satisfaction is an important aspect of evaluating healthcare system performance in terms of service quality, and patient happiness is becoming increasingly important in terms of care quality and healthcare delivery. All quality management ideas aim to improve customer-patient satisfaction, and Total Quality Management (TQM) requires a focus on quality and customer satisfaction. As a result, tracking patient satisfaction has become a standard for increasing consumer loyalty as well as a standard operating practice in the healthcare industry[84].

Furthermore, the Institute of Medicine of the United States (IOM) lists patient satisfaction and experience as one of its three key elements of what healthcare organizations want to have in the near future[85], and patient satisfaction has become an important metric for hospitals in the United States to evaluate their performance[86].

Manimay stated that providing effective training on interpersonal skills and realistic communication to service providers (including all hospital employees, medical and non-medical) boosts patient satisfaction. In hospitals, improving service quality is essential for establishing a trustworthy reputation among patients[87]. When service delivery consents to service assessment, it is deemed to influence patients' attitudes and expectations, which, in turn, reinforces their connection with the providers. As a result, the service delivery process has a significant influence on the administration of all associated services and organizations, which should be particularly concerned with delivering thorough healthcare services.

The fundamental obligations of service providers, as stated in the preceding discussion, are to establish and sustain patient happiness, as well as to give improved service delivery with important medical treatment by desired services as identified by people. This may be feasible if hospital employees (technical and non-technical) can comprehend and grasp the patients' perspectives. Patient satisfaction is also influenced by a healthcare professional's actions. There are many patients at public hospitals, enormous workloads for employees, and a work environment where these healthcare professionals can be nasty. The patient's repeated foolish queries, to some extent, can be answered using common sense rather than medical understanding. When presented with such scenarios, healthcare professionals have a habit of responding disrespectfully.

On the other hand, a healthcare professional's medical expertise is fundamental for patient care, and specialty-specific clinical best practices would be a principal determinant of the patient's medical usage. Patients want a comfortable and friendly connection with a healthcare professional that looks to be technically competent and provides enough information regarding the disease, according to several types of research. Many studies have been undertaken in both developing and developed nations to assess patient satisfaction with healthcare services[88].

In the last decade, patient safety has grown into one of the core components to assess quality care in healthcare facilities. In several studies, patient satisfaction is connected with patient safety culture (PSC) perceptions, and actions of healthcare professionals on patient safety[89]. Patients influenced healthcare service delivery regarding their satisfaction with the care received. Furthermore, patient encounters helped hospital management procure information and insights regarding healthcare performances[90].

The concept of patient-centered care is an emerging one defined by the IOM as care that respects and responds to distinctive patient needs, preferences, and values[91]. Over time, medical practices, research, and teachings are structured to focus on diseases and organ systems instead of patients[92]. However, the integration of patient-centered care into healthcare requires healthcare providers to understand patient values, needs, and preferences are understood and considered when providing healthcare services.

Patients have begun to assert their entitlement to better service in recent years as they have become more informed and aware of the many types of care and treatment options available to them. Patient satisfaction was found to be influenced by health workers' attitudes toward patients, their ability to provide immediate attention, their waiting time, their ability to send information, and their willingness to plainly explain what was wrong to the patient before giving detailed information about their drugs and the environment[93].

Patient satisfaction has been observed to be typically assessed in two ways: patient exit interviews, in which patients are asked to complete a questionnaire about the services they have just received as they leave a clinical consultation or healthcare facility, and patient satisfaction surveys, in which patients are asked to complete a questionnaire about the services they have just received. Patients' satisfaction with healthcare professionals and services is often assessed using this approach, which allows researchers to obtain data about patients' experiences in a short amount of time[94]. Population-based surveys, which employ survey sampling procedures to create a group of experimental subjects, are the second strategy to measure patient satisfaction. The question "how general were you happy with the healthcare system?" is widely used to assess overall patient satisfaction with the healthcare system, as happiness can be a significant factor of satisfaction.

While patient satisfaction is receiving more attention from all perspectives, there has been significant debate in recent decades over two distinct approaches of study service delivery performance. The first method of analysis, referred to as “Objective” measurements, entails assessing service delivery performance characteristics using data from official government archives to document performance criteria such as policy inputs, outputs, and inputs, as well as efficiency and effectiveness. The second technique, referred to as "subjective" measurements, is surveying a sample of the population's attitudes, views, and experiences about service delivery to assess the quality or quantity of a specific service. Subjective indicators are derived from population responses to surveys on their perceptions, experiences, and assessments of services received[95].

Several studies have found poor levels of consistency between objective and subjective variables, raising concerns about whether these two analytical approaches provide consistent or conflicting conclusions. Some policy experts have questioned the utility of subjective indicators due to a lack of strong relationships between objective indicators derived from public agency archives and subjective indicators derived from survey data[96]. Satisfaction measures have not always correlated well with objective aspects of people’s lives. For example, income has just a minor impact on contentment[97].

Patient satisfaction surveys have been utilized as a subjective style of study to represent patients’ views, experiences, and judgments of treatments received[98]. Even though patient satisfaction has been defined in a variety of ways, it is a valuable subjective mode to match all definitions done by well-accepted researchers. For example, a study defined patient satisfaction as “a personal evaluation of healthcare facilities and provider services”[99]. However, another study described patient satisfaction as “the provider’s success at meeting those client values and expectations on

which the client has ultimate authority"[100]. Eriksen defined patient satisfaction and the subjective instrument as "a rating or evaluation of a service or provider, based on a comparison of the patient's subjective criteria to the treatment received, and representing a positive emotional response to comparison"[101].

Quality theories, social comparison theories, consumer behaviour theories, and attribution theories have all demonstrated why and how patient or customer satisfaction is beneficial[102]. People evaluate their life by comparing themselves to others, according to social comparison theories, and subjective measurement is the best technique to complete any connected research. Also, attribution theories, which are psychological theories of attribution, use a similar approach, implying that people have a predisposition to infer in a specific way due to something about the person, such as attitude, character, or personality[103].

Similarly, researchers and healthcare managers have often assessed patient satisfaction using different tools and measures such as the IOM assessment measures, the long-form and short form of the Patient Satisfaction Questionnaire (PSQ), and the Healthcare Consumer's Assessment of Healthcare Providers and Systems (HCAHPS)[104].

2.2. Review of Empirical Studies

Due to one or varieties of circumstances relating to healthcare providers or patients, poor patient safety practices in public healthcare institutions in Nigeria have grown to be a substantial public health concern. Surgery, medication, diagnostics, transfusion, healthcare-associated infections, staff competency, medical equipment, communication, accessibility, reduced error reporting, management systems and emergency services are some of the most prevalent patient safety issues in Nigeria[105].

A recent study conducted among physicians in Nigeria discovered that 75.5% of the doctors who responded to the survey were burnt out, but no specific factors or organizational predictors of total burnout were observed. Physician burnout is viewed by the majority of doctors (74.6%) as having the potential to compromise patient safety[106]. Although it was inferred in the study that low physician-patient ratio and physician emigration were major causes of burnout, other factors could have influenced burnout among the physicians. The fact that the study was conducted across five Nigerian tertiary hospitals denoted the importance of its results to improve patient safety, however its focus on physicians alone limited its inference regarding burnout among other health care professionals.

Another study conducted among physicians in Abia state found that out of the 145 respondents who took part in the study, 62 had made at least one medical error, representing a prevalence of 42.8%. The most frequent error made was a mistake in the prescription of medication (95.2%). Other errors included incorrect ordering of radio-laboratory investigations (83.9%), incorrect doctor diagnoses (69.4%), incorrect surgery (29.0%), and incorrect procedural steps (25.8%). Additionally, of the 62 participants who made medical errors, 62 (100%) had a negative attitude toward disclosing the errors to the patients and their families. Regarding psychological distress brought on by medical mistakes, 28 (45.2%) of the subjects had none, 21 (33.8%) experienced depression, and 13 (21.0%) had an acute anxiety condition. None of the 62 participants who made medical mistakes were parties to a medical malpractice case [107]. However, incidence and reporting of adverse events in the study was indicated to be based on unverified subjective view of participants, thus leaving room for bias.

Findings of a meta-analysis study on surgery site infections conducted in Nigeria found a high incidence rate of surgery site infection (14.5%, 95% CI: 0.113–0.184). Although the population

of the study was low when compared to other studies in developed countries , the result was significantly higher than that of studies from mainland China (4.5%), USA (1.98%), and Europe (10%)[108,109 , 110].

The findings of some studies in Nigeria may depict a moderate or high level of patient safety. There is no doubt that Nigerian healthcare institutions need to improve on patient safety and continually build toward reducing the occurrence of adverse events.

2.2.1 Factors Affecting Patient Safety Culture

Several factors contribute to the increase or decline in PSC among HCPs and healthcare facilities. A systematic review conducted in Saudi Arabia found that poor leadership, shortage of staff, workload, blame culture, and poor communication hindered positive patient safety culture. Factors such as good teamwork with units, learning, continuous improvement, and management support contributed positively to patient safety in the country[111]. Another study conducted in Iran showed the negative impact of work shift, burnout, and type of hospital on patient safety culture[112]. The negative impact of work pace, inadequate staffing, burnout, and workload has been continuously revealed in studies[113]. Thus, the factors affecting patient safety culture shall be examined accordingly[114].

1. **Shortage of Resources:**

The lack of financial and human resources, medical supplies, pharmaceuticals, medical equipment, and technology have all had an impact on safety management plans and initiatives. Also, insufficient resources have failed in safety program innovation. It is, however, observed that building an organization's infrastructure is the first step in developing a safety culture. Limited funding, insufficient human resources, and a hazardous physical environment have

stymied the adoption of safety improvement measures[115]. Staffing shortages were included by ECRI as one of the top ten patient safety concerns for the year 2022, highlighting the fact that both clinical and non-clinical personnel shortages have been an issue since before the pandemic and that they are only going to become worse. For example, it quoted information demonstrating that U.S hospitals registered nurse turnover was 18.7% in 2020 and attributing staff shortages to mass retirements [116]. Various studies have linked shortage of healthcare professionals to low levels of patient safety, with negative impacts such as medication administration errors, overcrowding of healthcare facilities, high mortality, and decreased quality of care [117]. The shortage of medical supplies has been rampant since the Covid-19 pandemic, thereby exposing healthcare professionals and patients to risks of medical harm[118]. Healthcare personnel are more prone to get sick if they lack the right Personal Protective Equipment (PPE). When worker illness reduces the supply of healthcare and the demand for treatment increases, the healthcare infrastructure becomes unstable, lowering both the quality and amount of care that is offered. The spread of viruses is also facilitated by sick healthcare professionals[119].

Limited finance and a lack of essential support structures, such as plans, directives, instruments, and patient safety standards, continue to be serious issues throughout Africa. Inadequate data further hinders comprehension of the issues related to patient safety culture.[120]

2. Lack of Professional Competence and Empowerment.

Some factors have been observed to have impacted the institutionalization of safety culture which include; lack of creativity, insufficient professional and moral competence, lack of judgment and clinical decision-making ability, lack of knowledge and ability in care management, and lack of effort to improve professional competencies[121]. Even though all healthcare professionals are required to be safety managers, they are unable to do so since safety

training courses have failed to adequately increase their safety competence. A rapid assessment study conducted to assess patient safety competencies among undergraduate nursing students emphasised the importance of learning environment and development of technical skills such as communication and working in a multidisciplinary team[122]. Another study emphasized that when evaluating the impact of educational initiatives and/or clinical traineeship experiences on the development of NTS, non-technical skills (NTS) can be helpful[123].

Transferring responsibilities to personnel who lack the essential credentials and ability, on the other hand, raises the clinical risk. On the other hand, healthcare professionals with greater job experience may threaten the patients' safety for a variety of reasons, including false self-confidence, resistance to change, and a lack of up-to-date competencies. As a result, to build an efficient safety culture, all healthcare personnel should obtain up-to-date knowledge about their obligations. Furthermore, they should get training that is effective, efficient, and tailored for their job and responsibilities[124]. With modifications in work and behavioral working conditions, such as leadership, patient safety culture, expertise, training, ability to speak about safety, and organizational design characteristics, staff impressions of their workplace might alter over time.[125]

3. Unfavourable working conditions and unsafe workplace:

It is generally known that the workplace environment may have an impact on the safety culture in healthcare institutions as previous studies have linked a positive work environment to a lower risk of workplace accidents as well as a significant reduction of morbidity and mortality[126].

Healthcare professionals require favourable working conditions and a safe workplace to deliver safe patient care. Due to factors such as a lack of time, hard and boring work, a high volume of

patient admission and discharge, poor communication with coworkers, environmental stress, emotional pressure after patients' harm or death, and tension in the patients' families, strengthening a safety culture at work is difficult. The safety of healthcare professionals and patients is jeopardized by a congested ward and a large number of patients. These healthcare professionals are under stress, and they are also in danger due to agitation, a heavy workload, and high levels of tension. As a result, in such stressful circumstances, their attitudes toward safety culture would be negative[127]. A study conducted in Thailand found that better working conditions at university hospitals led to significantly lower levels of job dissatisfaction, desire to leave, and burnout among nurses[128].

4. **Lack of leadership competence:**

"Lack of commitment", "non-supportive leadership", "lack of participation in decision-making", and "inefficient safety management rounds and clinical audit" are the four issues in this classification[129].

a. Lack of Commitment: When leaders commit to building, moulding, and spreading a safe culture in the workplace, the culture is entrenched. Without intelligent, transformative, and dedicated leaders, integrating a safety culture into company culture will never be effective. Regarding the experiences of healthcare professionals and due to a variety of factors, including ineffective policies, poor-quality supervision, poor leadership practices, a lack of resource allocation, a lack of appropriate measures for promotion and rewarding employees, and a lack of integrated management in the field of safety, leaders lack the commitment and creativity to strengthen the safety culture. The key premise of

continuous safety is leaders' commitment to safety culture and precise oversight, but sadly, some leaders lack adequate commitment and competent supervision.

b. Non-supportive Leadership: Employee support is a critical component of good safety culture leadership. Leaders should pay close attention to their employees' psychological, mental, and emotional needs, and their encouraging behaviour encourages healthcare professionals to advance their skills and adopt safety measures. These challenges include leaders' inattention to workplace demands and the onerous responsibilities of healthcare profess; supervisors' prejudice, hostility, and violence toward employees; and the lack of help received in the healthcare profession.

c. Lack of participation in Decision-making: Individuals who must follow safety regulations, according to healthcare professionals, should be involved in the establishment and evaluation of the rules. The perceptions of healthcare professionals toward successful leadership have shifted negatively as a result of their frustration with their lack of engagement in safety decision-making. As a result, those circumstances hampered their active engagement and progress toward the creation of a safety culture.

d. Inefficient safety management rounds and clinical audits: The best techniques for leaders to become familiar with safety operations and find the reasons for big safety concerns have been observed to include coordinated preparation for targeted walk rounds, as well as watching and chatting directly with staff. This strategy is far more efficient than looking over data and reports in the office. Even though the majority of leaders thought they had stressed the importance of safety concerns during walk rounds, healthcare professionals' reactions indicate that safety walk rounds did not produce the desired results. Some leaders also feel that management's commitment to safety is limited to the

provision of protective equipment, the installation of mottos and safety signs, the administration of punishment and reward, and the compilation of data. Employees would be assured that managers have kept their commitments if leaders listen carefully to their difficulties and concerns during frequent and focused walk rounds and monitor corrective measures. However, this has not occurred, and walk rounds have yet to be operational and produce suitable results. On the other hand, a clinical audit was introduced by healthcare professionals as a key tool for evaluating and improving the safety culture through the use of standard checklists. Nonetheless, they thought that the audit process had failed for a variety of reasons, including the audit team's lack of enthusiasm as a result of getting no compensation, the lack of an expert team, and employees' and leaders' disregard for the audit. Sometimes, the auditors are not very skilled or knowledgeable about auditing. Furthermore, when the audit findings are applied to the safety section, they observed that no progress has been achieved in the following audit period.

5. **Lack of sustenance and keeping up with national and international standards:**

Accreditation, clinical governance, and clinical risk management are significant examples of quality improvement measures for sustaining and keeping up with national and international safety standards. These significant examples allow healthcare professionals to come together and join their efforts together to offer safe treatment and develop a safe culture throughout the world. Results have revealed that the efforts to integrate and alter these quality improvements are insufficient. However, “failure to establish a quality environment and clinical risk management”, “culture of resistance to change towards system approach”, “the culture of blame and punishment”, “weakness in feedback to reporting errors”, “weakness in the culture of

organizational education and learning", and "weakness in protective culture", are all qualities that reflect the poor efforts of all healthcare professionals[130]. These sub-categories are as follows:

a. Failure to establish a quality environment and clinical risk management: Quality improvement systems have taken steps to improve safety management. However, challenges such as lack of knowledge, management and organizational culture issues, a limited amount of resources, heavy workload, limited time, and teamwork weaknesses, lack of infrastructure as reported by healthcare professionals are the reasons for their unfavourable attitude toward quality and safety improvement techniques in the health industry.
b. Culture of resistance to change towards a system of approach: The system of approach is essential to enhance the safety culture. The system of approach assists leaders of the organization to conduct a thorough evaluation of safety incidents and prevent accidents caused by system flaws by changing the system's flaws. As a result, changes in organizational culture, structures, systems, procedures, environment, equipment, processes, and organizational behaviour are required. There is, however, resistance to culture change according to healthcare professionals' experiences and leaders are unaware of the system approach's social, human, and economic benefits.
c. The culture of blame and punishment: Special attention should be given to the culture of mistakes and safety event reporting as a critical component of safety culture to reduce safety events. Also, a punishment and guilt culture must be avoided. The risk of being blamed and punished, rejecting the explanation of healthcare professionals, and scolding and disciplinary actions are all challenges contributing reasons to the blame culture. Safety event reporting is said to be relatively low because healthcare professionals are

afraid of the repercussions of reporting, such as being chastised, reprimanded, or losing their jobs. Failure to report occurrences may also lead to an underestimation of the safety event report. It does not, however, improve the safety culture.

d. Lack of feedback in reporting errors: The system for obtaining data and reporting errors is required to conduct a thorough investigation of safety occurrences, analysis of results, dissemination of remedial actions, and employee feedback. The lack of certain activities, such as report delivery, feedback to employees, and follow-up on their input, indicates a lack of priority in reporting and a lack of a safety culture.

e. Poor culture of organizational education and learning: Individual, institutional, and group teaching and learning are boosters for a system approach and a stronger safety culture. The practice of learning from previous accidents will promote safety and prevent such situations from occurring again. Healthcare professionals often lose interest in organizational learning, due to their passive attendance in training courses, a lack of adequate training, a lack of time, and work pressure. For instance, healthcare professionals who have tried to exhibit their educational background and experience do not receive satisfactory responses to their efforts. These healthcare professionals believe that putting behind their knowledge and talents as important members whose actions impact the safety culture as well as organizational leaders' active efforts to limit healthcare professionals' personal growth play a significant role in reducing their desire for organizational learning.

f. Poor preventive culture: Patients and healthcare professionals are sometimes harmed as a result of an unethical attitude where corrective measures are not taken when an accident occurs. As a result, to build a safety culture, they must encourage the preventative

approach. They should also serve as a role model for the rest of the team. Analysis of Failure Modes and Effects (FMEA) is a preventive and protective approach to safety; however, there has been little progress in this area in hospitals.

6. Overshadowed values of team participation

Safety culture demands teamwork at all levels of the organization, as well as at all levels of education and talent, and it is impossible to achieve without the involvement and knowledge of the team. A variety of problems, such as “the failure to redefine and clarify responsibilities”, “the gap in team coordination”, and “the difficult dynamics of team interactions”, outweigh the importance of teamwork in the development of a safety culture[131].

a. The failure to redefine and clarify responsibilities: The promotion of patient safety demands clarity in the tasks of the healthcare team. However, problems such as a lack of clarity in team tasks and roles, opposition to the adoption of roles and responsibilities, a lack of knowledge about the roles, and a lack of awareness of one’s place in teamwork obstruct successful team roles, putting one’s safety at risk. The healthcare professionals disagree concerning their risk and safety management duties, for example, identifying risks and reporting incidents. These tasks, they claim, are not part of their responsibilities. As a result, each member of the healthcare professional team's job description should include risk and safety management.
b. A gap in team coordination: Team coordination is a significant element of collaboration and engagement. Healthcare professionals, they say, are the most significant group that puts patients in danger and on the other hand, dislike being called to engage in safety team programs such as root cause analysis, or when therapy and management teams are not coordinated in many care and treatment programs.

c. The difficulty dynamics of team interactions: The safety culture would be promoted through pleasant interpersonal and professional connections between patients, healthcare professionals and their coworkers working as a team. Suitable interactions among this team are said to provide a positive emotional, psychological, and social environment at work and minimize stress. Unethical and improper communications, as well as a lack of understanding of communication concepts, have resulted in challenging team relationships. Also, unfavourable attitudes of healthcare professionals severely influence their work and compromise patient safety.

Patients, healthcare professionals and their coworkers are intended to help each other communicate more effectively by facilitating professional connections, encouraging interdisciplinary cooperation, and resolving communication issues. Some leaders, on the other hand, do not communicate well with healthcare professionals and may not comprehend their concerns about patient safety. They may be discouraged from pursuing patient safety precautions including reporting their errors as a result of insufficient communication. In terms of emphasizing the influence of all healthcare team members, communication is an important factor that influences patient safety as ineffective communication between them could act as an obstacle to improved patient safety culture due to perceived hierarchical differences. More so, healthcare professionals' individuality and attitudes have made it difficult for them to accept other peoples' ideas and opinions, or to use their expertise and experience in decision-making. Such circumstances have had a negative influence on their performance, including stress, a lack of enthusiasm, and a lack of emotional stability.

7. **Teamwork and cooperation among healthcare workers**

The method of working in groups to accomplish organizational goals involves the engagement of the team leader, delegated tasks, shared interests, intensive communication, future and work productivity, creative minds, and timely responses. Effective managers motivate their staff to work better. To achieve the objectives that have been stated, managers must be able to handle variances in the aptitude, skills, and competence of the team members[132].

To function as a cohesive team, all hospital components must work well together. Patients will receive comprehensive services as a result of teamwork. In the same way, if there is no collaboration among the team members of the current service providers, patient safety is unlikely to be achieved. Consequently, teamwork among managers and employees who engage specifically with the patients should be encouraged. The highest level of service quality may be offered if all runs seamlessly and everyone is connected to one another as they ought to be[133].

8. **Differences in healthcare facilities**

Just like many other countries, healthcare facilities in Nigeria are categorized into three levels namely; primary level, secondary level and tertiary level. Primary healthcare facilities offer communities preventive care, treatment, therapy, and basic medical care. These institutions refer patients to secondary hospitals (private and public), which are in charge of diagnosing and treating common and commonly occurring diseases in a number of localities. Tertiary medical facilities are large medical facilities that offers specialist medical services to various areas. These hospitals offer healthcare, rehabilitation, and preventative services in addition to clinical education, retraining, and scientific and technical activities[134].

All healthcare facilities cannot have the same level of patient safety culture. These differences in patient safety levels can be as a result of the type of healthcare facility. In terms of governance, compensation, and training, private and public healthcare facilities differ[135]. In perspective of the working environment, the private and public healthcare facilities do not share many similarities and each has its own advantages and disadvantages. Although there are no differences between working as a healthcare provider in various facilities, various factors may influence their choice. For example, a busy and crowded employment can be one in the public sector, where healthcare providers deliver care to many more patients than private healthcare facilities[136]. Furthermore, when compared to private healthcare facilities, governmental rules and training are typically carried out more carefully in the public healthcare facilities[137].

9. **Management support for patient safety**

Management or managers in healthcare facilities play key roles in ensuring that high level of patient safety culture exist in healthcare facilities. One of the fundamental concepts of creating and, eventually, maintaining a safety culture contends that, regardless of organizational structure, the management team bears primary responsibility for an effective safety culture[138]. Successful healthcare managers promote avenues to hear concerns, discuss problems, and give prompt feedback to foster effective team communication, in order to quickly resolve any issues that staff may be experiencing by identifying them early through regular communication and staff engagement[139].

Successful healthcare managers continuously promote a “no blame” attitude and show care and concern for the personnel when things actually go wrong to compel them to disclose problems and events without hesitation. Furthermore, they put in place trustworthy key metrics that

adequately describe the risks to which employees are exposed. Evaluating and surveilling health and safety performance is also a good way to assess the culture of health and safety within an organization and a way to enhance current procedures[140].

10. **Error reporting tools**

The initial cause of action in prevent medical errors and enhance patient safety is to better understand the many types of medical errors so that we can prevent them. From one institution to the next, and over time, cause of medical errors, kinds, and rates might fluctuate, especially when we make adjustments to the way we administer treatment. As a result, it's critical to record, monitor, and assess all adverse events[141]. Two examples of effective error reporting tools are the Team Strategies and Tools to Enhance Performance and Patient Safety (TeamSTEPPS), and the Situation, Background, Assessment, and Recommendation (SBAR) communication tool[142].

The Situation, Background, Assessment, and Recommendation (SBAR) communication tool was created to improve handover effectiveness and is commonly believed to improve safety culture in healthcare facilities. The SBAR handover tool can be utilized verbally, in person, or through paperwork. The SBAR tool is split into four portions, every of which is composed of a specified set of organized components[143]. This simple guide offers an easy-to-follow procedure that enables healthcare professionals to get ready for communication-related situations. It serves as a review, preventing information overload and enabling the dissemination of knowledge that is concentrated, true, understandable, and free of recurrence. Instituting handover procedures also gives medical personnel confidence because it simplifies communication process and serves as a reminder of the patient records that should be expected[144]. A few organizations have introduced an "I" to the beginning of SBAR to represent identity. Thus, every individual interacting with the

SBAR tool should start by introducing themselves. The American Hospital Association, categorized SBAR as a standardized way to convey important details about a patient's situation that necessitates the need for timely intervention and attention[145].

The Agency for Healthcare Research and Quality (AHRQ) created the Team Strategies and Tools to Enhance Performance and Patient Safety (TeamSTEPPS) program as an evidence-based approach to teamwork training[146]. This tool was founded on five fundamental tenets: team structure, communication, leadership, situation monitoring, and mutual support. Enhancement of team support, communication, and performance across all roles and disciplines of the health care team is the goal of implementing the program in the health care setting. Among the crucial principles of effective provider education is the effective execution of confined interaction, particularly in the context of patient safety and the decline of adverse events[147].

Lack of standardized error reporting tools in healthcare institutions may jeopardize the identification of adverse events, its causes, and development of patient safety culture.

11. Burnout

The word "burnout" was coined by Freudenberger in 1974, after perceiving a decrease in enthusiasm and reduced commitment among volunteers at a clinic for mental illness[148]. Maslach created the Maslach Burnout Inventory (MBI), which is the most widely used instrument for measuring burnout worldwide. Burnout, according to Maslach's definition, is a reaction to inordinate stress at work that is categorized by thoughts of being psychologically fatigued and suffering from a lack mental energy[149]. Emotional exhaustion is characterized by a negative and detached response to other people, as well as a loss of idealism—depersonalization; and a downturn in feelings of competence and productivity at work—reduced Individual Success.

Maslach proposed that burnout is a state that develops as a result of a sustained disparity between an individual and at least one of the six work-related dimensions which are;

a. Fairness: the perception of injustices at work, such as inequity in volume of work and compensation.

b. Community: Employees are frustrated and less likely to seek social support because they do not perceive meaningful relationships with their managers and coworkers.

c. Control : Employees lack adequate control over the resources required to carry out or achieve their task.

d. Workload: an inordinate volume of work and requirements that prevents recovery.

e. Reward: an absence of sufficient compensation for a successful task. Financial, social, and intrinsic rewards are all possible

f. Values: When healthcare professionals feel compelled by their task to think and behave against their individual values and ideals, or when they confront dispute between the values of the institution.

Maslach identified these six work attributes as elements that lead to burnout and identified deterioration in employees' health and job performance as outcomes of burnout[150].

Other burnout models differ from Maslach's in two ways: they do not consider burnout to be solely a work-related symptom, and they see burnout as a process instead of a condition.

2.2.2. Factors affecting Patient Satisfaction

Several factors affect patient satisfaction and discontent in healthcare settings. Communication (doctor-patient relationship), technical facilities (diagnostic services), physical facilities (clean atmosphere and convenience), finances (cost of care), waiting time and time spent with healthcare professionals while receiving health care and government policy are some of these aspects. The patient, on the other hand, determines the quality of health care in terms of compassion, consistency, response, knowledge, and the treatment they receive[151].

1. **Communication (Healthcare Staff-Patient Relationship):**

Most importantly, a healthcare professional's behaviour is a critical component in patient satisfaction, as doctor-patient relationships are influenced, at least in part, by how healthcare professionals interpret and respond to patients. Patients want strong connections and respectful conduct from their doctors. It also has an impact on the patients' decisions to stick with their doctors. Patients are less satisfied and less inclined to follow their medical regimen, return for visits, or otherwise cooperate in their treatment when their expectations are not met. Patients also determine their general opinion of healthcare services, and their prospective consequences through their doctor-patient relationship[152]. Patients must create a good and cordial relationship with the doctor by employing a higher degree of communication to evaluate healthcare services[153]. A positive doctor-patient relationship is essential for ensuring that patients follow medical advice, which increases treatment efficacy and lowers transaction costs. This encounter may also increase the patient's trust in the medical facility and willingness to use it again in the future. This frequent use can also help the hospital's reputation. Patients in need of more in-depth medical attention have a stronger impression of the quality of the doctor's service, as well as their

overall satisfaction, according to some studies, patients in need of more in-depth medical attention have a stronger impression of the quality of the doctor's service, as well as their overall satisfaction[154]. It has been proved that a doctor's examination and communication abilities in outpatient facilities might affect a patient's perceptions or satisfaction. Hospital personnel proficiency and skills, their medical efficacy, the atmosphere they create and the support they provide, the general attitude, and service processes were all identified as fundamental components. The United Nations has developed sustainable development goals (SDGs), which emphasize the significance of enhanced delivery of services[155].

In general, the higher the healthcare professional's friendliness and solidarity, the more happy and dissatisfied a patient would be. Furthermore, a healthcare professional's information-giving and courteous demeanors are positively connected with patient satisfaction.

2. **Technical Facilities (Laboratory and Diagnostic Services):**

Technical facilities which include laboratory and diagnostic services are now widely regarded as the backbone of the healthcare industry. Due to the number of diagnostic devices discovered in laboratories that have saved millions of people's lives, such as improved ultrasound, magnetic resonance imaging (MRI), pathology tests, and much more development in testing, the world is fast growing in the technology business[156]. Laboratory and diagnostic services are critical for aiding in the diagnosis of patients' ailments since, in many circumstances; laboratory and diagnostic services inform healthcare professionals about the severity of the patients' condition. There is a clear link between laboratory services, diagnostic care, and patient satisfaction and this is because the patient is the primary beneficiary of public healthcare. The patient is the key focal

point of the healthcare delivery system. In less developed countries, healthcare officials appear to have largely ignored a patient's perspective on the medical care system.

Patient satisfaction as discussed earlier is determined by several factors, including the quality of clinical facilities provided, pharmacy services, medication accessibility, communication quality (doctors' and paramedical employees' attitudes), institutional infrastructure, physical comfort, emotional support, and respect for client preferences. The disparity in patient expectations and the healthcare facilities supplied is linked to a decrease in satisfaction levels[157].

Furthermore, evaluating patient perspectives provides them with a voice, which may help personal and government-run healthcare facilities on how to respond better to patients' demands. Effective technical services that provide services promptly are critical from both a medical and a financial standpoint, as well as in terms of patient satisfaction[158]. The laboratory and diagnostic's function in healthcare for the public, as a diagnostic tool for diseases, is as important as any other medical professional.

However, no one can deny the significance of laboratory and diagnostic services in the healthcare industry. The World Health Organization (WHO) recognizes this as they have included laboratory services in healthcare and as a result, the WHO advised nation members to promote and enhance healthcare services through health laboratories as part of a primary healthcare strategy[159].

3. **Physical Facilities (Clean atmosphere and Convenience):**

Physical facilities evaluate a patient's perception of the hospital's physical services in terms of service quality. The cleanliness and upkeep of the institution, as well as the availability of physical facilities such as resident rooms, technical capabilities, diagnostic test rooms, blood

banks, wards, beds, ambulance services, waiting rooms, and operation theatres, are all factors to consider in determining patient satisfaction while receiving health care. Several studies have sought to determine the impact of physical services on quality delivery and on creating a good atmosphere that makes it easier for patients to recuperate completely. The proper healthcare professionals must work to enhance the hospital's physical environment; such an environment will greatly assist patients in recovering on time and living a healthy life and reduce patients' dissatisfaction[160].

4. Finances (Cost of Care)

Patients visiting healthcare facilities pay for medical services such as consultation, surgery, imaging, pharmaceuticals and so on. High medical bills are known to have caused poverty among citizens of developed countries such as the USA[161]. These are attributed to higher costs, higher out-of-pocket expenses, and increased usage of diagnostic instruments, radiography, and prescriptions[162]. In contrast to urban populations, rural inhabitants across all continents and nations have much worse health and less access to healthcare facilities[163]. Households or individuals have lower amount of available income left over after paying for medical expenses through out-of-pocket means. This restricts the utilization of health care services and expands the wealth gap between the rich and the poor. Similar to taxes, household out-of-pocket medical spending can have a proportional, progressive, or regressive impact based on the design of the healthcare payment scheme[164]. Recent research has demonstrated a positive correlation between health insurance and a higher level of patient satisfaction, which may be primarily attributed to the alleviation of patients' anxieties about the expense of care. Patients who paid more hospital entry fees gave higher ratings to the hospital's living quarters and medical staff, but were generally unsatisfied with the price of their care[165].

Medical expenses are calculated as the sum of all household healthcare costs, which comprises of costs for medical supplies and equipment, outpatient care, and hospital services. While household expenditure on health services is thought to cause financial disaster for 150 million individuals worldwide, out-of-pocket payment for medical expenses is still a very common practice among Nigerian households[166]. Out-of-pocket costs are fees that people or households spend when receiving healthcare services. These include the cost-sharing portion (the portion not covered by a third party, such as an insurer), as well as informal payments (such as gratuities and under-the-table payments), but do not include insurance premiums or any other third-party payer reimbursements (e.g., health insurgence fund)[167]. Despite having a sizable public healthcare system, just 13% of healthcare spending in Nigeria is covered by the government[168]. The National Health Insurance Scheme (NHIS) offers health insurance through mandatory (such as formal sector health insurance programs) and optional (such as for self-employed or retired people) enrolment. However, fewer than 10% of people have access to health insurance (i.e. public or private)[169].

Out-of-pocket health expenses often put the impoverished groups of the population in immediate danger of going without food, which causes them to put off or delay getting medical care. The families will be further pushed into the cycle of poverty as a result of the high cost of healthcare and the associated financial constraints[170]. Out of pocket expenses and financial inclusion are often connected because Out of pocket expenses primarily explains how families are forced into poverty, particularly when confronted with high healthcare costs. Financial inclusion is crucial to realizing SDG3 of the Sustainable Development Goals (SDGs). It enables people to effectively manage their medical bills, which improves their health and wellness. This is due to the fact that a significant portion of the financing of the healthcare system in middle- and low-income nations

comes from out-of-pocket health expenditures , or the household's contribution of direct healthcare expenses[171].

5. **Access to Care and Waiting Time**

Patient satisfaction is affected by the amount of time a patient spent while waiting for health care and time spent with the healthcare professionals while receiving treatment. The amount of time spent discussing during health care visits can be linked to a level of greater satisfaction. However, while a patient is satisfied with the discussion, another patient is waiting to be attended to and becomes dissatisfied. Healthcare professionals with high-volume practice have been observed to be more efficient with their time but have poorer patient satisfaction, provided less preventive care and are perceived as being less sensitive in the doctor-patient relationship[172]. High wait times may be difficult to prevent owing to circumstances beyond the healthcare providers' control, such as numbers of patients or appointment modifications. Furthermore, they may make it more difficult for healthcare professionals to encourage patient compliance and deal with unhappy patients[173]. Therefore, it is important to keep in mind that waiting times have a significant role in the patient experience

2.3. Organizational Culture, Patient Safety Culture and Patient Satisfaction

Theories help us comprehend how certain occurrences happen. As a result, they have a significant impact and application in professional practice. Situations that encourage excellence in patient safety culture and patient satisfaction can be identified. What is the safety of hospitals? Why do some hospitals have a higher incidence of patient-related accidents and errors? How can we reliably evaluate and analyze healthcare employees' safety attitudes? What can hospitals and other healthcare settings do to enhance their safety culture and reduce patient harm? In the last

decade, research in the field of Patient Safety Culture (PSC) and Patient Satisfaction has focused on these and other concerns. More hospitals and healthcare executives are attempting to understand the nature of their organizations' cultures and implementing methods to improve patient safety and patient satisfaction[174].

2.4. The Instruments to Measure and Evaluate Patient Safety Culture and Patient Satisfaction

International licensing and internal regulatory organizations have long emphasized the need of cultivating a patient safety culture. Much of the understanding of patient care requirements, healthcare personnel needs, and organizational culture improvement and evaluation may be gained by using the evaluation framework and assessment tools. This has resulted from the utilization of data gathered through evaluations to develop constructive adjustments to the healthcare system's safety[175].

Assessment tools made to measure safety characteristics, such as management and supervision, safety systems, risk perceptions, teamwork, communication, feedback, reporting systems, workload, personal and psychological resources, and other organizational factors, can be used to evaluate the safety culture of a hospital[176]. Several instruments have been developed to measure and evaluate patient safety culture and patient satisfaction. Although the first safety culture tools designed for healthcare began to emerge in the year 2004. Many of these tools are in the form of survey instruments or questionnaires. Safety Attitudes Questionnaires (SAQ) and the Hospital Survey of Patient Safety Culture (HSOPSC) are regarded as the most popular tools[177].

a. Safety Attitudes Questionnaires (SAQ)

The Safety Attitudes Questionnaires (SAQ) was created to assess patient safety climate by factoring in 'teamwork climate,' 'safety climate,' 'perceptions of management,' 'job satisfaction,' working conditions, and stress recognition[178]. The SAQ is also known as an upgrade of the Intensive Care Unit Management Attitudes Questionnaire (FMAQ). After researchers discovered that most aircraft accidents were caused by failures in interpersonal components of crew performance such as teamwork, speaking out, leadership, communication, and collaborative decision making, the FMAQ was devised. The FMAQ assesses how crew members feel about these issues. The new SAQ items were developed through interactions with healthcare practitioners and subject matter experts since 25% of the FMAQ items exhibited value in medical settings in terms of the subject covered and factor loadings. Since its creation, the SAQ has been modified for use in intensive care units (ICUs), operating rooms (ORs), general inpatient settings (medical wards, surgical wards, and ambulatory clinics)[179]. The item content is the same for each version of the SAQ, with slight changes to reflect the clinical area. It comprises of 32 measures measuring healthcare professionals' attitudes in 5 areas: workplace conditions (4 questions), perception of management (10 items), job satisfaction (5 items), and teamwork culture (6 items) safety culture (7 items). The degree of satisfaction with each question is assessed using a five-point Likert scale (1 = strongly disagree, 2 = somewhat disagree, 3 = neutral, 4 = slightly agree, and 5 = strongly agree)[180].

Researchers administered the original SAQ to 203 sites consisting of over 10000 participants, and it revealed significant variation among sites. The data was exposed to multi-level confirmatory factor analysis models by the questionnaire creators, who also investigated the construct validity until a good model fit was attained. The Raykov's coefficient was used to

determine the reliability. The SAQ's reliability was strongly indicated by the p-value of.90. They came to the conclusion that the factor analysis and reliability results both showed strong psychometric qualities[181].

According to a Polish study, the Safety Attitudes Questionnaire reliability had a Cronbach's Alpha of 0.98, . The Kaiser test was used to determine whether the data meet the criteria for the factor analysis prior to performing the analytical validity of the Polish adaption of the SAQ-SF. The level of the Kaiser-Mayer-Olkin (KMO) value, which is a gauge of how well the sample was chosen, was assessed at 0.87 (df = 8630, p0.001). This model accounted for 68% of the total variation of the variables analyzed[182].

b. The Hospital Survey on Patient Safety Culture (HSOPSC)

There has always being the need to follow thorough evaluation of the literature on patient safety and management, with input from both researchers and hospital administrators[183]. the the United States Agency for Healthcare Research and Quality (AHRQ) developed the Hospital Survey on Patient Safety Culture (HSOPSC) tool in 2004[184]. This tool was developed to assess patient safety culture among healthcare professionals[185]. Furthermore to measure patient safety culture and also used in presenting a thesis[186]. A database was released by the AHRQ to make it easier to compare the results of different survey respondents. For instance, the 2019 benchmark contains information obtained from 382 834 responders in 630 hospitals in the USA[187]. Despite the lack of comparable data from the other countries, this instrument enables comparisons with other nations based on research using the same variables and related items that show satisfactory validity and reliability[188].

The HSOPSC is one of the most applied instruments developed for patient safety culture in general practices[189]. This instrument has been translated and certified in a number of languages and healthcare environments since its conception. It consists of unit-level aspects of patient safety which include; "manager promoting safety", "organizational learning", "teamwork within hospital units", "communication openness", "feedback and communication", and "non-punitive response to error and 'staffing". Hospital-level aspects are collected in three dimensions: "hospital management support", "teamwork across hospital units" and "hospital handoffs & transitions", "frequency of event reporting" and "overall perceptions of safety"[190].

The HSOPSC includes 10 dimensions that characterize how healthcare professionals view safety culture. Additionally serving as performance indicators are the "frequency of event reporting" and "overall views of safety" dimensions. The 42 item tool is operationalized by three to four items or questions per dimension. This instrument gauges safety culture using five-point Likert scales, evaluating frequency and agreement from "never" to "always" and strongly disagreeing to strongly agree. This instrument has strong psychometric backing, adequate reliability. With Cronbach's alpha = 0.63–0.84, exploratory and confirmatory factor analyses were used to establish content and construct validity[191]. Several other tools exist, some of which target specific aspects of safety culture[192].

c. **The Safety Climate Survey (SCS)**

The SCS is often used by organizations to get faster assessment data on the safety climate from which leaders of organizations can focus on the improvement of activities[193]. The Center of Excellence for Patients, Safety Research and Practice at the University of Texas created the Safety Climate Survey, which is regarded as a unidimensional instrument that makes it easier for

it to be adapted to many countries and cultures[194]. The survey tool has 19 parts, each of which is further broken down into 3 subparts. A 5-point Likert scale must be used to rate each item (1, do not agree at all; 5, fully agree; 0, I cannot say). Higher ratings in the participants' evaluations are indicative of a safer environment. Calculating item mean values, total mean values, or safety climate sum scores are suggested for assessing the safety climate[195].

The first SCS consisted of questions on: “the status of the workplace safety committee”, “status of the safety officer”, “effects of safe conduct on promotion”, “level of risk at the workplace”, and “management attitudes toward safety” and “effect of safe conduct on social status”. Subsequently, there has been a modification of the SCS which still focuses on the factors of the first SCS but bothers on five constructs: "supervising safety report", "co-worker safety report", "management commitment to safety", "employee participation" and "competence level"[196].

d. **The Patient Safety Climate in Healthcare Organizations Survey (PSCS)**

The PSCS is developed from the Patient Safety Cultures in Healthcare Organizations (PSCHO) constitutes: (a). Organization level “senior managers’ engagement”, “organizational resources” and “overall emphasis on safety”, (b). Unit level “unit safety norms” and “unit recognition and support for safety”, (c). Individual “fear of shame”, “fear of blame”, and “learning, and the additional “provision of safe care”. The PSCS measures patient safety culture and patient safety climate[197].

e. **The Manchester Patient Safety Assessment Framework (MaPSaF)**

The MaPSaF is developed as a tool for organizations to qualitatively work with nine dimensions of patient safety culture in five organizational levels of safety; “pathological”, “reactive”, “calculative”, “proactive” and “generative”[198]. Early in the 1990s, a petrochemical industry

application led to the development of the framework that serves as MaPSaF. The original framework included descriptors of what an organization might look like for a variety of different safety aspects at each of three cultural key stages (termed pathological, bureaucratic, and generative) using a scale akin to Guttman's[199].

There is no related framework for fostering a culture of patient safety at the pathology level. Reactive level refers to a patient safety culture system that is still fragmented, such as because of regulations, accreditation standards, or the need to only react when a patient safety incident occurs. Bureaucratic level refers to a patient safety approach that is systematic but whose application is only carried out in the event of a patient safety incident. The proactive level entails a thorough approach to patient safety culture and the execution of treatments supported by data and evidence (evidence-based). The final level, known as generative means healthcare institutions have either created and adopted a patient safety culture as a core component of activities carried out within the institution or is classified as being integrated with health service goals so that interventions, evaluations, and significant patient safety-related actions are taken into consideration[200].

Parker and Hudson, as well as Reason, modified the tool for use in the primary healthcare sector, including extending the examination to five stages of maturity. Later, it was changed for hospitals, pharmacies, mental medical institutions, and paramedics[201].

f. Stanford Patient Safety Culture Instrument (Stanford/PSCI) and Modified Stanford Instrument

The Stanford Patient Safety Culture Instrument (Stanford/PSCI) and Modified Stanford Instrument is a safety culture assessment tool required by the healthcare accreditation body of

Canada which involves a ranking system for positive and negative responses to questions and consists of: “organizational leadership”, “shame and repercussions”, “perceived state of safety” and “safety learning behaviours”[202]. The instrument consists of three different scales a 5-point Likert scale, a "yes"/"no"/"uncertain" scale, and a 5-point frequency scale, which are used to rate responses. The survey can be conducted by "internal or external assessors" because it is a scale-based survey. Despite having 30 items to answer, the survey did not fully address the problems underlying safety culture[203]. The Modified Stanford Instrument (MSI-06) was created as a result to solve the difficulties with concision. The MSI-06 assigns scores to 32 questions on 5 dimensions (organizational management for safety, unit management for safety, perceived status of safety, fear and implications of reporting, and safety learning attitudes)[204].

The ability to evaluate a wide range of healthcare institution including direct care providers (nursing staff, clinical staff, allied healthcare staff, and specialists), medical teachers and administrators, and support service staff and managers like unit clerks, housekeeping staff, and health records technicians, is one of the modified Stanford tool's strengths. The Stanford PSCI and AHRQ HSOPSC, two previously validated instruments, are built upon in the MSI-06, which was created to be utilized in variety of healthcare settings, including acute and chronic care, as well as community - based settings[205].

g. **Victorian Safety Climate Scale (Vic SCS)**

The Victorian Managed Insurance Authority (VMIA) and the Victorian Quality Council (VQC) created the [Victorian] Safety Climate Survey (Vic SCS), as a more contemporary version of the SAQ, to assess the patient safety climate in hospitals. Six of the original SAQ factors (Teamwork

Climate, Safety Climate, Job Satisfaction, Perceptions of Management, Working Conditions, and Stress Recognition) are included in the survey items, which were adapted from the whole SAQ[206].

h. **Patient Satisfaction Questionnaire (PSQ-18) Short-form**

Marshall and Hays developed the PSQ-18 to investigate patient satisfaction with healthcare in a variety of clinical settings, including outpatient departments, and explains that the PSQ-18 contains certain components that are designed to measure satisfaction with medical care and others that are designed to reflect displeasure.[207]. The PSQ-18 consists of 18 questions in total, each to assess 7 dimensions. These questions were graded using a Likert scale with a maximum score of five and a minimum score of one (strongly agree) (strongly disagree)[208].

2.5. Summary of Gaps in Literature Reviewed

The reviewed literature showed a dearth in studies regarding patient safety culture and patient satisfaction in Nigeria. Only a very few number of research has been conducted to identify the the levels of patient safety and patient satisfaction in the country. Although few studies have been conducted in single study sites and within specific units of hospitals, some questions are left unanswered with the lack of literature in Nigeria. Questions such as; What is the incidence rate of adverse events (medical error) in Nigeria?, what are the error reporting systems in Nigerian hospitals and how often are they utilized?, what is the perception of patient safety culture from the healthcare provider's view and patients' view?, what factors affect perception of patient safety culture in Nigeria?, and are there patient safety managers in Nigerian hospitals, and primary health care?

Although several studies reviewed made use of the HSOPSC questionnaires, they however does not measure patients' perception of safety culture being practiced in these healthcare facilities..

The lack of this information can significantly affect the overall identification and management of adverse events and improvement of patient safety.

The total number of adverse events that occurred in Nigeria are relatively unknown, even several studies only generalized the total number according to number of adverse events reported by staff.

Although, the studies assessed feedback, communication about errors and communication openness, they failed to distinctively assess the reporting systems of the study sites to determine if the reporting system was the cause of low positive response to total errors reported.

Further studies are needed to ensure how best to create a blame free environment and reduce punitive response to errors. Anonymous error reporting is an idea than can help reduce fear and pressure on clinical staff to report adverse events.

Finally, although assessing patient safety culture among clinical staff is a good step towards high patient safety culture in health care setting, patient safety is not limited to clinical staff because non clinical and non medical staff are also responsible for overall patient safety in the hospital. Further studies should be conducted among other staff in healthcare settings.

Lackadaisical approach to job duties by any hospital staff can result in adverse events e.g a cleaner who forgets to signify a wet surface while cleaning could eventually result in patients fall and injury. Long queues at cashiers' unit where patients need to wait before they can make payment can lead to additional stress levels ill patients. Ambulance driver pausing for chit-chat with colleague wasting minutes that could save a life.

In conclusion, Patient safety culture and patient satisfaction is a relatively recent idea, having emerged in the 1990s. More study is needed to determine how findings from various patient safety contexts differ or connect, as well as how organizational culture and cultural change might be effectively incorporated. Furthermore, studies should be conducted to measure overall patient safety culture of entire hospital staff, patients' perception and adverse reporting systems to have a generalized approach to the level of patient safety in health care settings.

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Chapter Three

Methodology

3.1 Research Design

The study is a descriptive cross-sectional multicenter study that assessed the perception of PSC among HCPs and patient satisfaction among patients in primary and secondary healthcare facilities in Ibadan South-West LGA, Oyo State, Nigeria.

The study designed assessed PSC using the HSOPSC questionnaire developed by AHRQ. The survey tool evaluated the dimensions of PSC. These were Teamwork, Staffing, Work-Pace, Organizational Learning - Continuous Improvement, Communication about Errors, Response to Errors, Supervisor / Manager / Clinical Leader's Support for Patient Safety, Communication Openness, Reporting Patient Safety Events, Hospital Management Support for Patient Safety.

Furthermore, the study design assessed patients' satisfaction using the Short-form Patient Satisfaction Questionnaire (PSQ-18) to assess satisfaction among patients attending the selected healthcare facilities about the care they received. The PSQ-18 survey tool assessed dimensions of patient satisfaction such as doctor-patient interaction, quality of medical care, transparency and communication between healthcare professionals and the patient, cost and financial aspect of care, access to physicians.

3.2 Population of Study

This study was conducted in Ibadan southwest LGA of Oyo State, Nigeria. The city of Ibadan had a population estimated at 3,565,108 as of 2021[1]. At the time of this study, the city ranked as the third-largest city by population in Nigeria, and consisted of 11 LGAs (Ibadan North LGA,

North-East LGA, North-West LGA, South-East LGA, South-West LGA, Akinyele LGA, Oluyole LGA, Egbeda LGA, Ido LGA, Lagelu LGA, and Ona Ara LGA)[2].

Ibadan South-West LGA is an urban area with an estimated population of 397,700 individuals. The LGA has a landmass of 25.13 km2, a population density of 15,828 km2, and an annual population density of 3.5% from the year 2006 to 2016. With a population index (persons per facility) of 10,150 persons, Ibadan South-West LGA has 43 hospitals with 22 PHCs and 21 secondary hospitals (16 private secondary hospitals and 5 public secondary hospitals). The selected LGA comprised two of the three-tier levels of healthcare (Primary and Secondary healthcare facilities)[3].

The selected study sites included 6 primary healthcare facilities, 3 public secondary healthcare facilities, and 3 private secondary healthcare facilities in Ibadan Southwest LGA, Oyo State, Nigeria. Selected healthcare facilities offered a variation of in-patient and out-patient services. These services include medical, surgical, obstetrics and gynaecology, paediatrics, dental, and specific clinical services. The selected public and private healthcare facilities provided on-site laboratory, imaging, and pharmaceutical services.

The study population were healthcare professionals working in primary and secondary healthcare facilities in badan south-west LGA, Oyo State, Nigeria. Individuals residing in the Ibadan South-West LGA were included as participants in the study population to assess patient satisfaction.

3.3 Sample and Sampling Techniques

Using Yamane's formula (n = N / 1 + N(e)2), investigators selected a sample size of 268 HCPs from the population of 808 individuals listed on the Ministry of Health facility list as healthcare workers in Ibadan south-west LGA. The sample was calculated with a confidence level of 95%

and a 5% margin of error. It was to provide an adequate representation of the population. Based on Cochran's formula (z2pq / e2 where q = 1-p), researchers selected 385 patients from the population of 3,565,108 individuals in Ibadan to participate in the patient satisfaction survey. Investigators calculated the sample size with a confidence level of 95% with α of 0.05 and a 5% Margin of Error[4].

Investigators utilised a multistage sampling technique to select the participants of the study. In the first stage, investigators purposely chose Ibadan southwest LGA from the 11 LGAs in the city. The LGA had the second-highest population index (persons per facility)[5].

In the second stage, researchers stratified healthcare facilities into primary, public secondary and private secondary healthcare facilities. Thirdly, researchers used a ballot system to randomly select the primary, public, and private healthcare facilities.

Researchers chose a sample frame of HCPs that worked in the selected healthcare facilities. Investigators gave consenting HCPs at the selected study sites the HSOPSC version 2.0 questionnaires to participate in the study. Patients at the selected study sites received the Short-form Patient Satisfaction Questionnaire (PSQ-18).

Researchers included all HCPs that worked at the selected study sites at the time of the study as participants in the study. Investigators included patients who were literate in the English language and attended the selected healthcare facilities on clinic days as participants in the study. Researchers excluded HCPs who were indisposed, on leave, on vacation and on night duty from the study. Also, patients in Intensive Care Units (ICU) who required emergency and admission services, and patients who were not literate in the English language were excluded from the study.

3.4 Description of the Research Instruments

Hospital Survey on Patient Safety Culture (HSOPSC) questionnaire version 2.0 questionnaire was developed by the Agency for Healthcare Research and Quality developed this questionnaire to assess PSC perception among clinicians and staff within and across units in a hospital. The questionnaire has been pilot tested as a reliable and valid survey instrument.

The HSOPSC version 2.0 survey tool comprised of 40 survey items. These items contained single-item measures on number of errors reported, overall patient safety rating for unit/work area. Furthermore, survey items on background and characteristics such as staff position, work/unit area, hospital tenure, unit/work area tenure, work hours, and patient interactions.

Furthermore, the instrument grouped survey items into composite measures in groups of two or more survey items that assessed the same areas of PSC. The majority of the survey items used a 5-point Likert scale ("Strongly Disagree" to Strongly Agree") and frequency scales ("Never" to "Always"), and included "Don't know" or "Does not apply. In addition, there will be open-ended comments at the end.

The Patient Satisfaction questionnaire (PSQ-18) was developed by Marshall and Hays. This instrument contained 18 survey items that assessed the dimensions of satisfaction among patients for the care received. These dimensions included communication, financial features, technical quality, interpersonal manner, time spent with physician/doctor, accessibility, satisfaction, and convenience.

3.5 Validity of Research Instrument

Over the years, there have been growing efforts among healthcare policy makers and mangers to continually PSC in healthcare facilities[6]. However, several researchers have expressed their concerns regarding the surveys and questionnaires and urged caution[7]. Concerns were raised by about overall differences in how survey dimensions were used in safety survey tools; differences in emphasis on survey dimensions; a lack of very detailed descriptions of how different tools were developed [8]. Furthermore, the limited validity of dimensions or constructs in safety surveys against other ways to assess safety culture that has not been discovered [9].

The psychometric attributes of the HSOPSC questionnaire were highlighted in the SOPs hospital survey items and composite measures[10]. The reliability of composite measures such as Teamwork and Organizational Learning - Continuous Improvement both contained 3 survey items, and recorded Cronbach's alpha of 0.76. Staffing and Work Pace with 4 items recorded a Cronbach's alpha of 0.67. Response to Error and Communication Openness which contained 4 items recorded Cronbach's alpha of 0.83, while Reporting Patient Safety Events which contained 2 items recorded 0.75. Other composite measures such as Supervisor/Manager/Clinical Leader Support for Patient Safety, Communication about Error, Hospital Management Support for Patient Safety, and Handoff and Information Exchange all contained 3 items, and recorded Cronbach's alpha of 0.77, 0.89, 0.77, and 0.72. Similarly, in-depth systematic reviews of safety culture found multiple common components such as reporting or recording of adverse events, communication, leadership and management, systems policies/education/training, work demands, teamwork, values and beliefs about safety, organizational learning, individual factors, evaluating incidents and best practices, and as a whole commitment to continuous improvement [11]. The most frequent characteristics in these three systematic evaluations were leadership, safety

systems, collaboration, values and attitudes about safety, and teamwork[12]. Additionally, when the HSOPSC has been used in a Turkish health care context and a Dutch health care setting[13]. It was further used in many other European nations including United Kingdom[14]. It was observed to have adequate reliability and construct validity[15].

For use in various studies, the Patient Satisfaction QuestionnaireShort Form (PSQ18) has been validated. This was condensed from much longer questionnaires while keeping internal consistency and reliability[16]. The PSQ-18 questionnaire has been utilized in various studies, thus proving its validity to assess patient satisfaction accurately to a satisfactory degree .

3.6 Reliability of the Research Instrument

A psychometric assessment of the HSOPSC questionnaire carried out in Kuwaiti showed a acceptable level of reliability (a ≥ .60) in nine dimensions of [17]. Conclusively, The use of the HSOPSC version 2.0 survey tool in numerous studies to accurately assess safety culture to an acceptable degree, showed the validity of the survey tool.

A study conducted in India found PSQ- 18 survey tool to be valid and reliable, with internal consistency across dimensions varying from 0.72 to 0.93 [18]. Furthermore, It was developed after thorough research. Seven factors of patient satisfaction with regard to their doctors were suggested by the team who developed this Likert scale questionnaire. These include overall satisfaction, technical excellence, interpersonal courtesy, communication, budgetary considerations, amount of time spent with the doctor, and accessibility and convenience. All dimension is examined using various relevant questions[19].

3.7 Data Collection

Investigators collected data regarding PSC among HCPs with the Hospital Survey on Patient Safety Culture (HSOPSC) questionnaire version 2.0. The initial version in 2004 was incorporated into the newer version 2.0 in 2019[20]. Investigators developed the survey instrument to assess PSC perception among clinicians and staff within and across units in healthcare facilities. The HSOPSC has been pilot tested as a reliable and valid survey instrument[21]. The tool had 40 survey items. These items contained 8 single-item measures. Researchers asked respondents about the number of errors they had reported and their overall patient safety rating for their unit/work area.

There were six survey items on background characteristics such as staff position, work/unit area, hospital tenure, unit/work area tenure, work hours, and interaction with patients. The investigators also grouped thirty-two (32) survey items into ten (10) composite measures in groupings of two or more survey items that assessed the same areas of PSC. The majority of the survey items used a 5-point Likert scale (Strongly Disagree to Strongly Agree, and frequency scales (Never to Always) and included don't know or Do not apply. In addition, there were open-ended comments at the end. Investigators obtained data regarding patient satisfaction using the Short-form Patient Satisfaction Questionnaire (PSQ-18), developed by Marshall and Hays[22]. This instrument contained 18 survey items that assessed the seven (7) dimensions of satisfaction among patients for the care received. These dimensions included; communication, overall satisfaction, financial features, technical quality, interpersonal manner, time spent with physician/doctor, accessibility, and convenience.

Previous studies tested the survey tools to be valid and reliable to assess satisfaction with the medical care received[23].

3.8 Data Analysis

Data were collected from participants using HSCOPSC version 2.0 and PSQ-18 questionnaires.

Trained assistants administered questionnaires to participants during official work hours in the selected study sites. Trained assistants distributed questionnaires directly to the respondents and collected completed surveys directly from participants to ensure complete confidentiality, anonymity, and accountability for all returned survey tools.

The survey tools obtained information on the dimensions of patient safety culture on respondents' socio-demographic characteristics, the overall perception of PSC, and overall patient safety rating. PSQ questionnaires did not obtain information on the socio-demographic characteristics of patients. The survey items only assessed the degree of satisfaction among patients regarding care received. Investigators gave participants incentives to compensate for additional time spent completing the surveys.

Researchers used the Shapiro Wilk Test to confirm that the data obtained had a normal distribution. For researchers to compute PPR, the frequency proportions for strongly agree and strongly disagree (for non-negatively phrased questions and strongly disagree and disagree (for negatively framed questions) were added (for negatively worded questions). Researchers generated the composite index for each dimension by taking the average PPR.

Positively response rate percentages were computed by summing frequency proportions for strongly agree and strongly disagree (for non-negatively phrased questions) and strongly

disagree and disagree (for negatively worded questions) and the average PPR to calculate the composite index for each dimension. Researchers used Pearson correlation analysis to investigate the relationship between PSC and patient safety grade by calculating the items under each dimension and creating a composite complex.

Before that, negative questions such as “we have patient safety issues in this unit”, were reversed (5 = strongly disagree, 4 = disagree, 3 = neutral, 2 = agree, 1 = Strongly agree). Many respondents predicted to respond “strongly disagree” or “disagree” to negatively worded items. Furthermore, investigators used Linear regression to identify characteristics influencing patient satisfaction among health professionals and One-Way Analysis of Variance (ANOVA) to compare the mean scores of the three institutions. Researchers met all of the assumptions underlying ANOVA.

3.9 Ethical Approval

This study was granted ethical considerations by the Oyo State Research Ethics Review Committee, Ministry of Health Secretariat, Ibadan, and the Health Research Ethics Committee, Lead City University Ibadan (LCU-HREC). Also, investigators sought permission from the selected healthcare facilities to conduct the study. Investigators informed participants about the details and objective of the study and obtained the consent of the participants in both written and verbal form and assured participants of the anonymity and confidentiality of their responses.

Participants had the opportunity to decline participation in the study. Furthermore, participants were allowed to decide whether to proceed or withdraw from the study at any given time without consequences.

This study posed no risk or danger to participants. Investigators informed participants that they would disseminate findings in an aggregate form to academic journals, policymakers, and healthcare managers with no way to identify their responses.

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Chapter Four

Results and Discussion of Findings

4.1 Demographic Data Analysis

A higher percentage of healthcare professionals were nurses who accounted for approximately 43.5 per cent of the overall population, 11.4% of doctors, 2.6% of administrators, and 42.4% of other professions such as pharmacists, lab scientists, etc. At least 50.2% had less than one year of job experience and more than 75% from public secondary health care facilities. The details are in Table1.

Table 1. Demographic Characteristics of Healthcare Professionals

Demographic Variables	N=271 n(%)
Position	
Nurses	118 (43.5)
Doctors	31(11.4)
Administrators	7(2.6)
Others	115 (42.4)
Primary Work Area/Unit	
Multiple Units, No specific unit	52 (19.2)
Medical/Surgical Units	84 (31.0)
Patient Care Units	48 (17.7)

Surgical Services	8(3.0)
Clinical Services	58(21.4)
Administration/Management	21(2.1)
Experience	
<1	136(50.2)
1-5	106(39.1)
6-10	20(7.4)
>11	9(3.3)
Work Hours	
<30	34(12.5)
30-40	125(46.1)
>40	112(41.3)
Hospital Types	
Primary Health Centers	23(8.5)
Public Secondary Hospitals	205(75.6)
Private Secondary Hospitals	43(15.9)

4.2 Presentation of Data

1. Perceptions of Patient Safety Culture among Clinical Staff

Dimensions of patient safety culture are described in Table 2: Results of this study showed that while some patient safety culture dimensions recorded strong positive response rates (above 70%), reporting patient safety events (47.4%) staffing and work pace (49.9%) recorded the lowest PPRs. In the dimension regarding response to error (67.3), PPR was recorded below 70%.

In the dimension of patient safety rating, 76.7% of the respondents rated patient safety in their units as very good and excellent. Furthermore, 51.7% reported at least one patient safety event in the last 12 months. Overall patient safety culture was 72.1%.

Table 2. Frequency Distribution on Perceptions of Patient Safety Culture among Clinical Staff

Patient Safety Dimension	Strongly Disagree n(%)	Disagree (n(%)	Undecided n(%)	Agree n(%)	Strongly Agree n(%)	% of positive response rate
Teamwork						**88.5**
In this unit, we work together as an effective team	3 (1.1)	1 (0.4)	2 (0.7)	87 (32.1)	178 (65.7)	97.8
During busy times, staff in this unit help each other	10(3.7)	6(2.2)	10(3.7)	108(39.9)	137(50.6)	90.5
There is a problem with disrespectful behaviour by those working in this unit	102(37.6)	107(39.5)	27(10.0)	21(7.7)	14(5.2)	77.1
Staffing and Work Pace						**49.9**
In this unit, we have enough staff to handle the workload	41 (15.1)	91 (33.6)	32 (11.8)	68 (25.1)	39 (14.4)	39.5
Staff in this unit work longer hours than is best for patient care	6 (2.2)	48 (17.7)	43 (15.9)	102 (37.6)	72 (26.6)	19.9
This unit relies too much on temporary, float, or PRN staff	57 (21.0)	119 (43.9)	54 (19.9)	26(9.6)	15 (5.5)	64.9
The work pace in this unit is so rushed that it negatively affects patient safety	92(33.9)	112(41.3)	23(8.5)	27(10.0)	17(6.3)	75.2

Organizational Learning-Continuous Improvement						**83.7**
This unit regularly reviews work processes to determine if changes are needed to improve patient safety	3 (1.1)	12 (4.4)	26 (9.6)	137 (50.6)	93 (34.3)	84.9
In this unit, changes to improve patient safety are evaluated to see how well they worked	6(2.2)	21(7.7)	27(10.0)	141 (52.0)	76(28.0)	80.0
This unit lets the same patient safety problems keep happening	134(49.4)	100(36.9)	22(8.1)	11(4.1)	4 (1.5)	86.3
Response to Error						**67.3**
In this unit, staff feel like their mistakes are held against them	33(12.2)	124 (45.8)	55 (20.3)	46(17.0)	13 (4.8)	58.0
When an event is reported in this unit, it feels like the person is being written up, not the problem	48(17.7)	128 (47.2)	46(17.0)	39 (14.4)	10(3.7)	64.9
When staff make errors, this unit focuses on learning rather than blaming individuals	11(4.1)	32(11.8)	24(8.9)	123(45.4)	81(29.9)	75.3
In this unit, there is a lack of support for staff involved in patient safety errors	52(19.2)	140 (51.7)	46(17.0)	22(8.1)	11(4.1)	70.9

Supervisor, Manager, or Clinical Leader Support for 80.4 Patient Safety						
My supervisor, manager, or clinical leader seriously considers staff suggestions for improving patient safety	6(2.2)	7(2.6)	16(5.9)	124 (45.8)	118 (43.5)	89.3
My supervisor, manager, or clinical leader wants us to work faster during busy times, even if it means taking shortcuts	52(19.2)	119(43.9)	34(12.5)	40(14.8)	26 (9.6)	63.1
My supervisor, manager, or clinical leader takes action to address patient safety concerns that are brought to their attention	6(2.2)	6(2.2)	18 (6.6)	136(50.2)	105(38.7)	88.9
Patient Safety Dimension	**Never**	**Rarely**	**Sometimes**	**Most of the Time**	**Always**	**% of positive response rate**
Communication about Errors						**72.2**
We are informed about errors that happen in this unit	14 (5.2)	42 (15.5)	61(22.5)	60 (22.1)	94 (34.7)	56.8
When errors happen in this unit, we discuss ways to prevent them from happening again	2(0.7)	11 (4.1)	25(9.2)	55 (20.3)	178 (65.7)	86.0
In this unit, we are informed about changes that are made based on event reports	2(0.7)	10(3.7)	59 (21.8)	81 (29.9)	119 (43.9)	73.8

Communication Openness						**75.9**
In this unit, staff speak up if they see something that may negatively affect patient care	5 (1.8)	5 (1.8)	25(9.2)	65 (24.0)	171 (63.1)	87.1
When staff in this unit see someone with more authority doing something unsafe for patients, they speak up	5 (1.8)	17 (6.3)	60 (22.1)	67 (24.7)	122 (45.0)	69.7
When staff in this unit speak up, those with more authority are open to their patient safety concerns	7(2.6)	22(8.1)	54(19.9)	70 (25.8)	118 (43.5)	69.3
In this unit, staff are afraid to ask questions when something does not seem right	144(53.1)	66 (24.4)	34(12.5)	17 (6.3)	10(3.7)	77.5
Reporting Patient Safety Events						**47.4**
When a mistake is caught and corrected before reaching the patient, how often is this reported?	17 (6.3)	55 (20.3)	71 (26.2)	64 (23.6)	64 (23.6)	47.2
When a mistake reaches the patient and could have harmed the patient, but did not, how often is this reported?	22 (8.1)	42(15.5)	78 (28.8)	63 (23.2)	66 (24.4)	47.6
Number of Events Reported						**51.7**
In the past 12 months, how many patient safety events have you reported?	none	1-2	3-5	6-10	>11	
	131 (48.3)	54 (20.0)	41 (15.1)	15(5.5)	30(11.1)	

Patient Safety Rating	Poor	Fair	Good	Very Good	Excellent	% of positive response rate
How would you rate your unit/work area on patient safety?	0(0.0)	8(3.0)	55 (20.3)	92 (33.9)	116 (42.8)	**76.7**
Characteristics	**Strongly Disagree n(%)**	**Disagree (n(%)**	**Undecided n(%)**	**Agree n(%)**	**Strongly Agree n(%)**	**% of positive response rate**
Hospital Management Support for Patient Safety						**72.2**
The actions of hospital management show that patient safety is a top priority	2 (0.7)	7 (2.6)	17 (6.3)	124 (45.8)	121 (44.6)	90.4
Hospital management provides adequate resources to improve patient safety	9 (3.3)	26 (9.6)	47 (17.3)	115 (42.4)	74 (27.3)	69.7
Hospital management seems interested in patient safety only after an adverse event happens	46(17.0)	107 (39.5)	49 (18.1)	52 (19.2)	17(6.3)	56.5
Handoffs and Information Exchange						**83.9**
When transferring patients from one unit to another, important information is often left out	96(35.4)	132(48.7)	19 (7.0)	16 (5.9)	8(3.0)	84.1

During shift changes, important patient care information is often left out	104 (38.4)	125 (46.1)	27 (10.0)	9 (3.3)	6(2.2)	84.5
During shift changes, there is adequate time to exchange all key patient care information	7(2.6)	11 (4.1)	28 (10.3)	136 (50.2)	89(32.8)	83.0

2. Perceptions of Patient Satisfaction among Patient Attending Hospitals in Ibadan South-west Local Government

Table 3 shows perceptions of patient satisfaction among patients attending hospitals in the Ibadan south local government area. Interpersonal manner (75.7%), and communication (84.5%) recorded the highest number of positive responses. Other dimensions of patient satisfaction recorded a percentage of positive responses below 70%. The financial aspect (54.9%) recorded the lowest percentage of positive responses.

Table 3. Frequency Distribution on Perceptions of Patient Satisfaction among Patients Attending Hospitals in Ibadan South-west Local Government

Characteristics	Strongly Disagree n(%)	Disagree (n(%)	Undecided n(%)	Agree n(%)	Strongly Agree n(%)	% of positive response rate
General Satisfaction						**69.8**
The medical care I have been receiving is just about perfect	2(0.5)	19(4.9)	60(15.5)	203(52.5)	103(26.6)	79.1

I am dissatisfied with some things about the medical care I receive	68(17.6)	166(42.9)	49(12.7)	67(17.3)	37(9.6)	60.5
Technical Quality						**63.9**
I think my doctor's office has everything needed to provide complete medical care	12(3.1)	54(14.0)	76(19.6)	151(39.0)	94(24.3)	63.3
Sometimes doctors make me wonder if their diagnosis is correct	15(3.9)	104(26.9)	102(26.4)	120(31.0)	46 (11.9)	30.8
When I go for medical care, they are careful to check everything when treating and examining me	3(0.8)	20(5.2)	23(5.9)	190(49.1)	151(39.0)	88.1
I have some doubt about the ability of doctors who treat me	82(21.2)	203(52.5)	55(14.2)	26(6.7)	21(5.4)	73.7
Interpersonal Manner						**75.7**
Doctors act too businesslike and impersonal toward me	59(15.2)	192(49.6)	45(11.6)	61(15.8)	30(7.8)	64.8
My doctors treat me in a very friendly and courteous manner	2(0.50	22(5.7)	28(7.2)	191(49.4)	144(37.2)	86.6

Communication						**84.5**
Doctors are good about explaining the reason for medical tests	2(0.5)	11(2.8)	23(5.9)	183(47.3)	168(43.4)	90.7
Doctors sometimes ignore what I tell them	81(20.9)	222(57.4)	31(8.0)	36(9.3)	17(4.4)	78.3
Financial Aspect						**54.9**
I feel confident that I can get the medical care I need without being set back financially	23(5.9)	64(16.5)	43(11.1)	175(45.2)	82(21.2)	66.4
I have to pay for more of my medical care than I can afford	32(8.3)	136(35.1)	75(19.4)	99(25.6)	45(11.6)	43.4
Time Spent with Doctors						**61.7**
Those who provide my medical care sometimes hurry too much when they treat me	47(12.1)	206(53.2)	43(11.1)	65(16.8)	26(6.7)	65.3
Doctors usually spend plenty of time with me	17(4.4)	79(20.4)	66(17.1)	165(42.6)	60(15.5)	58.1

Accessibility and Convenience						**65.3**
Where I get medical care, people have to wait too long for emergency treatment	46(11.9)	158(40.8)	51(13.2)	69(17.8)	63(16.3)	52.7
I have easy access to the medical specialist I need	12(3.1)	49(12.7)	57(14.7)	181(46.8)	88(22.7)	69.5
I find it hard to get an appointment for medical care right away	61(15.8)	160(41.3)	62(16.0)	65(16.8)	39(10.1)	57.1
I am able to get medical whenever I need it	11(2.8)	35(9.0)	25(6.5)	193(49.9)	123(31.8)	81.7

3. Relationships between HCPs' Perception of Patient Safety Dimensions and Outcomes of Patient Safety in Each Study Site

Tables 4, 5, and 6 demonstrate relationships between HCPs' perception of patient safety dimensions and patient safety outcomes in each study site. There was a significant correlation between organization learning continuous improvement, supervisor manager, communication openness hospital management handoff information and patient safety outcome in public secondary healthcare facilities within the local government. Furthermore, there was a significant correlation between staffing and workplace, hospital management and patient safety outcomes in private secondary healthcare facilities. However, result showed no significant correlation between patient safety culture dimensions and patient safety outcome in the primary healthcare facility.

Table 4. Pearson Correlation Matrix between Patient Safety Culture Dimensions and Patient Safety Grade in Primary Healthcare Facilities in Ibadan South-west LGA, Oyo State, Nigeria

Characteristics	Pearson correlation coefficient	P-value
Teamwork	0.82	0.41
Staffing and Workplace	0.14	0.53
Organizational Learning Continuous Improvement	-0.19	0.40
Response to Error	0.32	0.13
Supervisor Manager or Clinical Leadership Support	-0.26	0.24
Communication about Error	-0.81	0.41
Communication Openness	-0.12	0.58
Reporting Patient Error	0.08	0.70
Hospital Management	-0.15	0.50
Hand-off Information	-0.23	0.29

*P value <0.05, **P value< 0.001

Table 5. Pearson Correlation Matrix between Patient Safety Culture Dimensions and Patient Safety Grade in Public Secondary Healthcare Facilities in Ibadan South-west LGA, Oyo State, Nigeria

Characteristics	Pearson correlation coefficient	P-value
Teamwork	0.08	0.24
Staffing and Workplace	0.07	0.34
Organizational Learning Continuous Improvement	0.29	<0.001**
Response to Error	0.04	0.61
Supervisor Manager or Clinical Leadership Support	0.20	0.01*
Communication about Error	0.04	0.56
Communication Openness	0.17	0.01*
Reporting Patient Error	0.07	0.35
Hospital Management	0.35	<0.001**
Hand-off Information	0.16	0.02*

*P value <0.05, **P value< 0.001

Table 6. Pearson Correlation Matrix between Patient Safety Culture Dimensions and Patient Safety Grade in Private Secondary Healthcare Facilities in Ibadan South-west LGA, Oyo State, Nigeria.

Characteristics	Pearson correlation coefficient	P-value
Teamwork	0.11	0.49
Staffing and Workplace	0.33	0.03*

Organizational Learning Continuous Improvement	0.16	0.30
Response to Error	0.16	0.29
Supervisor Manager or Clinical Leadership Support	0.29	0.85
Communication about Error	-0.07	0.64
Communication Openness	0.14	0.39
Reporting Patient Error	-0.30	0.05
Hospital Management	0.49	0.02*
Hands-off Information	0.41	0.29

*P value <0.05, **P value< 0.001

4. Factors Related to Overall Patient Safety Culture Perception by the Study Participants

Table 6 describes a Multiple Linear Regression Model for Predicting Factors affecting Overall Patient Safety Culture Perception. Years of experience. and the facility type was found to predict the overall Perception of Patient Safety Culture Perception at R^2=0.05 and p-value=0.003

Table 7. Multiple Linear Regression Model to Predict Factors that Affect the Overall Perception of Patient Safety Culture

Factors	***B***	***SE B***	***β***	**p-value**
Years of experience	1.69	0.80	0.19	0.04*
No of years in the unit	1.95	1.15	-0.17	0.06
Working hours	0.32	0.81	0.02	0.67

Facility type	0.54	1.28	0.27	<0.001**
Unit	-0.52	0.42	0.81	0.20
Job title	0.47	0.44	-1.76	0.08
R2			0.05	
f			2.44	0.03*

*P-value <0.05, **P value< 0.001

5. Relationship between Patient Safety Culture among Healthcare Professionals and Patient Satisfaction Among Patients in Ibadan South-west LGA, Oyo State, Nigeria

There was no significant relationship between Patient Safety Culture Among Healthcare Professionals and Patient Satisfaction Among Patients in Ibadan South-west LGA, Oyo State, Nigeria. This is explained in detail in table 8 below.

Table 8. Pearson Correlation Matrix between Patient Safety Culture among Healthcare Professionals and Patient Satisfaction among Patients in Ibadan South-west LGA, Oyo State, Nigeria.

Characteristics	Pearson correlation coefficient	P-value
PSC vs PXSAT	0.01	0.12

6. Differences in Perception of Patient Safety Culture among Healthcare Professionals in the Different Levels of Healthcare Facilities.

There was a statistically significant difference in patient safety culture perception among the three levels of health care facility: p <0.001 for F (19.98). comparing the mean gap between the public and private secondary healthcare systems There was a considerable difference in perception levels. Similarly, there was a statistical difference when comparing public secondary

hospitals to private secondary healthcare facilities. Table 9 also showed that there was no significant difference between the perception of patient satisfaction among those who attend public secondary healthcare facilities and private secondary healthcare facilities.

Table 9. Mean Differences in Perception of Patient Safety Culture among Healthcare Professionals in the Different Levels of Healthcare Facilities.

(I) Name of hospital	(J) Name of hospital	(Mean Difference (I-J)	Std. Error	Sig	F	P-value
Primary	Public secondary	-1.83	2.68	0.49	19.98	<0.001**
	Private Secondary Healthcare Facility	-14.20	3.10	<0.001**		
Public Secondary	Private Secondary Healthcare Facility	-12.37	2.04	<0.001**		

Table 10. Mean Differences in Patient Satisfaction in the Different Levels of Healthcare Facilities

(I) Name of hospital	(J) Name of hospital	(Mean Difference (I-J)	Std. Error	Sig	F	P-value
primary	Public secondary	-3.15	1.94	0.11	1.43	0.24
	Private Secondary Healthcare Facility	-2.14	2.28	0.35		

Public secondary	Private Secondary Healthcare Facility	1.01	1.48	0.49

4.2.1 Research Questions

1. Regarding the research question on the baseline status of patient safety culture among healthcare professionals in primary and secondary healthcare facilities in Ibadan South-west LGA, Oyo State, Nigeria, researchers found no related study conducted in Ibadan South-west LGA to establish a baseline status. However, this study recorded an average Percentage of Positive Response (PPR) of 72.1% in 10 areas of PSC assessed across 3 public, 3 private and 6 primary healthcare facilities, hereby establishing a baseline status in Ibadan South-west LGA for other studies to utilize.

2. With respect to the research question on the level of satisfaction among patients regarding care received in primary and secondary healthcare facilities in Ibadan South-west LGA, Oyo State, Nigeria, the result of this study revealed the overall average PPR of 67.9% in all 7 dimensions of the PSQ-18 survey tool. This result was similar to a study conducted in India[1]. This result was also similar to another study conducted in one healthcare facility in Nigeria[2]. However the overall average PPR was lower in comparison to other studies where overall patient satisfaction was above 70%[3]. Overall, the level of patient satisfaction among patients in Ibadan South-west LGA is a little above average.

3. In respect to the research question on what factors influence PSC among HCPs in primary and secondary healthcare facilities in Ibadan South-west LGA, Oyo State, Nigeria, the results of this study showed that facility-level predicted the overall perception of patient safety culture, this finding correlates with the results of a study conducted in Ethiopian public

healthcare facilities, where primary healthcare facilities were associated with a high perception of patient safety culture was found to be associated with working in primary healthcare facilities[4]. Furthermore, findings found years of experience to predict the overall perception of patient safety culture. It could be because of the high percentage of HCPS (89.3%) who had less than 6 years of work experience in their respective units. This result is similar to a study conducted in Brazil where HCPs who had less than 4 years of work experience had a lower perception of patient safety culture[5]. Another study conducted in the United States of America found work experience to influence healthcare workers' perception of patient safety culture[6].

4. Concerning the research question on the differences in perception of PSC among HCPs in primary and secondary healthcare facilities in Ibadan South-west LGA, Oyo State, Nigeria, the findings of this study showed there was a statistically significant difference in patient safety culture perception among the three levels of health care facilities. In addition, there was a statistical difference when comparing public secondary healthcare facilities to private secondary healthcare facilities. It aligns with the result of a multicenter study conducted in Brazil and Portugal, where its findings revealed a statistical difference in perception of patient safety culture among hospitals[7].

5. With reference to the research question about any correlations between PSC results among HCPs and patient satisfaction results among patients, the results of this study found no significant relationship between patient safety culture among HCPs and patient satisfaction among patients. The result from another study conducted in Nigeria with the same survey tools also found no significant relationship between patient safety culture and patient satisfaction[8].

4.2.2 Hypotheses

Before data collection and analysis, researchers hypothesized that there will be no significant

relationship between patient safety dimensions and patient safety outcomes in primary and secondary healthcare facilities in Ibadan South-west LGA. Using Pearson Correlation Matrix, researchers found that there was a significant correlation between organization learning continuous improvement, supervisor manager, communication openness hospital management handoff information and patient safety outcome in public secondary healthcare facilities. Researchers also found that staffing and workplace, and hospital management had significant correlation with patient safety outcomes in private secondary healthcare facilities. However, result showed no significant correlation between patient safety culture dimensions and patient safety outcome in the primary healthcare facility. Researchers however reject the null hypothesis regarding public and private healthcare facilities, as there is enough evidence to support the claim that there is a significant relationship between patient safety dimensions and patient safety outcomes in public and private secondary healthcare facilities. However, researchers fail to reject the null hypothesis regarding primary healthcare facilities, as there is no substantial evidence to show a significant relationship between patient safety dimensions and patient safety outcomes in primary healthcare facilities in Ibadan South-west LGA.

Preparatory to data collection and analysis, researchers hypothesized that there will be no significant relationship between demographic characteristics and patient safety outcomes. However, using a multiple linear regression model, result of the study showed that Years of Experience and Facility Type were found to predict the overall perception of patient safety culture perception ($R2=0.05$ and p-value=0.003). Therefore researchers in this study reject the null hypothesis, as there is enough evidence to prove that a significant relationship exists between demographic characteristics of heath care professionals and patient safety outcomes.

Previous to data collection and analysis, researchers hypothesized that there will be no

significant difference in PSC perception among primary, public secondary and private secondary healthcare facilities. Result of this study revealed that there was a statistically significant difference in patient safety culture perception among the three levels of health care facility: $p < 0.001$ for F (19.98). By comparing the mean gap between the public and private secondary healthcare systems, result of this study showed a considerable difference in perception levels. Similarly, there was a statistical difference when comparing public secondary healthcare facilities to private secondary healthcare facilities. Therefore, researchers in this study hereby reject the null hypothesis regarding the difference in PSC perception among the three levels of healthcare facilities in Ibadan South-west LGA.

Prior to data collection and analysis, researchers in this study hypothesized that there will be no significant correlation between PSC results among HCPs and patient satisfaction results among patients in Ibadan South-west LGA. Using Pearson Correlation Matrix, result of this study showed no significant relationship between PSC among HCPs and patient satisfaction among patients in Ibadan South-west LGA. Researchers in this study fail to reject the null hypothesis regarding correlation between PSC among HCPs and patient satisfaction among patients in Ibadan South-west LGA.

Prior to data collection and analysis, researchers hypothesized that there will be no significant difference in patient satisfaction results among patients in primary, public secondary, and private secondary healthcare facilities in Ibadan South-west LGA. Results of this study showed that by comparing the mean gap among the levels of healthcare facilities, there was no significant difference in satisfaction among patients in the three levels of healthcare facilities in Ibadan South-west LGA. Therefore, researchers in this study fail to reject the null hypothesis regarding difference in patient satisfaction results among patients in primary, public secondary, and private

secondary healthcare facilities in Ibadan South-west LGA.

4.3 Discussion of Findings

4.3.1 Patient Safety Culture

Investigators distributed 320 HSOPSC version 2.0 questionnaires to healthcare professionals in three public secondary healthcare facilities, three private secondary healthcare facilities, and six primary healthcare facilities. Respondents attempted 286 questionnaires, which denoted an 89.4% response rate. However, researchers excluded 15 questionnaires from the study through data cleaning guidelines recommended by AHRQ[9]. Consequently, investigators analyzed a total number of 271 HSOPSC questionnaires. The high response rate from this study was above the 2021 Survey on Patient Safety (SOPS) hospital 2.0 database reports, and corresponded with the high response rates from another multi-center study carried out in Saudi Arabia[10]. Several factors might have been responsible for the high response rate. However, just like the Saudi Arabian study, factors such as study tools and the use of hospital point of contact might have contributed to the high response rate. Furthermore, studies conducted in Cameroon and Tunisia utilised the same study tool and recorded high response rate but didn't indicate the influence of hospital point of contact on the high response rate[11]. Most participants consisted of nurses (43.5%), and a majority of 31.0% of the respondents worked in medical/surgical units. In addition, many participants (50.2%) had below 1-year work experience in their respective work units and healthcare facilities.

The average PPR was 1.1% higher than the average PPR in the dimensions of PSC surveyed in the AHRQ's 2021 SOPS hospital 2.0 survey databases. Although, when compared to the benchmark findings, some dimensions recorded nearly similar PPRs. However, areas of strength and weaknesses slightly differed.

This study result showed similarities with a study conducted in Iran and Ethiopia, where composite measures such as teamwork, handoffs information exchange, supervisor / manager / clinical leader support for patient safety recorded high PPRs, and dimensions and dimensions such as staffing and work pace, handoffs information exchange recorded low PPRs [12,13]. The low PPR in staffing and work pace was also seen to be an area of weakness in another study, where poor staffing was a deterrent to improving patient safety in healthcare facilities[14]. Although, results of this study revealed that 51.6% of HCPs reported at least one patient safety event in the last 12 months, it also revealed that reporting patient safety events (47.4%) recorded the lowest PPR. This could mean adverse events had occurred more than was reported. Several factors are responsible for low patient events reporting. The most common factor is a punitive work environment. The result where at least 21.8% of HCPs felt that management held errors against them, and 18.1% perceived that they were being written up rather than the problem, revealed that a certain degree of blame culture and punitive work environment exists within healthcare facilities in Ibadan South-west LGA.

Although 76.7% rated patient safety as very good and excellent, and 7 out of 10 composite measures recorded PPRs above 70%, there is a need to improve overall patient safety in the selected healthcare facilities. This was because, as at the time of this study, there was no available baseline status of patient safety culture in Ibadan South-west LGA. Therefore, necessitating need to substantiate the number of adverse events and level of patient safety culture across healthcare facilities.

4.3.2 Patient Satisfaction

Investigators distributed 400 copies of the short-form patient satisfaction questionnaire (PSQ-18) to patients across the selected healthcare facilities[15]. Participants completed and returned 387 questionnaires which denoted a 96.8% response rate. This high response rate was similar to that of recent studies[16].

Among the dimensions of the PSQ-18, Communication (84.5%) recorded the highest PPR, and interpersonal manner (75.7%) was the second-highest. The financial aspect (54.9%) recorded the lowest PPR. In this dimension, at least 22.4% of patients answered that they could not get healthcare services without being set back financially, and 37.2% paid more for medical care than they could afford. These findings correlated with studies that showed that the cost of medical care in Nigerian healthcare facilities to be high[17,18]. Dimensions such as general satisfaction (69.8%), technical quality (63.9%), time spent with the doctor (61.7%), accessibility, and convenience (65.3%) scored below 70%, which showed the need for improvement in overall healthcare services.

Regarding the correlation between dimensions of patient safety culture and patient safety grade, results from primary healthcare facilities found no significant relationship. However, in public secondary healthcare facilities, composite measures such as Organizational learning continuous improvement, Supervisor manager or clinical leadership support, Communication Openness, Hands-off Information, and Hospital management support for patient safety showed significant correlation with patient safety grades. In private healthcare facilities, only two dimensions (hospital management support for patient safety, Staffing, and workplace) significantly correlated with patient safety grades. Furthermore, the results revealed that there was no statistically significant difference in patient satisfaction among patients who attended public

secondary healthcare facilities and private secondary healthcare facilities.

Overall, the findings of this study showed the need to improve patient safety among HCPs in Ibadan South-west LGA. In addition, the need to for healthcare institutions to focus on patient-centered care in order to meet patients needs and demands in healthcare service delivery.

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Chapter Five

Conclusion

5.1 Summary of Findings

A total of 271 HCPs and 387 patients participated in the study. Study findings showed the overall perception of PSC was slightly above the 2021 SOPS hospital 2.0 database report. Among PSC dimensions, recording patient safety events and staffing and work pace recorded the lowest and second lowest PPR respectively, while teamwork recorded the highest PPR.

Overall satisfaction among patients was average. Among patient satisfaction dimensions, communication recorded the highest PPR, while financial aspect recorded the lowest PPR.

Furthermore, findings showed no significant correlation between patient safety culture and patient satisfaction.

5.2 Conclusion

While Patient Safety Culture and Patient Satisfaction are considered vital components to improving the quality of care provided in healthcare facilities and reducing adverse events. There are not many studies conducted on them in Ibadan south west LGA. Thus showing the lack of substantial evidence to truly ascertain the level of PSC and Patient Satisfaction.

Investigators in this study found that some dimensions of PSC significantly correlated with patient safety outcomes in private and public secondary healthcare facilities, but found no significant correlation between PSC and patient safety outcomes in primary healthcare facilities. Factors such as work experience , facility type, staffing,communication openness and teamwork were seen to influence the perception of patient safety among healthcare professionals. Regarding patient satisfaction, factors such as financial aspect and communication influenced the perception of patient satisfaction among patients.

Investigators in this study found no significant relationship between PSC among HCPs and patient satisfaction among patients.

It is evident that the level of PSC in Ibadan South-west LGA is below par when compared to other other studies conducted in developed countries. Although some dimensions of PSC were seen to be high and satisfactory, this could have been due to several other factors that influenced such high PPR. The lack of workforce and staff revealed the lack of qualified health professionals to properly provide care for patients in Ibadan South-west LGA. Thus, the urgent need to increase workforce in the health sector.

In this study, some level of negativity was seen to be present among health workers in their work environment. Although this may not be at an alarming level, such level cannot be tolerated if patient safety is to improve.

The rising cost of care in Nigeria is alarming. This could be due to the rise in inflation. Findings of this study reflected the high cost of care perceived by patients in Ibadan South-west. High cost may serve as a deterrent for patients not to seek care in healthcare settings or opt for alternative form of care.

It is therefore evident that recruitment of qualified healthcare personnel, abolishing blame culture and punitive response to errors, continuous utilization of error reporting tools, reduction is out-of pocket expenditure, and research will improve PSC and patient satisfaction in Ibadan south west LGA.

Overall, Patient Safety Culture is an emerging concept and there have not been many studies conducted in Nigeria to assess PSC and Patient Satisfaction, therefore making it difficult to determine the level of PSC in healthcare facilities in Nigeria. The finding of this study will help

bridge this gap by providing evidence-based results showing the level of PSC and Patient Satisfaction in a specific region in Nigeria. This will serve as baseline data for other studies.

5.3 Recommendation(s)

This study found the overall patient safety culture among HCPs in Ibadan southwest LGA slightly higher than the 2021 SOPS hospital 2.0 database reports despite the results suggesting a high level of PSC among HCPs in Ibadan southwest LGA. However, several dimensions showed that there is an urgent need for improvement. Composite measures such as staffing and work-pace showed the need to increase the workforce and reduce the work rate among HCPs. Thus, the researcher recommends as follows

1. The overall level of satisfaction among patients regarding healthcare reveals the need for urgent improvement in healthcare facilities to meet the needs of patients
2. Healthcare providers, policymakers, and healthcare managers should develop or adopt error reporting systems to enable HCPs to report patient safety events. Healthcare managers should abolish the blame culture in healthcare facilities, and non-punitive responses to errors should be encouraged to encourage error reporting.
3. Patient-centred care should be implemented and practised in healthcare facilities to meet patients' needs and expectations regarding healthcare service delivery.
4. There is poor staffing and work-pace in healthcare facilities in Ibadan southwest LGA. Healthcare managers, stakeholders and policymakers should endeavour to employ more staff to meet up with the HCP to patient ratio needed to provide quality healthcare services.
5. Policymakers should help implement strategies to curb the rise in cost of care to enable affordable care to patients.

5.4 Contribution to Knowledge

The finding of this study will help bridge this gap by providing evidence-based results showing the level of PSC and Patient Satisfaction in a specific region in Nigeria. This will serve as baseline data for other studies.

5.5` Suggested Areas for Further Research

1. Adverse events and error reporting systems in Nigeria
2. Patient centered care in Nigeria

APPENDICIES

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Hospital Survey on Patient Safety (Version 2.0)

Instructions

This survey asks for your opinions about patient safety issues, medical error, and event reporting in your hospital and will take about 10-15 minutes to complete. If a question does not apply to you or your hospital or you don't know the answer, please select "Does Not Apply or Don't Know."

> ***"Patient safety"*** *is defined as the avoidance and prevention of patient injuries or adverse events resulting from the processes of healthcare delivery.*
>
> ***A "patient safety event"*** *is defined as any type of healthcare-related error, mistake, or incident, regardless of whether or not it results in patient harm.*

Your Staff Position

1. What is your position in this hospital?

Select ONE answer.

Nursing

- ☐1 Advanced Practice Nurse (NP, CRNA, CNS, CNM)
- ☐2 Licensed Vocational Nurse (LVN), Licensed Practical Nurse (LPN)
- ☐3 Patient Care Aide, Hospital Aide, Nursing Assistant
- ☐4 Registered Nurse (RN)

Medical

- ☐5 Physician Assistant
- ☐6 Resident, Intern
- ☐7 Physician, Attending, Hospitalist

Other Clinical Position

- ☐8 Dietitian
- ☐9 Pharmacist, Pharmacy Technician
- ☐10 Physical, Occupational, or Speech Therapist
- ☐11 Psychologist
- ☐12 Respiratory Therapist
- ☐13 Social Worker
- ☐14 Technologist, Technician (e.g., EKG, Lab, Radiology)

Supervisor, Manager, Clinical Leader, Senior Leader

- ☐15 Supervisor, Manager, Department Manager, Clinical Leader, Administrator, Director
- ☐16 Senior Leader, Executive, C-Suite

Support

- ☐17 Facilities
- ☐18 Food Services
- ☐19 Housekeeping, Environmental Services
- ☐20 Information Technology, Health Information Services, Clinical Informatics
- ☐21 Security
- ☐22 Transporter
- ☐23 Unit Clerk, Secretary, Receptionist, Office Staff

Other

- ☐24 Other, please specify:

Your Unit/Work Area

2. Think of your "unit" as the work area, department, or clinical area of the hospital where you spend *most* of your work time. What is your primary unit or work area in this hospital?

Select ONE answer.

Multiple Units, No specific unit

☐1 Many different hospital units, No specific unit

Medical/Surgical Units

☐2 Combined Medical/Surgical Unit
☐3 Medical Unit (Nonsurgical)
☐4 Surgical Unit

Patient Care Units

☐5 Cardiology
☐6 Emergency Department, Observation, Short Stay
☐7 Gastroenterology
☐8 ICU (All Adult Types)
☐9 Labor & Delivery, Obstetrics & Gynecology
☐10 Oncology, Hematology
☐11 Pediatrics (including NICU, PICU)
☐12 Psychiatry, Behavioral Health
☐13 Pulmonology
☐14 Rehabilitation, Physical Medicine
☐15 Telemetry

Surgical Services

☐16 Anesthesiology
☐17 Endoscopy, Colonoscopy
☐18 Pre Op, Operating Room/Suite, PACU/Post Op, Peri Op

Clinical Services

☐19 Pathology, Lab
☐20 Pharmacy
☐21 Radiology, Imaging
☐22 Respiratory Therapy
☐23 Social Services, Case Management, Discharge Planning

Administration/Management

☐24 Administration, Management
☐25 Financial Services, Billing
☐26 Human Resources, Training
☐27 Information Technology, Health Information Management, Clinical Informatics
☐28 Quality, Risk Management, Patient Safety

Support Services

☐29 Admitting/Registration
☐30 Food Services, Dietary
☐31 Housekeeping, Environmental Services, Facilities
☐32 Security Services
☐33 Transport

Other

☐34 Other, please specify:

SECTION A: Your Unit/Work Area

How much do you agree or disagree with the following statements about your unit/work area?

Think about your unit/work area:	Strongly Disagree ▼	Disagree ▼	Neither Agree nor Disagree ▼	Agree ▼	Strongly Agree ▼	Does Not Apply or Don't Know ▼
1. In this unit, we work together as an effective team	☐1	☐2	☐3	☐4	☐5	☐9
2. In this unit, we have enough staff to handle the workload	☐1	☐2	☐3	☐4	☐5	☐9
3. Staff in this unit work longer hours than is best for patient care	☐1	☐2	☐3	☐4	☐5	☐9
4. This unit regularly reviews work processes to determine if changes are needed to improve patient safety	☐1	☐2	☐3	☐4	☐5	☐9
5. This unit relies too much on temporary, float, or PRN staff	☐1	☐2	☐3	☐4	☐5	☐9
6. In this unit, staff feel like their mistakes are held against them	☐1	☐2	☐3	☐4	☐5	☐9
7. When an event is reported in this unit, it feels like the person is being written up, not the problem	☐1	☐2	☐3	☐4	☐5	☐9
8. During busy times, staff in this unit help each other	☐1	☐2	☐3	☐4	☐5	☐9
9. There is a problem with disrespectful behavior by those working in this unit	☐1	☐2	☐3	☐4	☐5	☐9
10. When staff make errors, this unit focuses on learning rather than blaming individuals	☐1	☐2	☐3	☐4	☐5	☐9
11. The work pace in this unit is so rushed that it negatively affects patient safety	☐1	☐2	☐3	☐4	☐5	☐9
12. In this unit, changes to improve patient safety are evaluated to see how well they worked	☐1	☐2	☐3	☐4	☐5	☐9
13. In this unit, there is a lack of support for staff involved in patient safety errors	☐1	☐2	☐3	☐4	☐5	☐9
14. This unit lets the same patient safety problems keep happening	☐1	☐2	☐3	☐4	☐5	☐9

SECTION B: Your Supervisor, Manager, or Clinical Leader

How much do you agree or disagree with the following statements about your immediate supervisor, manager, or clinical leader?

	Strongly Disagree ▼	Disagree ▼	Neither Agree nor Disagree ▼	Agree ▼	Strongly Agree ▼	Does Not Apply or Don't Know ▼
1. My supervisor, manager, or clinical leader seriously considers staff suggestions for improving patient safety	☐1	☐2	☐3	☐4	☐5	☐9
2. My supervisor, manager, or clinical leader wants us to work faster during busy times, even if it means taking shortcuts	☐1	☐2	☐3	☐4	☐5	☐9
3. My supervisor, manager, or clinical leader takes action to address patient safety concerns that are brought to their attention	☐1	☐2	☐3	☐4	☐5	☐9

SECTION C: Communication

How often do the following things happen in your unit/work area?

Think about your unit/work area:	Never ▼	Rarely ▼	Some-times ▼	Most of the Time ▼	Always ▼	Does Not Apply or Don't Know ▼
1. We are informed about errors that happen in this unit	☐1	☐2	☐3	☐4	☐5	☐9
2. When errors happen in this unit, we discuss ways to prevent them from happening again.....	☐1	☐2	☐3	☐4	☐5	☐9
3. In this unit, we are informed about changes that are made based on event reports	☐1	☐2	☐3	☐4	☐5	☐9
4. In this unit, staff speak up if they see something that may negatively affect patient care	☐1	☐2	☐3	☐4	☐5	☐9
5. When staff in this unit see someone with more authority doing something unsafe for patients, they speak up	☐1	☐2	☐3	☐4	☐5	☐9
6. When staff in this unit speak up, those with more authority are open to their patient safety concerns	☐1	☐2	☐3	☐4	☐5	☐9
7. In this unit, staff are afraid to ask questions when something does not seem right.....	☐1	☐2	☐3	☐4	☐5	☐9

SECTION D: Reporting Patient Safety Events

Think about your unit/work area:	Never ▼	Rarely ▼	Some-times ▼	Most of the Time ▼	Always ▼	Does Not Apply or Don't Know ▼
1.... When a mistake is caught and corrected before reaching the patient, how often is this reported?	☐1	☐2	☐3	☐4	☐5	☐9
2. When a mistake reaches the patient and could have harmed the patient, but did not, how often is this reported?	☐1	☐2	☐3	☐4	☐5	☐9

3. In the past 12 months, how many patient safety events have you reported?

☐a. None ☐b. 1 to 2 ☐c. 3 to 5 ☐d. 6 to 10 ☐e. 11 or more

SECTION E: Patient Safety Rating

1. How would you rate your unit/work area on patient safety?

Poor ▼	Fair ▼	Good ▼	Very Good ▼	Excellent ▼
☐1	☐2	☐3	☐4	☐5

SECTION F: Your Hospital

How much do you agree or disagree with the following statements about your hospital?

Think about your hospital:	Strongly Disagree ▼	Disagree ▼	Neither Agree nor Disagree ▼	Agree ▼	Strongly Agree ▼	Does Not Apply or Don't Know ▼
1. The actions of hospital management show that patient safety is a top priority	☐1	☐2	☐3	☐4	☐5	☐9
2. Hospital management provides adequate resources to improve patient safety	☐1	☐2	☐3	☐4	☐5	☐9
3. Hospital management seems interested in patient safety only after an adverse event happens.....	☐1	☐2	☐3	☐4	☐5	☐9
4. When transferring patients from one unit to another, important information is often left out.....	☐1	☐2	☐3	☐4	☐5	☐9
5. During shift changes, important patient care information is often left out	☐1	☐2	☐3	☐4	☐5	☐9
6. During shift changes, there is adequate time to exchange all key patient care information	☐1	☐2	☐3	☐4	☐5	☐9

SECTION G: Background Questions

1. How long have you worked in this hospital?

☐a. Less than 1 year ☐b. 1 to 5 years
☐c. 6 to 10 years
☐d. 11 or more years

2. In this hospital, how long have you worked in your current unit/work area?

☐a. Less than 1 year
☐b. 1 to 5 years ☐c. 6 to 10 years
☐d. 11 or more years

3. Typically, how many hours per week do you work in this hospital?

☐a. Less than 30 hours per week
☐b. 30 to 40 hours per week ☐c. More than 40 hours per week

4. In your staff position, do you typically have direct interaction or contact with patients?

☐a. YES, I typically have direct interaction or contact with patients
☐b. NO, I typically do NOT have direct interaction or contact with patients

SECTION H: Your Comments

Please feel free to provide any comments about how things are done or could be done in your hospital that might affect patient safety.

Thank you for completing this survey.

SHORT-FORM PATIENT SATISFACTION QUESTIONNAIRE (PSQ-18)

These next questions are about how you feel about the medical care you receive.

On the following pages are some things people say about medical care. Please read each one carefully, keeping in mind the medical care you are receiving now. (If you have not received care recently, think about what you would expect if you needed care today.) We are interested in your feelings, good and bad, about the medical care you have received.

How strongly do you AGREE or DISAGREE with each of the following statements?

(Circle One Number on Each Line)

	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
1. Doctors are good about explaining the reason for medical tests	1	2	3	4	5
2. I think my doctor's office has everything needed to provide complete medical care	1	2	3	4	5
3. The medical care I have been receiving is just about perfect	1	2	3	4	5
4. Sometimes doctors make me wonder if their diagnosis is correct	1	2	3	4	5
5. I feel confident that I can get the medical care I need without being set back financially	1	2	3	4	5
6. When I go for medical care, they are careful to check everything when treating and examining me	1	2	3	4	5
7. I have to pay for more of my medical care than I can afford	1	2	3	4	5
8. I have easy access to the medical specialists I need	1	2	3	4	5

How strongly do you AGREE or DISAGREE with each of the following statements?

(Circle One Number on Each Line)

	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
9. Where I get medical care, people have to wait too long for emergency treatment	1	2	3	4	5
10. Doctors act too businesslike and impersonal toward me	1	2	3	4	5
11. My doctors treat me in a very friendly and courteous manner	1	2	3	4	5
12. Those who provide my medical care sometimes hurry too much when they treat me	1	2	3	4	5
13. Doctors sometimes ignore what I tell them	1	2	3	4	5
14. I have some doubts about the ability of the doctors who treat me	1	2	3	4	5
15. Doctors usually spend plenty of time with me	1	2	3	4	5
16. I find it hard to get an appointment for medical care right away	1	2	3	4	5
17. I am dissatisfied with some things about the medical care I receive	1	2	3	4	5
18. I am able to get medical care whenever I need it	1	2	3	4	5

INFORMED CONSENT FORM

PATIENT SAFETY CULTURE

We invite you to participate in the study titled "Perception Of Patient Safety Culture Among Healthcare Professionals And Patient Satisfaction In South-West Nigeria. You were selected as a possible participant in this study because you currently work as a physician/doctor, nurse, midwife or other healthcare professional in this healthcare facility, and have the information needed to determine the degree of patient safety culture among healthcare professionals in this medical facility. This survey is part of a study to fulfill academic requirements for Master of Public Health (MPH), Lead City University Ibadan.

If you decide to participate in this study, the research investigators will give you a Hospital Survey on Patient Safety Culture (HSOPSC) version 2.0 questionnaire. This questionnaire will assess your perception of patient safety culture in this healthcare facility. The survey will contain a total of 40 survey items. Some consist of single-item measures that will ask about the number of errors reported and your overall patient safety rating for your unit/work area. Furthermore, items will ask about your characteristics such as position, work/unit area, work tenure, unit/work area tenure, work hours, and patients interactions.

This survey takes less than 15 minutes to complete and will be collected by the research assistant once completed. Kindly note that this survey poses no risk to you or any other participants of this study. Assessment of patient satisfaction will be beneficial to policymakers, stakeholders, healthcare managers, hospital management, staff, and patients.

Policymakers may use the results of this study to plan, implement policies/strategies to improve the culture of safety, prevent patient harm, provide a safe work environment for healthcare workers, improve healthcare service delivery in this hospital to meet the needs, and expectations of patients.

Investigators will provide refreshments to you to compensate for your time in this survey.

Any information obtained in connection with this study will keep your identity confidential, and we may only disclose it with your permission. All reports or publications concerning this study will not identify you as a participant. We will present the findings of this research only in aggregate data.

Participation in this study is voluntary. If you decide not to participate, there will be no consequences. If you agree to participate, you are free to discontinue your participation any time you feel like it, and there will be no consequences.

This study has been reviewed and approved by Oyo State Ethical Review Committee, Department of Planning Research and Statistics Division. If you have any questions about the research and research participants' rights or wish to report a problem, call Mr. Abel Chukwuemeka on 09056244346 or contact the Department of Public Health, Lead City University Ibadan.

By completing and returning this survey, you are granting consent to participate in this research.

Thank you.

.....

SIGNATURE & DATE

INFORMED CONSENT FORM

PATIENT SATISFACTION

We invite you to participate in the study titled "Perception Of Patient Safety Culture Among Healthcare Professionals And Patient Satisfaction In South-West Nigeria.
You were selected as a possible participant in this study because you received care in this healthcare facility. This survey is part of a study to fulfill academic requirements for Master of Public Health (MPH), Lead City University Ibadan.

If you decide to participate in this study, the research investigator will give you a patient satisfaction questionnaire (Short-form PSQ-18). This questionnaire will assess your experience and satisfaction with the care you received in this healthcare facility. The survey contains 18 questions that will require your opinion about this healthcare facility in areas such as; communication, general satisfaction with care, the financial cost of care, Technical quality, interpersonal manner, time spent physician/doctor, accessibility, and convenience.

This survey takes less than 10 minutes to complete and will be collected by the research assistant once completed. Kindly note that this survey poses no risk to you or any other participants of this study. Assessment of patient satisfaction will be beneficial to policymakers, stakeholders, healthcare managers, hospital management, staff, and patients.

Policymakers may use the results of this study to plan, implement policies/strategies to improve the culture of safety, prevent patient harm, provide a safe work environment for healthcare workers, improve healthcare service delivery in this hospital to meet the needs, and expectations of patients. Investigators will provide refreshments to you to compensate for your time in this survey.

Any information obtained in connection with this study will keep your identity confidential, and we may only disclose it with your permission. All reports or publications concerning this study will not identify you as a participant. We will present the findings of this research only in aggregate data.
Participation in this study is voluntary. If you decide not to participate, there will be no consequences. If you agree to participate, you are free to discontinue your participation any time you feel like it, and there will be no consequences.

This study has been reviewed and approved by Oyo State Ethical Review Committee, Department of Planning Research and Statistics Division.
If you have any questions about the research and research participants' rights or wish to report a problem, call Mr. Abel Chukwuemeka on 09056244346 or contact the Department of Public Health, Lead City University Ibadan.

By completing and returning this survey, you are granting consent to participate in this research.
Thank you.

.....
SIGNATURE & DATE

NHREC

Lead City University
Research Ethics Committee

PROJECT TITTLE: **PERCEPTION OF PATIENT SAFETY CULTURE AMONG HEALTHCARE PROFESSIONALS AND PATIENT SATISFACTION IN SOUTH-WEST NIGERIAN PRIMARY AND SECONDARY HEALTHCARE FACILITIES.**

PROJECT NUMBER: **LCU-HREC/21/002.**

APPROVAL LETTER

The above named proposal has been adequately reviewed; the protocol and safety guidelines satisfy the conditions of *LCU-HREC* policies regarding experiments that use human subjects.

Therefore, the study under its reviewed state is hereby approved by the LCU-Health Research Ethics Committee.

Prof. Olusola Ladokun ..... 22.11.2021 .....

Name of LCU-HREC Chairman ***Signature of LCU-HREC Chairman and Date***

Dr. Folahanmi Akinsolu ..... 16/11/2021 .....

Name of LCU-HREC Secretary ***Signature of LCU-HREC Secretary and Date***

This approval is given with the investigator's Declaration as stated below;

By signing below I agree/certify that:

1. I have reviewed this protocol submission in its entirety and that I am fully cognizant of, and in agreement with all submitted statements.
2. I will conduct this research study in strict accordance with all submitted statements except where a change may be necessary to eliminate apparent immediate hazard to a given research subject.
   - I will notify the HREC promptly of any change in research procedures necessitated in the interest of the safety of a given research subject.
   - I will request and obtain HREC approval of any proposed modification to the research protocol or informed consent document(s) prior to implementing such modifications.

Lagos-Ibadan Express way, Toll Gate Area.
P.O. Box 30678, Secretariat, Ibadan Oyo State Nigeria.
Lcu.hrec@lcu.edu.ng
Tel: 234 803 499 5499

TELEGRAMS..... TELEPHONE.....

MINISTRY OF HEALTH

DEPARTMENT OF PLANNING, RESEARCH & STATISTICS DIVISION

PRIVATE MAIL BAG NO. 5027, OYO STATE OF NIGERIA

Your Ref. No. .....
All communications should be addressed to the Honorable Commissioner quoting
Our Ref. No. AD 13/479/ 4482

14th October, 2021

The Principal Investigator,
Department of Public Health,
Faculty of Basic Medical and Applied Sciences,
Lead City University,
Ibadan, Nigeria.

Attention: Chukwuemeka Abel

ETHICS APPROVAL FOR THE IMPLEMENTATION
OF YOUR RESEARCH PROPOSAL IN OYO STATE

This is to acknowledge that your Research Proposal titled: "Perception of Patient Safety Culture among Healthcare Professionals and Patient Satisfaction in South-West Nigerian Primary and Secondary Healthcare Facilities." has been reviewed by the Oyo State Ethics Review Committee.

2. The committee has noted your compliance. In the light of this, I am pleased to convey to you the full approval by the committee for the implementation of the Research Proposal in Oyo State, Nigeria.

3. Please note that the National Code for Health Research Ethics requires you to comply with all institutional guidelines, rules and regulations, in line with this, the Committee will monitor closely and follow up the implementation of the research study. However, the Ministry of Health would like to have a copy of the results and conclusions of findings as this will help in policy making in the health sector.

4. Wishing you all the best.

OYO STATE RESEARCH ETHICAL REVIEW COMMITTEE
MINISTRY OF HEALTH, IBADAN

Signature & Date

Dr. Abdus Soobhan
Director, Planning, Research & Statistics
Secretary, Oyo State, Research Ethics Review Committee

BIO-DATA

A. Personal Data

1. **Full Name:** Abel Nnamdi CHUKWUEMEKA
2. **Date and Place of Birth:** 02-03-1986, Ibadan
3. **Nationality:** Nigerian
4. **Marital Status:** Married
5. **No. of Children & their age:** NIL
6. **Name and Address of Spouse:** Matilda Adedoyin CHUKWUEMEKA, House 10, Harmony Avenue, Elebu, Ibadan.
7. **Name and Address of Next of Kin:** Matilda Adedoyin CHUKWUEMEKA, House 10, Harmony Avenue, Elebu, Ibadan.
8. **Date of Assumption of Duty in Current Establishment:** March 2022.
9. **Status of First Appointment in Current Establishment:** March 2022
10. **Present Position:** Director
11. **Date of Last Promotion:** Not Applicable
12. **Date of Confirming of Appointment:** Not Applicable
13. **If not Confirmed, Why?** Not Applicable
14. **Present Salary:** Not Applicable
15. **Faculty:** Basic Medical and Applied Science
16. **Department:** Public Health

B. Educational Background:

I. Primary Education:

St Isabel Nursery and Primary School Eleyele Ibadan. 1991 - 1993

Bola Immaculate Nursery and Primary School 1993-1996

II. Secondary Education:

Federal Government College Ikirun 1996-2001

Christ Victory College 2005

III. Higher Educational Institutions Attended with Dates and Qualifications

Lead City University

Diploma in Sports and Recreation Management 2011-2012

Lead City University

B.Ed Physical and Health Education (Second Class Upper Division) 2014-2018

Lead City University

MPH (*In View*) 2020-2022

C. **AWARDS AND FELLOWSHIPS:** None

D. Work Experience: With Dates (including courses taught where relevant):

St Joseph Medical Center Ibadan 2003-2005

E. Membership of Academic Professional Bodies:

Associate, Institute of Personality Development and Customer Relationship Management

Associate, Advertising Regulatory Council of Nigeria (ARCON) Formerly APCON

F. Publications:

1. Thesis/Dissertation: Not Applicable
2. Books/Monographs:

a. Authored Books:

b. Edited Books:

c. Contribution to Books:

3. Published Refereed Conference Proceedings:
4. Papers Accepted for Publication:
5. Book Reviews and Commentaries in Scholarly Journals:
6. Technical Reports:
7. Other Publications:
8. Creative Work: Not Applicable

G. **Notable Scholarly or Professional Accomplishments**: Not Applicable

H. Major Conferences/Workshops Attended:

African Human Rights Moot Court Competition, University of Pretoria, South Africa, 2016

I. Services in Lead City University:

1. Services within the University Dept:
2. Services within the Faculty:
3. Services within the University:
4. Services outside the University (Local, State, or National or International):

J. **Extra-Curricular Activities**: Research, Writing

K. Others

L. Names and Addresses of Referees:

1. Professor Oliver Ezechi (Senior Lecturer) Department of Public Health. Lead City University, Ibadan.
2. Dr. F.T Akinsolu (Head of Department) Department of Public Health, Lead City University, Ibadan
3. Dr Banjoko (Senior Lecturer) Lead City University Ibadan.

M. **Date and Signature:** …….

University Compliance Certification

This is to certify that the thesis by Abel Nnamdi Chukwuemeka in the Department of Public Health, Faculty of Basic Medical and Applied Sciences, Lead City University, Ibadan is in full compliance with the approved University Format and Style.

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Name Date