SCHOOL OF PUBLIC HEALTH
COLLEGE OF HEALTH SCIENCES
UNIVERSITY OF GHANA

PHYSICIAN-PATIENT COMMUNICATION AND ITS INFLUENCE ON SATISFACTION OF HEALTHCARE SERVICES AMONG PATIENTS ATTENDING OPD IN LEGON HOSPITAL, ACCRA-GHANA.

BY
DIANA MAKAFUI TUEKPE
(10804823)

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DECLARATION

I hereby declare that except for ideas and references to other people's work that have been duly cited, this work submitted for review is my own, done under the supervision of my academic supervisor.

22/9/2021

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DIANA MAKAFUI TUEKPE DATE

(STUDENT)

22/9/2021

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DR. BENEDICT WEOBONG DATE

(SUPERVISOR)

DEDICATION

This work is first and foremost dedicated to God Almighty for His protection and guidance throughout the study. It is also dedicated to my mother, Mrs. Bright Esinu Atadjah, Mr. Dusu, Prof. Peter Atadjah, and my entire family, for the support and love they gave me throughout of study.

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ABSTRACT

Background: Physician-patient relationship is the cornerstone of health care. It has been established that there is a link between clinician-patient communication and health outcomes such as level of satisfaction. The degree of satisfaction a patient experiences with healthcare could be influenced by the quality of the relationship between the physician and the patient. This study determined the influence of physician-patient communication behavior on the satisfaction of healthcare received by patients attending the outpatient department (OPD) in Legon hospital in Accra, Ghana.

Method: The study used a mixed-method cross-sectional design. The data was collected using two different approaches. Firstly, a structured questionnaire on physician-patient communication and patient satisfaction of care was administered to consecutive patients attending OPD. Secondly, a checklist of physician communication styles was completed through observation in the consulting room. Descriptive statistics were used to estimate the prevalence of good physician-patient communication and the patient's level of satisfaction. As part of the inferential analysis, chi-square tests were used to assess relationships between categorical variables of interest in the first instance.

Result: There was a 56.1% prevalence of good physician-patient communication experienced by patients at the OPD and physicians were observed to show 60% of good physician-patient communication. 65.4% of patients reported a high level of satisfaction with healthcare services. Moreover, the highest mean score of the domains of physician-patient communication was listening with the mean value of 3.2 (80.1%). This was followed by empathy 3.1(77.5%), decision making 2.7(66.9%), respect 2.6(65.2%), and the least was information 2.5(63.3%). Also, 40% of physicians were observed to have used negative talk, open-structured questions, and social non-medical conversation. Good physician-patient communication experience was

associated with an increased odds of self-reported patient satisfaction of care (adjusted odds ratio (OR), 2.26 (1.10 to 4.63); p<0.025).

Conclusion and Recommendation: The study concludes that the prevalence of good physician-patient communication was fairly above average, and there is evidence of an association between physician-patient communication and satisfaction of care. There is a need for management to consider the improvement and implementation of a health communication policy, particularly research on the ways of reducing negative talk during physician-patient communication.

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LIST OF ABBREVIATIONS

AMA	Accra Metropolitan Assembly
CI	Confidence Interval
GHS	Ghana Health Service
IHI	Institute for Healthcare Improvement
IT	Information Technology
MOH	Ministry of Health
OPD	Outpatient Department /Unit
OR	Odds Ratio
PPC	Physician-Patient Communication
Sec	Secondary
SPSS	Statistical Package for Social Sciences
STATA	Statistical Data
Tech	Technical
VOC	Vocational School
WHO	World Health Organisation

CHAPTER ONE

INTRODUCTION

1.1. Background of the Study

Health communication remains the heart of medicine. A diagnosis or treatment cannot be established without the need for good communication between a clinician and a patient. Also, one cannot handle the emotional implication of disease nor give medical advice to a patient without practicing effective communication. However, the quality of communication in health has been overlooked (Hardavella *et al*., 2017).

Patients believed that communication is part of the first three skills every doctor should possess, and it was observed as one of the main reasons why a patient would move from one healthcare service to another (Ha & Longnecker, 2010).

Studies were done to find the association between physician-patient communication and health outcomes. The result showed that when physicians gave patients more information and patients got actively engaged in the consultation, the patients had a more improved health outcome. Also, patients who received primary health care from clinicians whom they saw to be more patient-centered had better emotional well-being (Street, 2013).

Even though providing information by the patients is not a recognized part of participation, studies have shown that about eighty percent of the time, the patient's report affects the physician's diagnosis and treatment. Thus, it is vital how detailed the information provided by the patients is on matters such as symptoms, medical history, and psychosocial issues (Berger, Boss, & Beach, 2017).

According to surgeons, 'how" a message is relayed is important as 'what' is said. The Institute for Healthcare Improvement (IHI) stresses the need to be more centered on patients and the

physicians should include in the design of care the participation of patients and families. When patient values are respected, there is effective and detailed information and communication, there is proper coordination of care, the participation of family, and agreement between the health care professionals then we could say we are involved in patient-centered care. The physicians should identify the patient as a person and a resourceful individual in other to encourage patient-centered care. There are numerous advantages to patient-centered care. An example is the patient would be inspired more to pay heed to treatment advice and feel more pleased with the health care (Epstein & Street, 2011). Another researcher is of the view that because the patients have very little knowledge about medical techniques and are unable to link the treatment with improvements in health, the affective component of the clinician's communication becomes a vital area in the patients' evaluation. It includes the physician treating the patient as a person and not a 'case' and this can be seen as allocating enough time for interaction, a genuine show of interest in the patient, and showing devotion to the health problem (Buller, 2019). According to Woodside *et al.* (1989) cited in Peprah (2014), the basic need for healthcare providers is to satisfy the consumer. In deciding by physicians and institutional healthcare services, satisfaction is a vital component to consider. A review of 139 studies proved across different settings that the doctor-patient relationship is a key element influencing general satisfaction with healthcare (Ha & Longnecker, 2010).

1.2. Problem statement

Ideally, the physician-patient relationship should be the cornerstone of health care. It has been established that there is a relationship between clinician-patient communication and health outcomes. (Street, Makoul, Arora, & Epstein, 2009). The degree of satisfaction a patient experiences with healthcare could be influenced by the quality of the relationship between the doctor and the patient (Repository, 2012). Generally, it is expected that a positive association between patients and health care providers will lead to quality and satisfactory health outcomes.

However, globally, the patient and provider relationship has declined, which has badly affected the quality of healthcare (WHO, 2016).

Communication difficulty occurs when doctors struggle to communicate effectively with patients and fail to provide adequate information on patients' conditions. Research has shown physicians overlook about fifty percent of psychosocial and psychiatric problems are due to poor communication (Hall & Roter, 2019).

Often, in developing countries, communication between physicians and patients is very bad. It is assumed that poor communication is because the patients are at the mercy of the physicians (Alrubaiee & Alkaa'ida, 2011). The majority of the patients who visit the OPD are not given the chance to ask the doctors even though according to the patients' charter provided by the Ghana health service, they are supposed to be entitled to full information on their health condition.

To ensure that informed decisions concerning the health care of patients are made, the patient should have some knowledge of the sickness, risks, and advantages of various options of treatment. The physicians must also have a clear knowledge of the values, preferences, and belief systems of the patient concerning their health. However, because effective physician-patient communication is not practiced, physicians and patients end up having different points of view when it comes to understanding the patients' health (Street *et al.*, 2009).

Regardless of increasing evidence of the impact of patient-doctor communication on health outcomes in developed countries, unfortunately, the quality and influence of physician-patient communication in low- and middle-income countries has not been documented well. The differences in the structure of health care in developed and low-income countries should make us circumspect in thinking that the associations or results realized in one setting will be the same as in the other (Nyblade, L., Stockton, M.A., &Giger, K.,(2019).

In Ghana, very little study has been done on physician–patients communication behavior and its influence on patient satisfaction of healthcare. Specifically, this research has not been carried out before in the University of Ghana, Legon hospital even though it happens to be one of the hospitals in Ghana where physicians interact with a rich variety of people from different socio-cultural, educational, and economic backgrounds.

1.3. Justification of the study

The purpose of the study is to offer empirical research regarding how physician-patient communication could influence patient satisfaction of quality of care at the University Hospital. The findings of this study will not only contribute to existing knowledge on how physician-patient communication behavior could influence patient satisfaction of quality of care in general but would give new knowledge, specifically on how physician-patient communication behavior could influence patient satisfaction of quality of care in Legon Hospital. In a primary health care facility, customer care especially communication among clients and health care workers is vital for the hospital to thrive since clients who are dissatisfied with their providers' services may change the facility (Essilfie-Bonzie,.2018). Thereby reducing the number of people who visit the facility and cause financial loss to the hospital. It will help create awareness to all stakeholders of the health care facility concerning how physician-patient communication behavior could influence patient satisfaction of quality of care either negatively or positively for proper measures to be put in place. It will also provide opportunities for further research to be done in this area.

1.4. Conceptual Framework

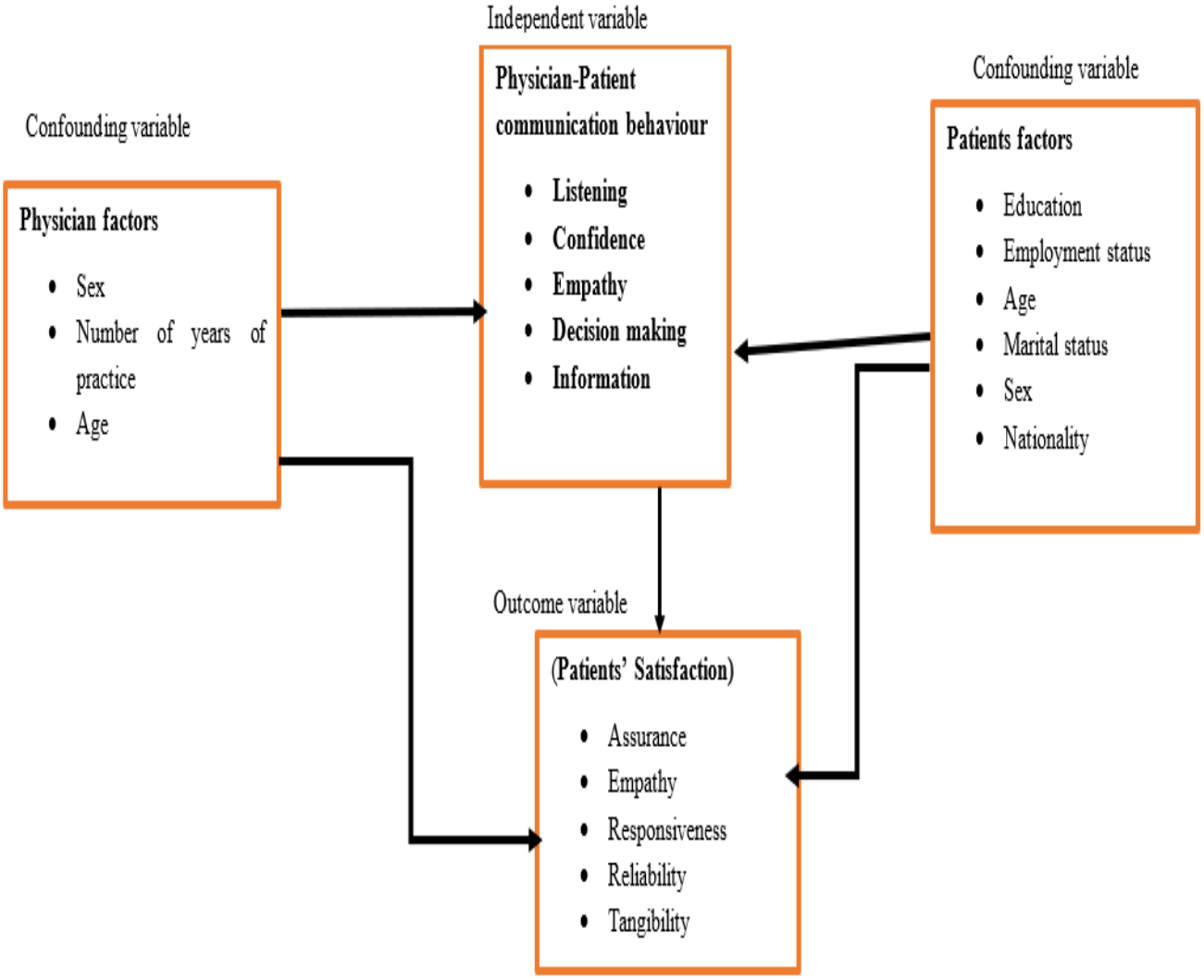

Figure 1. Conceptual Framework for assessing the relation between physician - patients communication and Patient Satisfaction. Adapted from (Penergan et al, 2015)

1.4.1. The narration of the Conceptual Framework

The conceptual framework shows that the outcome variable of the study; patients' satisfaction is influenced directly by the physician-patient communication behaviors. Studies have been done to find the association between physician-patient communication and health outcomes. Patients who received primary health care from clinicians whom they saw to be more patient-centered had better emotional well-being (Street *et al*., 2009). The talk could have a therapeutic effect on the patient. The physician who shows a form of empathy during consultation would observe patients have a more improved psychological health- fewer negative emotions expressed (e.g., fear, anxiety) and more positive emotions (e.g., self-worth, hope). Physical symptoms could also be affected by talk. Findings say that physiological arousal and pain in individuals suffering from irritable bowel symptoms could be lowered as a result of empathic communication (Street *et al*., 2009). The five domains under the patient's satisfaction with healthcare were viewed under the SERVQUAL Model. The model's variables are as following; Tangibles, Reliability, Responsiveness, Assurance, and Empathy (Peprah&Atarah,2014).

Patient and physician factors which are confounding variables play a role in influencing the satisfaction of the patient. The socio-demographic characteristics of patients such as the need for social and emotional support from spouse or family, the gender of the physician, and even the age of the physician could influence the patient's satisfaction. Some patients would prefer to be treated by someone older than them since they believe the person would have more experience in health as compared to a younger physician. Patients with good income would pay more money to see a private physician. Patients who are very sick too would provide more biomedical information (Hall & Roter, 2019). Physician-patient communication behavior would be influenced by physicians' factors and patients' factors. The patient factor such as socioeconomic/ demographic characteristics of the patient would inform the level of patient's participation in communicating with the physician. Patients who have been better educated

may ask more questions during the consultation, seek treatment options, share their opinions, and talk about the treatment option they prefer far better than those who do not. Also, some patients would feel uncomfortable disclosing their health problems with physicians of the opposite sex. Physicians' factors can also not be overlooked. Physicians with good knowledge of the patient charter are likely to communicate better with patients. Also, physicians' gender and age could influence how the physician would communicate with their patients.

Based on the information in the conceptual framework, the study sought to answer the following research questions and specific objectives.

1.5. Research Questions

1. How well do physicians and patients communicate during OPD consultation?
2. What factors affect physician-patient communication behaviors?
3. What is the level of patient satisfaction with health care received at the OPD?
4. Is there a direct relationship between physician-patient communication behavior and satisfaction of care among OPD attendees?

1.6. Research Objectives

The research objective was categorized into the primary objective and secondary objectives.

1.6.1. Primary Objective

The general objective of the study is to determine the influence of physician-patient communication behavior on the satisfaction of healthcare received by patients attending OPD in Legon Hospital in Accra, Ghana.

1.6.2. Specific Objectives

The specific objectives of the study are as follows:

1. To assess the prevalence of physician-patient communication behaviors at the OPD.
2. To determine the level of satisfaction of healthcare received by patients at OPD.
3. To determine factors associated with physician-patient communication of healthcare received patients at OPD.
4. To assess the association between physician-patient communication behaviors and satisfaction of healthcare received by patients at OPD.

CHAPTER TWO

LITERATURE REVIEW

2.1. Introduction

This chapter presents much insight into previous studies expounded on physician-patient communication behavior and its association with patients' satisfaction

2.2. Physician-Patient Communication

An excellent physician-patient communication could be defined as the ability of the physician to understand the way the patient communicates and adjust his own to achieve positive results. The doctor is to show commitment, empathy, respect, and genuine interest in their patient's ideas, fears, expectations, and opinions; accept shared decision-making, and give detailed health information to the patient (Committee on Improving the Quality of Cancer Care *et.al*.,2013). According to Ge *et al*., (2009), to ensure effective doctor-patient communication, there should be a mutual understanding between patient and doctor.

A physician's ability to communicate effectively is said to be a fundamental skill that aids them to develop other clinical capacities (Ranjan, P., Kumari, A., & Chakrawarty, A. 2015).

Physician-patient communication is essential to discovering other results of consultation (Bertakis, 2009; Sandhua, Adamsa, Singletona, Clark-Carterb & Kidda, 2009).

Several types of research show that the quality of treatment outcomes seen in patients hinges on effective doctor-patient interactions (Dibbelta, Schaidhammera, Fleischerb, & Greitemanna, 2009).

Traditionally, physician-patient communication is doctor-centered (King, A., & Hoppe, R. B. 2013) meaning the doctor is the one who controls the way the communication should go. According to Ravn (2012), consultations that are "one-sided" are those in which doctors spend most of the time during the communication sharing their ideas or thoughts with the patients

and spend considerably very little time listening to patients' concerns. The information they give the patients does not meet the specific needs of the patients and doctors do not evaluate if the patients understand the information relayed concerning the various treatment options.

However, Patient-centeredness has been defined somewhat by various authors (Epstein & Street 2011). It could be described as when the attitudes, expectancies, beliefs, values, experiences, and cultural backgrounds of patients are taken into consideration in the process of care. The patient plays an active role in the process unlike doctor-centeredness (Hall & Roter, 2019).

2.3. Role of Patient and Physician on Physician-Patient Communication

The socio-demographic characteristics of patients may affect their communication with physicians (Aelbrecht *et al*., 2019). In countries in Africa, the socio-economic and living conditions of many patients influence health care outcomes (Ogunfowakan *et al.*, 2012).

Some of the potential barriers which could affect physician-patient communication are the ethnic group, sex, the patient's socio-economic status, religious beliefs, level of education, age, and language spoken of either patient or physician (Charon, 2009).

When patients have a different cultural background from doctors, the patients may feel hesitant sharing accurate information on their health because they would feel the doctor can not relate with them properly (Ge *et al.,* 2009).

Also, the physician's communication with patients differs based on the patients' educational background. Patients who are less educated are not given enough information and are less included in making decisions on treatment. The physician normally approaches these patients in a very dominant style, and the patients are made to do a lot with very little guidance (Verlinde *et al*., 2012). When both the patient and the physician are not fluent in the same language(s), it affects the quality of care and the patient's health outcomes (Sears *et al*., 2013).

2.4. Measurement of physician-patient communication

Mishler, 1984 in Hall and Roter, (2019) say many authors have accessed physician-patient communication using qualitative and quantitative methods. The quantitative way involves it being consistent with the biomedical model and having the ability to transform observations into numbers. Statistical summaries are present and objectives that are correlated are measured. On the other hand, qualitative research normally records the data in the language the participants used. They often pay special attention to the perspective and worldview of the patient.

In a literature review on physician-patient communication, the three most vital components which emerged were: building an effective interpersonal relationship, the way information was exchanged, and making shared decisions with patients (King, A., & Hoppe, R. B., 2013). A qualitative study also focused on three central aspects which were: listening, asking patients for information, and giving patients information (Nowak, 2011).

A study was done to systematically review authorized physician-patient scales available in English. They used a theoretical model centered on a multidisciplinary method to choose relevant items. A committee of health experts made up of physicians, pharmacists, and psychologists were given the chosen items to use to create a crisp, readily useable questionnaire. Six items emerged as domains to be used to measure physician-patient communication quantitatively. The domains are involving patients in making the decision, physicians listening to patients, patients having confidence in physicians, physicians having empathy for the patient, and giving adequate information to patients (Bosson & Foote, 2018).

2.4.1. Listening

From an expert communicative view, patients' trust in physicians could be built up when physicians practice listening carefully to patients. As Ge *et al*., (2009) demonstrated, when physicians express interest in listening to patients, patients begin to feel that they could

communicate better with their physicians – as well as talk to physicians about private health problems and delicate information about their health. Effective physician-patient communication entails physicians engaging in good listening. This is one of the qualities a lot of patients desire greatly(Matusitz, J., & Spear, J., 2014). Listening has been recognized as a crucial element of patient-centered care received in the hospital (Lusk, J. M., & Fater, K., 2013).

2.4.2. Confidence

In hospitals where the patients and physicians interacting have different cultural backgrounds, the need for trust or confidence is of extreme importance. Since based on different cultural backgrounds, there are different views concerning trust, developing the trust between patients and physicians can be challenging (Alrubaiee, L., & Alkaa'ida, F., 2011).

2.4.3. Empathy

The physician who shows a form of empathy during consultation would observe patients have a more improved psychological health- less negative forms of emotions expressed (e.g., nervousness, fear, etc.) and high positive forms of emotions (e.g., self-worth, hope).

To ensure effective dialogue between the physician and the patient, the patient's emotional state and concerns should be responded to by the doctor. The physician who displays concern, empathy, verbal and non-verbal support makes patients feel understood thus enhances good rapport building. Responsiveness makes the patient feel more like a person than an object (Hall & Roter, 2019).

2.4.4. Decision making

Decision-making which is a shared responsibility may not be a common practice in the hospital. Although doctors try to describe the treatment methods, a lot of patients find it hard to understand what they are told thus, they cannot share in decision making. Sometimes when

patients do disagree with the doctor's view, it can lead to conflict (Berger, Boss & Beach, 2017).

2.4.5. Information

During the dialogue between the patient and physician in the consulting room, the physician must ensure to provide technical information and expertise in a way that the patient would understand. Studies over the past twenty-five years on physicians and patients' communication reports that patients normally want very detailed information from their physicians on their health. The information received is as vital as the patient's ability to handle overwhelming uncertainty (Roter & Hall, 2019).

2.5. Patient's Satisfaction

Satisfaction could be defined as a feeling of either happiness or displeasure by an individual when they compare the outcome of a product to their expectations (Oliver, R. L., 2014).

Also, satisfaction could be explained as both affective (how did I feel after the experience?) and evaluative (did the experience match up with my standard of quality?), and there are tools used to measure these factors. On the other hand, operationally, about fifty percent of satisfaction works define it as the factual description (e.g., my doctor seemed to be in a rush, my doctor responded to all my questions) which limits 'satisfaction' only to the assumptions on the expectations by the patients (Hall & Roter, 2019).

Customer satisfaction is described by Stemming in Kotler's review as a product of cognitive and affective analysis, where evaluative standards are established and related to the originally perceived performance. The customer is dissatisfied when the perceived performance is exceeded by the expected performance. However, if the perceived performance exceeds the expected performance, the customer becomes very satisfied. Otherwise, when the expected performance is the same as the perceived performance, the customer becomes indifferent or neutral (Oliver, R. L., 2014)

According to Prepah (2014), these factors play a vital role in patients satisfaction; the doctor's patience to explain clearly to the patient their health issues before administering treatment, the doctor giving very detailed information about the type of medications available to the patient, how clean a hospital is and the hospital's ability to provide 24 hours service.

2.6. Measurement of Patients' Satisfaction

The Servqual model is one of the tools used in measuring the quality of service and subsequently the client's satisfaction. Parasuraman *et al*., (2015) created the SERVQUAL tool to precisely quantify functional service quality. The SERVQUAL tool, in its initial form, has twenty-two pairs of Likert scale statements designed around five service quality scopes: These dimensions are:

(i) Tangible: defines how the hospital facility, hospital equipment, and personnel appear.

(ii) Reliability: describes the ability of the hospital to be dependable in delivering services.

(iii) Responsiveness: deals with the willingness of the hospital to promptly provide help to patients.

(iv) Assurance: the hospital's ability to make patients build trust and confidence in the hospital's service.

(v) Empathy: capability of doctor to offer compassionate, caring, and individualized devotion to customers.

The twenty-two pairs of statements are created to suit the five dimensions of quality of service. The scale for assessing produced a seven-point scale beginning from "strongly agree" (7) to "strongly disagree" (1) comes with each statement. The "strongly agree" end of the scale is created to relate with high expectations and high perceptions (Parasuraman *et al.*,1988). Service quality arises when anticipations are met (or exceeded) and a service gap happens if expectations are not met.

2.7. Influence of patient-physician communication on patients' satisfaction

The medical visit is often used to measure the satisfaction of patients with medical care. The very high reports of satisfaction shown in many studies seem to be disproved by the everyday view that a lot of patients are disappointed about their interaction with physicians (Amabile, T., & Kramer, S., 2011). A lot of studies have reported the relationship between physician-patient communication and patient satisfaction. Normally, good satisfaction is linked to a doctor's behavior which includes more information giving, more social talk, and more psychosocial talk. Also, nonverbal behavior such as voice tone, gaze, etc. influences patient's satisfaction (Williams, DiMatteo, Heritage, & Rosenthal, 2008).

2.8. Conclusion

In brief, there has been some documentation from other researchers on the topic of physician-patient communication and its influence on the satisfaction of healthcare services received by patients attending OPD in Legon hospital, Accra-Ghana. Firstly, some articles explained the term physician-patient communication. Then, we reviewed some documents which proved a correlation of the influence of patients and physicians on physician-patient communication. Several findings showed how the socio-demographic characteristic of the patient would influence physician-patient communication. Furthermore, some documents pointed out how to measure physician and patient communication. An article revealed six domains to focus on measuring quantitatively physician-patient communication. Finally, patient-physician communication has been found to influence patients' satisfaction and measurement for patients' satisfaction could be done using the SERVQUAL tool. The next chapter shows the methods used in data collection and analysis.

CHAPTER THREE

METHODS

3.1. Introduction

This section gives an overview of the study design employed, the study area, the study population, inclusion and exclusion criteria, sample size, sampling method, and details of the processes that were undertaken. These include tools for data collection, quality control strategies, data processing, management and analysis, ethical consideration, and dissemination of results.

3.2. Study Design

This study used an analytical cross-sectional design using both quantitative and qualitative approaches to collect data to help to examine physician-patient communication behavior and its association with patient satisfaction of health care at Legon Hospital. A cross-sectional study design is a type of study design where the researcher ensures that the outcome variable and the exposure or independent variables are measured all together during the same period during the study (Setia &Maninder, 2016).

3.3. Study Site

The study location was the University of Ghana Hospital. The University of Ghana Hospital is currently located in Legon, a suburb of the Greater Accra region. It is situated about twelve (12) kilometers (7.5 miles) northeast of the city center in the Accra Metropolis District, a district in the Greater Accra Region of Ghana (A.M.A, 2015). The hospital delivers several services: medical and surgical, maternal and child health, reproductive health, dental, dietetics and physiotherapy, specialist eye care, orthopedics, urology, and dermatology. The hospital was mainly constructed to offer care for the university population but later expanded its services to deliver care to the population in Madina, Adenta, Aburi, and Abokobi. The different

individuals who visit the hospital daily per their background would have a different perspective on what to expect when they communicate with the physician, which would enable them to generate have a broad view on what informs their level of satisfaction with health care.

3.4. Study Participants

The study involved physicians who work at the out-patient department of the Legon hospital and patients who visited the out-patient department during the study period.

3.4.1. Inclusion criteria

1. Patients who visited the OPD and fall between the ages of 15 and above.
2. Physicians who worked at the general OPD.

The study chose the following participants because the study seeks to understand the way physicians and patients communicate with each other.

3.4.2. Exclusion criteria

1. An unconscious patient in the hospital.
2. A physician who is working at the surgical OPD

The study did not choose the following participants because they may not be able to adequately answer the questionnaires given to them due to circumstances beyond their control.

3.5. Measurement of Variables

3.5.1. Independent variable

The independent variable was physician-patient communication behavior. The physician-patient communication was a categorical variable derived from a scale. The patients who visited the OPD at Legon hospital were asked to indicate the level of agreement with 14 different questions based on 5 domains of physician-patients communication. Weight was added to the various responses as follows; strongly disagree-0, disagree-1, neutral-2, agree-3,

and strongly agree-4. As a result of putting the weight on the participant's responses, a total score of 56 was computed from the 14 questions. Then a median score of 40 for physician-patient communication was generated. When respondents scored 40 and above, it meant that they had received good physician-patient communication. Respondents who had 39 and below were reported to have had poor physician-patient communication.

3.5.2. Outcome variable

The outcome variable was the patients' level of satisfaction with healthcare received at OPD in Legon hospital in Accra, Ghana.

The patient's satisfaction was a categorical variable derived from a scale. The patient who visited the OPD at Legon hospital was asked to indicate the level of agreement with 9 different questions based on 5 domains of satisfaction. Weight was added to the various responses as follows; strongly disagree-0, disagree-1, neutral-2, agree-3, and strongly agree-4. As a result of putting the weight of the participant's responses, a total score of 36 was computed from the 9 questions. Respondents who scored 63.3% and above meant that they had a high level of satisfaction with healthcare and respondents who had 36.1% and below were reported to have had a low level of satisfaction with healthcare.

3.6. Sample Size Determination

3.6.1. Sample size calculation for patients

Using the Cochrane formula for cross-sectional study, (Kish L,1965)

$$N = \frac{\left(z_{1-\alpha/2}\right) 2 \; p(1-p)}{d^2}$$

N = required sample size

Z1-α/2 = confidence level of 95% (standard value of 1.96)

p = 83.4 % satisfaction level based on a study in Achimota Hospital (Francis, 2019)

q = 1-0.834=0.166

d= degree of precision, set at 5% =0.05

Substituting, $N = 1.96^2 \times 0.834(0.166)$

0.05^2

$= 212$

Upward adjustment for incomplete data, non-responses, and inconsistencies =10%.

Hence the minimum sample size of patients = 235

3.6.2. Sample size calculation for physicians

An average of 8 doctors run shifts per week at the Legon hospital OPD so for this study, data was gathered from the entire population of doctors who work at the OPD during the data collection period.

Hence the sample size of the doctors = 10.

3.7. Sampling Method

3.7.1 Sampling method used on Patients

Data was collected over a month from all the patients who visited the Legon hospital using the convenience sampling technique. The convenience sampling technique (also known as haphazard sampling or accidental sampling) is a sampling method that falls under the non-probability category where the study participants meet some specific requirements such as, easy to access the participant, participants being available at a particular time, and also they are willing to participate in the study (Given, 2008). It can also be said to be a study where the respondents are easily accessible to the researcher. Right after the patients leave the consulting room, they either move to various units of the OPD such as the cash office to make some payments, the pharmacy to purchase drugs, or the hospital laboratory to perform a series of

medical laboratory tests. So the researchers had to be positioned at all these various units of the OPD to wait for patients who came to use these other services to administer the questionnaires.

3.7.2. Sampling method for Physicians working at OPD.

The sampling method used for the physicians was the purposive sampling method. This sampling method is a non-probability sampling method where the researcher deliberately chooses a particular respondent who could provide vital information which may not be the same as received from other forms of study (Maxwell, 2019).

In other to observe how physician-patient communication occurred at different times of the day, the researcher purposely went on to the study site (consulting room) to observe the physicians during the different doctor shift periods (morning, afternoon, and evening).

3.8. Data Collection Method

Data was collected from two different respondents that were; the patients who were at the OPD during the study and the physicians who were working at the OPD during the study.

3.8.1. Data Collection Method for Patients

Closed-ended questionnaires were administered to respondents of the study. When closed-ended questionnaires are given to the participants of the study, the researcher provides the participants with a fixed number of responses for them to select their answers. These questionnaires were conducted via the use of Google forms at the OPD. Google forms were used in other to reduce close contact as much as possible between respondents and the researcher because of the ongoing COVID-19 pandemic during the time of the study. In other to ensure that the research assistants were conversant with the questionnaire, a three-day training section was conducted for all the research assistants. The principal investigator paid unexpected visits to the hospitals during times when data was collected to ensure that research

assistants adhere to the study protocol. Moreover, all the research assistants made deliberate efforts to observe all the COVID-19 protocols such as wearing nose masks, regular washing of hands using soap and water whiles collecting the data from the respondents. During the data collection, the respondents were given two options. The first option was they could choose to have the google form link sent onto their phones so they can fill the form individually and the second option was that the research assistants have the google forms on their mobile phones for the respondents to fill the questions as they read the questionnaire out to the respondents for them to choose their response to the various questions in the questionnaires.

The questionnaire administered to the patients who attended the OPD was made up of three main sections. The first section constituted the patient's socio-demographics such as education, employment status, age, marital status, sex, and nationality.

The second part focused on gathering data on patients' perspectives on physician-patient communication behavior. A questionnaire was adapted by (Bosson & Foote, 2018) which used five domains to create a 15 item questionnaire. The domains were listening, confidence, empathy, decision-making, and information. The 15 questions were formed in a way such that the answers could be scored using a Likert- type scale from 1 to 5.

The final part of the patient questionnaire was focused on the level of satisfaction of healthcare received by patients at OPD in Legon hospital using the SERVQUAL Model. The model's variables are as following: tangibility, reliability, responsiveness, assurance, and empathy. Each questionnaire was administered between 20 and 40 minutes

3.8.2. Data Collection Method for Physicians

For the physicians, data was gathered using a naturalistic observational study. This is a technique commonly used by researchers which involves critically observing some of the spontaneous behavior of study participants in their natural environment. The researcher collects

the observational data either by taking notes, behavioral coding, using checklists, or tally tables to record what you observe. This study collected the data observing the physicians in the consulting room using an already created checklist on various domains of physician-patient communication which was expected to be practiced by physicians. The checklist had a part where you tick how often you saw a particular behavior repeat itself. There was also a part where the researcher could write descriptive notes on some of the characteristics they observed. The physician-patient communication domains were; non-verbal communication, empathy, language, not a barrier, clear information, listening, understanding patient's disease, Understanding wholeness of the patient, finding common grounds, open structured questions, closed structured questions, positive talk, negative talk, and social non-medical conversation. The study also recorded the date of the study, the time an observation starts and ends, and the physician's socio-demographics such as; age, sex, number of years of practice, specialty, ethnic group, marital status, and religion. Furthermore, the researcher recorded some characteristics of each patient who was observed by the physicians such as their sex, age range, and language is spoken. The researcher was given a place to seat in the consulting room to enable the researcher to observe the doctor at a close range. Each physician was observed for a minimum of five hours. Also, each physician was observed communicating with a minimum of five patients during every observational section.

3.9. Data Collection Instruments

3.9.1. Data collection tools used for patients

For this study, the questionnaire was softcopy which was created using Google forms. The research assistants required some digital tools to make it easy for them to administer the data adequately to patients. The researcher used mobile phones and tablets to collect data from patients. The researchers were made to wear identification tags that were printed out with their names on it for the study for easy identification.

3.9.2. Data collection tools used for physicians

For the observational study, the study required that data was collected using a pen, notebook, paper to print the checklists, and a camera to take a few pictures of the environment which was observed.

3.10. Data Processing

3.10.1. Processing of data from patients

On each day, after the data had been gathered, the questionnaires were reviewed carefully to ensure it was complete. The data collected quantitatively was saved and later sent into Microsoft Office Excel 2010. To reduce errors during entry, the google form which was used for data entry was created with suitable variable definition and consistency checks. The font size was also big enough to ensure the respondents could easily read. To ensure the data sent to excel was accurate, the data was doubly checked by the principal investigator and a trained research assistant.

3.10.2. Processing of data from physicians

On each day, after the observational study, the researcher reviews the notes copied to be sure the make sure no vital information was left out.

3.11. Data Analysis

3.11.1. Quantitative data analysis

The final data from the field was entered into Microsoft Office Excel 2016 then exported into STATA version 15 (Stata Corporation, College Station, TX, USA) for analysis. The data analysis would be done and presented as;

Descriptive statistics of the independent variables i.e. frequencies, means, and median were presented in tables and charts as necessary. The categorical outcome satisfaction of patients and physician-patient communication were analyzed using proportions and percentages.

Pearson or Fischer's exact chi-square tests were used to assess the relationship between physician-patient communication and the level of patients' satisfaction. These tests were used to assess the association between socio-demographic characteristics and the level of patients' satisfaction.

The logistic regression technique was used to examine predictors of physician-patient communication behavior and test the association between patient satisfaction and physician-patient communication. Variables that are significant at the bivariate level were included in the logistic model. Odds ratio (OR) and their 95% confidence intervals (CI) were used to test the strength of association. In all the statistical procedures, a ρ- a value of less than 0.05 was used in the research to help determine statistical significance.

Cronbach's alpha was used to assess the internal consistency of questions in the 5 dimensions of physician-patient communication. In all analyses, alpha < 0.05 was considered statistically significant.

3.11.2. Qualitative data analysis

For the naturalistic observational study, the result was analyzed to show the proportion of physicians who showed the various domains of good physician-patient communication in the consulting room at the OPD.

3.12 Quality control

Three research assistants undergo training over 3 days. The purpose of the training was to enable the research assistants to understand the aim of the research and be conversant with the data collection and entry processing. Every day, after the collection of data from the hospital, meetings were be organized using the administered questionnaires to recognize challenges and

solutions was suggested by the team The principal investigator paid unexpected visits to the hospitals during times when data was collected to ensure that research assistants adhere to the study protocol. After the pretesting, the questionnaire was modified based on feedback received.

3.13. Ethical Consideration

Ethical clearance was sought from Ghana Health Service Ethical Review Committee with approval number GHS-ERC 029/02/20.

CHAPTER FOUR

RESULTS

4.1. Introduction

This chapter presents the result of the study. It covers the socio-demographic characteristics of respondents, physician-patient communication, and patient satisfaction of health care services provided in the hospital.

4.2. Socio-demographic characteristics of patients interviewed

A total of 205 patients were interviewed in the survey with a mean age of 41.8 years and a standard deviation of 17.5 years. Majority of the patients interviewed were females (60.5%, n=124) with 30.2% (n=62) in the age range 21 to 30 years. Less than a tenth had no formal education (8.3%, n=17), with about half having a tertiary level of education (48.8%, n=100). Almost half of the respondents were married (48.8%, n=100) with 43.4% (n=89) single. A high majority of them were employed (84.8%, n=145) with all but one of the interviewed patients being Ghanaians. (table 1)

Table 1:Socio-demographic characteristics of patients interviewed

Variables	Frequency	Percentage
N	205	
Sex		
Female	124	60.49
Male	81	39.51
Age, mean ± SD	41.84 ± 17.51	
Age group		
15-20	15	7.32
21-30	62	30.24
31-40	33	16.1
41-50	29	14.15
51-60	29	14.15
61+	37	18.05
Highest level of education		
No formal education	17	8.29
Primary/JHS	25	12.2
SHS/TECH/VOC	63	30.73
Tertiary	100	48.78
Marital status		
Single	89	43.41
Married	100	48.78
Divorced/widowed	16	7.8
Occupation		
Unemployed	17	9.94
Employed	145	84.8
Retired	9	5.26
Nationality		
Ghanaian	204	99.51
Non-Ghanaian	1	0.49

Field work(2020)

4.3. Physician-patients communication

Of the 205 patients interviewed, 78% agreed and 16.6% strongly agreed that the doctors replied to all their concerns and expectation, 77.1% agreed and 15.1% strongly agreed that the doctor made sure they understood all explanations and instructions given them concerning their health, 76.6% agreed and 16.6% strongly agreed that they have confidence after talking to the doctor. Moreover, 71.7% agreed and 25.9% strongly agreed that the doctor allowed them to talk without interruption, 69.8% agreed and 25.9% strongly agreed that the doctor understood them, 68.8% agreed and 25.4% strongly agreed that it was easy to understand what the doctor said during the examination, 68.3% agreed and 22.4% strongly agreed that the doctor encouraged them to express themselves.

Also, 63.9% agreed and 35.1% strongly agreed that the doctor listened to them carefully during the consultation, 51.2% agreed and 13.7% strongly agreed that they were given all the necessary information by the doctor concerning their health. (Table 2)

Table 2: Responses of patients on physician-patients communication

Physician-patient communication	Strongly disagree	disagree	Neutral	Agree	Strongly agree
On this visit, …	n (%)	n (%)	n (%)	n (%)	n (%)
… the doctor listened to me carefully during the consultation.	0 (0.0)	2 (1.0)	0 (0.0)	131 (63.9)	72 (35.1)
… the doctor allowed me to talk without interrupting me.	0 (0.0)	3 (1.5)	2 (1.0)	147 (71.7)	53 (25.9)
… the doctor encouraged me to express myself.	4 (2.0)	6 (2.9)	9 (4.4)	140 (68.3)	46 (22.4)
… I feel that the doctor understood me.	1 (0.5)	3 (1.5)	5 (2.4)	143 (69.8)	53 (25.9)
… it was easy to understand what the doctor said while examining me.	2 (1.0)	4 (2.0)	6 (2.9)	141 (68.8)	52 (25.4)
… I feel I was given all the necessary information by the doctor concerning my health.	12 (5.9)	43 (21.0)	17 (8.3)	105 (51.2)	28 (13.7)
… the doctor explains the advantages of the treatment to me.	15 (7.3)	29 (14.1)	37 (18.0)	107 (52.2)	17 (8.3)
… the doctor explained the disadvantages of the treatment to me.	18 (8.8)	50 (24.4)	56 (27.3)	69 (33.7)	12 (5.9)
… the doctor involved me in the decision-making concerning treatment options	8 (3.9)	26 (12.7)	30 (14.6)	126 (61.5)	15 (7.3)
… the doctor was respectful when communicating	19 (9.3)	35 (17.1)	3 (1.5)	98 (47.8)	50 (24.4)
… the doctor made sure that I understood all explanations and instructions.	3 (1.5)	6 (2.9)	7 (3.4)	158 (77.1)	31 (15.1)
… I feel I have confidence after talking to the doctor.	2 (1.0)	4 (2.0)	8 (3.9)	157 (76.6)	34 (16.6)
… the doctor replied to all my expectations and concerns.	2 (1.0)	5 (2.4)	6 (2.9)	160 (78.0)	32 (15.6)
… I believe the doctor in general was able to communicate with me effectively.	2 (1.0)	3 (1.5)	3 (1.5)	153 (74.6)	44 (21.5)

Field work (2020)

4.4. Prevalence of Physician-Patient Communication

4.4.1 The prevalence of physician-patient communication (PPC)

Table 3 shows the prevalence of physician-patient communication which was assessed by patients attending the OPD. It indicates that the prevalence of good physician-patient communication is 56.1% and the prevalence of bad physician-patient communication is 39.7%.

Table 3:Descriptive Statistics to show the prevalence of Physician-Patient Communication (PPC)

PPC	Frequency	Percentage (%)
Bad PPC	85	39.7
Good PPC	120	56.1
Missing	9	4.2
Total	214	100.0

4.4.2. Mean of good physician-patient communication

An average of all the physician-patient domains means was computed to generate the mean score. The mean score of 2.82 is high and closer to 3.0. Using the Likert scale to interpret, 0 represented Strongly Disagree, 1 represents Disagree, 2 represents Neutral, 3 represents Agree and 4 represents Strongly Agree. Thus, the mean score of 2.82 means many participants were close to agreeing on receiving good physician-patient communication.

Table 4:Mean of good Physician-Patient Communication

Variable	Mean	Std. deviation
Physician-Patient Communication	2.82	0.447

4.5. Proportion of overall means scores of physician-patient communication domains

Table 5 shows a measure of the level of physician-patient communication (PPC) of respondents across the 6 domains of physician-patient communication from a score of 0 to 4. The results showed the mean PPC was highest for listening with a mean value of 3.2 (80.1%). This is followed by empathy with the mean value of 3.1(77.5%), decision making with a mean value of 2.7(66.9%), respect with a mean value of 2.6(65.2%) and the least mean PPC was information with a mean value of 2.5(63.3%). (table 5)

Table 5: Descriptive Statistics to show the proportion of the domains of Physician-Patient Communication (PPC)

Domains of PPC	Mean ± SD	PPC in Percentage
Listening	3.205±0.491	80.1%
Empathy	3.099±0.484	77.5%
Decision making	2.676±0.604	66.9%
Respect	2.610±1.278	65.2%
Information	2.530±0.738	63.3%

Std: Standard deviation

4.6. Level of physician-patients communication by socio-demographic characteristics

Table 6 reports on the level of physician-patient communication. Good level of patient-physician communication was highest among patients in the age groups 61 or more years (72.9%, n=27/37), 41-50 years (72.4%, n=21/29) and 51-60 years (65.5%, n=19/29) compared to those in age groups 15-20 years (33.3%, n=5/15), 21-30 years (53.2%, n=33/62) and 31-40 years (45.5%, n=15/33). The Pearson's chi-square showed a significant association between age groups and the level of physician-patients communication (p=0.023).

Good level of patient-physician communication was significantly higher among married patients (67.0%, n=67/100) and divorced or widowed patients (62.5%, n=10/16) compared to patients who were single (48.3%, n=43/89) from the Pearson's chi-square test (p=0.032). (table 6)

Table 6:Level of physician-patients communication by socio-demographic characteristics

Variable	Total N	Level of PCC		Pearson's Chi-square P-value
		Poor PCC n (%)	Good PCC n (%)	
N	205	85 (41.46)	120 (58.54)	
Sex				0.870
Female	124	52 (41.94)	72 (58.06)	
Male	81	33 (40.74)	48 (59.26)	
Age group				**0.023**
15-20	15	10 (66.67)	5 (33.33)	
21-30	62	29 (46.77)	33 (53.23)	
31-40	33	18 (54.55)	15 (45.45)	
41-50	29	8 (27.59)	21 (72.41)	
51-60	29	10 (34.48)	19 (65.52)	
61+	37	10 (27.03)	27 (72.97)	
Highest level of education				0.770
No formal education	17	6 (35.29)	11 (64.71)	
Primary/JHS	25	11 (44.00)	14 (56.00)	
SHS/TECH/VOC	63	29 (46.03)	34 (53.97)	
Tertiary	100	39 (39.00)	61 (61.00)	
Marital status				**0.032**
Single	89	46 (51.69)	43 (48.31)	
Married	100	33 (33.00)	67 (67.00)	
Divorced/widowed	16	6 (37.50)	10 (62.50)	
Occupation				0.360
Unemployed	17	6 (35.29)	11 (64.71)	
Employed	145	64 (44.14)	81 (55.86)	
Retired	9	2 (22.22)	7 (77.78)	
Nationality				0.400
Ghanaian	204	85 (41.67)	119 (58.33)	
Non-Ghanaian	1	0 (0.00)	1 (100.00)	

4.7. Logistic regression model of factors associated with good physician-patients communication.

Table 7 shows the logistic regression model of factors associated with the physician-patient communication level. Compared to patients aged 15-20 years, the crude odds of good physician-patient communication level were 5.2 times high among those aged 41-50 years

(COR: 5.25, 95% CI: 1.36-20.20), 3.8 times high among those aged 51-60 years (COR: 3.80, 95% CI: 1.02-14.21) and 5.4 times high among those aged 61 years and above (COR: 5.40, 95% CI: 1.48-19.73). From the adjusted model, the age group was not significantly associated with the physician-patient communication level.

Compared to patients who were single, the odds of a good level of physician-patient communication were 2 times among patients who were married from the unadjusted model (COR: 2.17, 95% CI: 1.21-3.91) and 3.3 times among married patients from the adjusted model (AOR: 3.30, 95% CI: 1.01 – 10.88). (Table 7)

Table 7: Logistic regression model of factors associated with good physician-patient communication

	Unadjusted model		Adjusted model	
Variables	**COR [95% CI]**	**P-value**	**AOR [95% CI]**	**P-value**
Sex				
Female	1.00 [reference]		1.00 [reference]	
Male	1.05 [0.59, 1.86]	0.865	0.97 [0.48, 1.99]	0.944
Age group				
15-20	1.00 [reference]		1.00 [reference]	
21-30	2.28 [0.70, 7.43]	0.173	3.28 [0.56, 19.23]	0.187
31-40	1.67 [0.47, 5.96]	0.432	1.07 [0.14, 8.04]	0.944
41-50	5.25 [1.36, 20.20]	0.016	3.68 [0.42, 31.86]	0.237
51-60	3.80 [1.02, 14.21]	0.047	4.09 [0.47, 35.81]	0.204
61+	5.40 [1.48, 19.73]	0.011	3.77 [0.43, 32.89]	0.230
Highest level of education				
formal education	1.00 [reference]		1.00 [reference]	
Primary/JHS	0.69 [0.19, 2.47]	0.573	1.85 [0.37, 9.23]	0.455
SHS/TECH/VOC	0.64 [0.21, 1.94]	0.430	0.78 [0.19, 3.11]	0.720
Tertiary	0.85 [0.29, 2.49]	0.772	1.74 [0.43, 7.00]	0.436
Marital status				
Single	1.00 [reference]		1.00 [reference]	
Married	2.17 [1.21, 3.91]	0.010	3.30 [1.01, 10.88]	0.049
Divorced/widowed	1.78 [0.60, 5.33]	0.300	2.13 [0.35, 12.81]	0.408
Occupation				
Unemployed	1.00 [reference]		1.00 [reference]	
Employed	0.69 [0.24, 1.97]	0.488	0.58 [0.17, 1.99]	0.390
Retired	1.91 [0.30, 12.26]	0.496	1.08 [0.12, 9.40]	0.945

COR: crude odds ratio. AOR: adjusted odds ratio. CI: confidence interval

4.8. Naturalistic Observation

This objective was analyzed based on observations where each of the physicians provided services to at least five outpatients during the study. The total number of physicians who participated in the study was 10, which constituted 6 males and 4 females. Also, a total of 57 patients were in the consulting room during the period of the study. The mean age of the physicians was 45.8. The respondents of the study have an average of 3 years of practice. All the physicians spoke both Asante Twi and English in the consulting room.

During the observational study, 60% of the physicians showed good physician-patient communication, out of which the male physicians showed a higher proportion of good physician-patient communication than female physicians.

Majority of the physicians were not limited by language (90%) and asked closed-ended questions (90%). However, comparing among the male and female physicians, the male physicians showed a higher proportion of both the domains.

Some physicians also engaged the patients using positive talk (80%), questions to understand the patient's disease (70%), and expressed empathy (70%) during the consultation with patients. Nevertheless, comparing among the male and female physicians, the female physicians showed a higher proportion of the various domains of physician-patient communication.

Moreover, 60% of the physicians communicated using clear information and non-verbal ways with a majority of the proportion of the physicians who exhibited these communication styles being females.

Likewise, 50% of the physicians tried to find common grounds, listened attentively, and asked questions to understand the wholeness of patients during the consultation with an equal proportion of the males and female physicians showing these communication domains.

Nevertheless, just a few physicians used the negative talk with patients (40%) with a greater proportion of the physicians who showed this communication style being females.

Similarly, the physicians asked open structured questions (40%) and used social non-medical conversation (40%) with the patients with a large proportion of the physicians who exhibited this communication style being males. (table 8)

Table 8: The proportion of physicians who showed various domains of good physician-patient communication.

	The overall proportion of indicator (N=10)	The proportion of male physicians (n=6)	The proportion of female physicians (n=4)
Good physician-patient communication	6(60%)	4(66.7%)	2(50%)
Domains of Physician-patient			
Non-verbal communication	6(60%)	4 (66.7%)	2 (50%)
Empathy	7(70%)	4(66.7%)	3(75%)
Language not a Barrier	9(90%)	6(100%)	3(75%)
Clear information	6(60%)	3(50%)	3(75%)
Listening	5(50%)	3(50%)	2(50%)
Understanding patient's disease	7(70%)	4(66.7%)	3(75%)
Understanding the wholeness of the patient	5(50%)	3(50%)	2(50%)
Finding common grounds	5(50%)	3(50%)	2(50%)
Open structured questions	4(40%)	3(50%)	1(25%)
Closed structured question	9(90%)	5(83.3%)	4(100%)
Positive talk	8(80%)	4(66.7%)	4(100%)
Negative talk	4(40%)	2(33.3%)	2(50%)
Social non-medical conversation	4(40%)	2(33.3%)	2(50%)

Field work (2020)

4.9. Responses of patients on the satisfaction of health care received

Of the 205 patients interviewed, 77.6% agreed and 13.7% strongly agreed that they were satisfied because the OPD staffs were compassionate to me, 73.7% agreed and 9.3% strongly agreed that they were satisfied that staff of OPD spend sufficient time (at least 10 min) to

listen to them, 73.3% agreed and 4.9% strongly agreed that they were satisfied that staff of the OPD has great communication and data skills. Also, 51.2% agreed and 2.4% strongly agreed that they were satisfied that OPD staff gave them good drugs as prescribed, 44.9% agreed and 2.9% strongly agreed that they were satisfied that the OPD does have adequate staff to care for their needs, 32.2% agreed and 2.4% strongly agreed that they were satisfied that laboratory results of the OPD were timely availed, 21.0% agreed and 3.4% strongly agreed that they were satisfied with that the OPD appeared clean on the visit. (table 9)

Table 9: Responses of patients on the satisfaction of health care received

Satisfaction	**Strongly Disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
	n (%)	n (%)	n (%)	n (%)	n (%)
"I am satisfied because OPD does appear clean on visit"	12 (5.9)	130 (63.4)	13 (6.3)	43 (21.0)	7 (3.4)
"I am satisfied that the staff of the OPD has great communication and data skills"	3 (1.5)	18 (8.8)	23 (11.2)	151 (73.7)	10 (4.9)
"I am satisfied that OPD staff has given me good drugs as prescribed"	0 (0.0)	3 (1.5)	61 (29.8)	105 (51.2)	5 (2.4)
"I am satisfied that staff of OPD spend sufficient time (at least 10 min)"	4 (2.0)	9 (4.4)	22 (10.7)	151 (73.7)	19 (9.3)
"I am satisfied that OPD does have adequate staff to take care of me"	8 (3.9)	54 (26.3)	45 (22.0)	92 (44.9)	6 (2.9)
"I am satisfied that Laboratory results of this OPD are timely availed"	10 (4.9)	15 (7.3)	78 (38.0)	66 (32.2)	5 (2.4)
"I am satisfied that OPD staffs were Compassionate to me"	6 (2.9)	11 (5.4)	23 (11.2)	155 (75.6)	10 (4.9)
"Generally, I am satisfied with all the services received at the OPD"	2 (1.0)	5 (2.4)	11 (5.4)	159 (77.6)	28 (13.7)
"I am satisfied that I can recommend this OPD services to other people"	5 (2.4)	6 (2.9)	13 (6.3)	136 (66.3)	45 (22.0)

4.10. The domains of patients' satisfaction.

Table 11 shows the mean scores of the domains of patient satisfaction. The results showed that the proportion means on the responsiveness is 2.8(71.0%). This is followed by empathy with

the proportion of mean of 2.7(68.6%), reliability with a proportion of mean of 2.7(67.7%), tangibility with a proportion of mean of 2.5(61.8%) and the least proportion of mean is the assurance (50.4%). The mean value of general satisfaction was 3.0 (75.0) (table:10)

Table 10: Descriptive Statistics showing the mean scores of Patient satisfaction with OPD services.

Domains of Patient Satisfaction	Frequency	Mean± SD	Satisfaction in Percentage
Assurance	205	2.017±0.688	50.4%
Tangibility	205	2.470±0.998	61.8%
Reliability	205	2.707±0.453	67.7%
Empathy	205	2.743±0.758	68.6%
Responsiveness	205	2.839±0.727	71.0%

4.11. Level of satisfaction by socio-demographic characteristics

Table 11 reports on the level of satisfaction of patients by socio-demographic characteristics. About two-third of the patient showed a high satisfaction level with health care received (65.4%, n=134) whilst 34.6% (n=71) reported a low satisfaction level with health care received. (Table 11)

Table 11: Level of satisfaction by socio-demographic characteristics

Variable	Total N	Level of satisfaction		P-value
		Low n (%)	High n (%)	
N	205	71 (34.63)	134 (65.37)	
				0.360
Sex				
Female	124	46 (37.10)	78 (62.90)	
Male	81	25 (30.86)	56 (69.14)	
				0.250
Age group				
15-20	15	9 (60.00)	6 (40.00)	
21-30	62	23 (37.10)	39 (62.90)	
31-40	33	10 (30.30)	23 (69.70)	
41-50	29	11 (37.93)	18 (62.07)	
51-60	29	7 (24.14)	22 (75.86)	
61+	37	11 (29.73)	26 (70.27)	
				0.250
Highest level of education				
No formal education	17	5 (29.41)	12 (70.59)	
Primary/JHS	25	11 (44.00)	14 (56.00)	
SHS/TECH/VOC	63	20 (31.75)	43 (68.25)	
Tertiary	100	35 (35.00)	65 (65.00)	
				0.240
Marital status				
Single	89	35 (39.33)	54 (60.67)	
Married	100	29 (29.00)	71 (71.00)	
Divorced/widowed	16	7 (43.75)	9 (56.25)	
				0.070
Occupation				
Unemployed	17	6 (35.29)	11 (64.71)	
Employed	145	55 (37.93)	90 (62.07)	
Retired	9	0 (0.00)	9 (100.00)	
				0.170
Nationality				
Ghanaian	204	70 (34.31)	134 (65.69)	
Non-Ghanaian	1	1 (100.00)	0 (0.00)	

4.12. Association between physician-patient communication and satisfaction of health care.

High satisfaction of health care services was significantly higher among patients who reported good physician-patient communication compared to those who reported poor physician-patient

communication from the Pearson's chi-square test (71.7% vs. 56.5%, χ^2=5.08,p=0.024). (Fig.2)

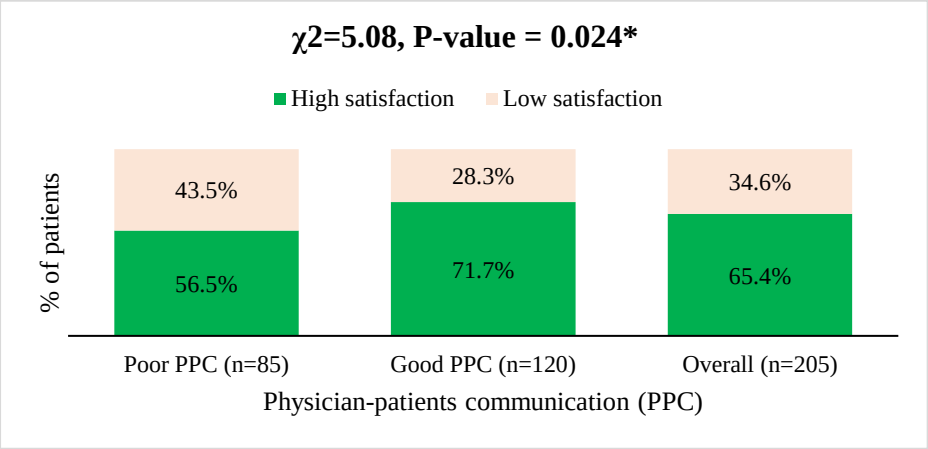

Fig. 2: Association between physician-patient communication and satisfaction of health care

4.13. Logistic regression model of the association between the physician-patient communication level and satisfaction of health care services among patients

Table 12 shows the logistic regression model of physician-patient communication on the satisfaction of health care services received among patients. From the crude odds ratio, patients who reported good physician-patient communication levels had 95% increased odds of high satisfaction of health care compared to patients with poor physician-patient communication (COR: 1.95, 95% CI: 1.09-3.50, p=0.025). From the adjusted odds ratio, patients who reported good physician-patient communication levels had 2 times higher odds of high satisfaction of health care compared to patients with poor physician-patient communication (AOR: 2.26, 95% CI: 1.10-4.63, p=0.025). (Table 12)

Table 12: Logistic regression model of the association between the physician-patient communication level and satisfaction of health care services among patients

	Unadjusted model		Adjusted model	
Variables	**COR [95% CI]**	**P-value**	**AOR [95% CI]**	**P-value**
Physician-Patient communication				
Poor PCC	1.00 [reference]		1.00 [reference]	

Good PCC	1.95 [1.09, 3.50]	0.025	2.26 [1.10, 4.63]	0.026

For the adjusted model, age group, sex, marital status, occupation, and the highest level of education were controlled for.

COR: crude odds ratio. AOR: adjusted odds ratio. CI: confidence interval

CHAPTER FIVE

DISCUSSION

5.1. Introduction

This study was designed to determine the physician-patient communication and its influence on the satisfaction of healthcare services received by patients attending OPD in Legon hospital, Accra-Ghana. Key findings of this study are discussed according to the specific objectives of the study.

5.2. Socio-demographic Characteristics of Respondents

This section reveals a summary of the socio-demographic characteristics of patients who visited the OPD and their link to the present literature.

From this study, most of the respondents were females contributing to about 60.5% of the population who accessed OPD services. This is in line with (Chakraborty *et al*., 2017) and (Ogunfowokan, 2012) studies which revealed that most of the study population in the hospital constituted females (60.8%). Also, this study is in agreement with the work by (Ofosu-Kwarteng, 2012) where females made up 53.1% of the participants in the hospital.

The highest age range of respondents in the study was 21-30 years (30.2%). The reason why the study at Legon hospital has the highest age range of participants within this age range (21-30 years) was that the Legon hospital was built purposively to be accessed by the students at the University of Ghana. Thus, it is expected to have recorded a lot of youths patronizing hospital services.

Most of the patients had tertiary education 48.8%, followed by those with secondary education 30.7%, then primary/JHS graduates 12.2%, and non-formal education 8.3%. This corresponds

with a study by (Darkoa, 2015) that reveals that the respondents who had tertiary education were 65.5% and 13.4% of the respondents had no-formal education. The reason why the study at Legon hospital had a lot of participants with tertiary education was that the Legon hospital was built purposively to be accessed by the members of the University of Ghana. Thus, it is expected to record having a large number of intellectuals attending the OPD.

In the observational study, all of the physicians were multilingual thus they did not encounter language barriers while communicating with the patient. This may be because Ghana, like most African countries, is a truly multilingual country. It has 81 living languages for a population of approximately 29 million people(Eberhard *et al*. 2020). Language fluency and skills could be a good tool for effective physician-patient communication and the promotion of quality healthcare delivery. This argument agrees with (Schieffelin & Ochs, 1986) in (Abdulai, Alhassan, & Sanus, 2019) where skills and fluency in languages were considered as requirements for efficient global engagement in every healthcare community.

5.3. Prevalence of Physician-Patient Communication Behaviors

Many studies have been done on physician-patient communication around the globe (Andaleeb, 2001; Williams *et al*., 2013; Kennedy *et al.,* 2014). This study reveals a 56.1% prevalence of good physician-patient communication at the OPD during their visit to the Legon Hospital. This is in disagreement with findings by (Larson, Leslie, & Kruk, 2017) which reports that the average score of good health providers communication in seven sub-Saharan Africa was low at 35%. Also, (Moyo & Salawu, 2017) reports qualitatively that from the view of respondents, good physician-patient health communication is low in the Mafikeng community of South Africa as a result of too many physiological, organizational, psychological, and administrative barriers.

The high prevalence of good physician-patient communication underscored by patients was confirmed with the observation study which was done to observe physicians. The observational study revealed that 60% of the physicians showed a high proportion of physician-patient communication.

5.4. Domains of Physician-Patient Communication

When comparing the means of domains of good patient-physician communication received by patients in the study, listening was found to have the highest mean. Effective physician-patient communication entails physicians engaging in good listening. According to (Nowak, 2011), listening was ranked as part of the three key areas of communication that would be vital in ensuring effective physician-patient communication. A study by (As Ge *et al*.,2009), demonstrated that, when physicians express interest in listening to patients, patients begin to feel that they could relate better with physicians and give them delicate information about their health. Listening has been recognized as a crucial element of patient-centered care in the hospital (Matusitz, J., & Spear, J., 2014).

Also, when comparing the means of the domains of patient-physician communication received by patients in the study, empathy emerged as the second-highest mean score. The physician who displays concern, empathy, verbal and non-verbal support makes patients feel understood thus enhances good rapport building. Being empathetic makes the patient feel more like a person than an object. According to (Hall & Roter, 2019), The physician who shows a form of empathy during consultation would observe patients have a more improved psychological health- fewer negative emotions expressed (e.g., fear, anxiety) and more positive emotions (e.g., self-worth, hope). Thereby to ensure effective communication between the physician and the patient, the patient's emotional state and concerns should be responded to by the physician. Furthermore, the decision-making domain was ranked the third mean score of 2.68, which shows that many of the physicians involved the patients in decision-making concerning their

health. This may be because the majority of the patients who visited the hospital are educated so the physicians would find it a little easier engaging them on the various treatment options. This study is in disagreement with recent research done by (Berger, Boss & Beach, 2017), which stated that shared decision-making may not be a common practice in many hospitals around the globe care. Physicians do not like to involve most patients in making decisions concerning health treatment methods because the physicians feel that it is time wasting and many patients may not understand the various treatment methods.

Also, respect was ranked as the fourth domain with a mean score of 2.61. According to (Flickinger *et al*., 2016), respect yields a lot of positive feedback during medical encounters by both physicians and patients because it is involved in building a good rapport among the physician and patient.

Moreover, the domain information had the lowest mean score. This is in line with (Berger, 2013; Olson, 2010), who says physicians give very little information to the patients concerning their health. This is because the doctors normally find it hard to communicate with patients without using medical jargon so would rather not give the information to the patient. The physicians must try as much as possible to provide enough technical information and expertise in a simple language that the patient would understand.

Furthermore, during the naturalistic observational study, a checklist was used to record the domains of physician-patient communication practiced by the physicians. The majority of the physicians asked a lot of closed-ended questions (90%). Closed-ended questions are set of questions which when asked, require just a one-word answer, usually yes or no, (e.g., “Are you experiencing headaches, or Do you have a loss of appetite ?”). These types of questions were very relevant to help the physicians take the history of the patients.

Most of the physicians engaged the patients using positive talk (80%). Often included in positive talks are sounds described as noises than as words; *hm*, *huh*, *aha*, and *ahh*, statements

such as your blood pressure have improved and you are doing a great job on taking your medication, shared laughter, and encouragement. A study by (Roter, D., & Hall, J. A. 2010) reports that positive talk improves the bond between the physician and the patients.

Slightly above average of the physicians expressed nonverbal communication. The hospital may have reported having low records of nonverbal communication because of the introduction of the compulsory wearing of a facemask and face shield. This resulted in physicians showing very little eye contact and showing facial expressions such as smiling and nodding. According to (Street, 2011), expressing nonverbal communication such as tone of voice, facial expression, and touch, is a very critical means by which patients' health is improved by reducing their level of anxiety.

Moreover, half of the physicians (50%) showed less proportion of good physician-patient communication specifically in areas such as physicians finding common grounds with patients, physician listening attentively to the patient, and physicians asking questions to understand the wholeness of patients during consultation.

Additionally, just a few physicians asked open structured questions to patients and initiated a social non-medical conversation among patients(40%). Open-ended questions gave the patients some amount of discretion in the direction they take in answering. Examples of open-ended questions which was observed were ‘Tell me about your leg pain’ and ‘What seems to be the problem?’. Physicians who encourage open conversation when engaging with the patients would get more complete information from the patients. There is a need for physicians to improve on this skill. This is in line with a study by the (Committee on Patient Safety and Quality Improvement Committee on Health Care for Underserved Women, 2014) which says that open-structured communication improves patient's involvement in their health care through negotiation and increases adherence to treatment plans that promote long-term health.

Finally, almost half of the physicians used negative talk when engaging with patients in this study. Although the negative talk is not often made explicit by physicians, a negative message can be expressed in other ways. The negative talk includes disagreements, confrontations, and antagonisms. Examples are; you have gained weight since your last visit, i am disappointed in you, and you are not trying at all to take your medications"). A study by (Roter, D., & Hall, J. A. 2010) says that the medical profession's etiquette and training disapprove of physicians being rude, unpleasant, and expressing high emotions. The negative talk could affect the mental health of the patients.

5.5. Level of physician-patient communication by socio-demographic characteristics

Physician-patient communication behavior was influenced by various socio-demographic factors of patients and physicians (Aelbrecht *et al*., 2019). In countries like Africa, the socio-economic and living conditions of many patients influence health outcomes (Ogunfowakan *et al*., 2012).

5.5.1 Patients' Gender

In this study, physician-patient communication for male patients was significantly not associated with the female patients (P-value : 0.865) who visited the Legon hospital. This is in disagreement with studies by (Hall & Roter, 2019) which reports an association between patients gender and physician-patient communication. Researchers found that female patients get more positive talk and are mostly included in non-social conversations than males. Also, the study showed that many physicians have a greater possibility to share humour with female patients and to ask them more about their feelings than male patients.

5.5.2 Physicians' Gender

From the observational study, the female physicians recorded to have expressed a higher proportion of good physician-patient communication than male physicians. The study suggests

that female physicians report experiencing many emotions both more frequently and more intensely than do male physicians and show more empathy by nature as compared to the male. A study by (Hall & Roter, 2019) supports these findings by saying that, male physicians show less smiling and laughing, less nodding, less hand gesturing, and very poor nonverbal communication skills.

5.5.3 Patients' Age

This study shows that compared to patients aged 15-20 years who visited the hospital, the crude odds of good physician-patient communication level were 5.2 times high among those aged 41-50 years (COR: 5.25, 95% CI: 1.36-20.20), 3.8 times high among those aged 51-60 years (COR: 3.80, 95% CI: 1.02-14.21) and 5.4 times high among those aged 61 years and above (COR: 5.40, 95% CI: 1.48-19.73). Mostly, due the older population may tend to more freedom to visit the hospital regularly for check-ups as compared to the younger patients and build a stronger bond and relationship with the physician because at that stage, they may have retired from working. A study by (Hall & Roter, 2019) aligns with these findings by stating that the elderly normally receive better treatment, more information, more total communication, and are asked more with regards to their medications than did younger patients. The reason why aged population receive better communication may be because the aged patients visit the hospital three times more often than younger patients.

5.6. Level of Satisfaction of Health Care Services at OPD

This study showed that the majority (65.4%) of the patients at the hospital were satisfied with the healthcare services they received at the OPD during their visit. This is consistent with studies on a survey which was done in Nigeria which reported to have an overall healthcare service satisfaction of 84% (Olawoye, 2008; Iliyasu *et al*., 2010), 75% (Ofili *et al.*, 2005), and 53% (Olusina *et al*., 2004).

5.7. Domains of Satisfaction

Among the domains of satisfaction, responsiveness with a mean value of 2.8(71.0%) was the highest domain of satisfaction of healthcare services. According to (Yousapronpaiboon & Johnson, 2013), recording good responsiveness reflects how quickly a hospital would try to meet all the needs of clients through giving information, spending less waiting time, and emergency responsiveness. Therefore, the report of the high level of responsiveness in Legon hospital implied that the patients who visit the hospital were attended to on time. This may be because the Legon hospital recently began to use a computerized data entry system which makes record keeping, processing medical laboratory reports, and retrieving medical history by doctors very efficient.

Also, the second-highest domain of satisfaction was empathy with a mean value of 2.7 (68.6%). According to (Coulter & Ligas, 2010), empathy is shown during an interaction between a client and a hospital staff. Many patients visiting the hospital expect that the services offered to them would not be delivered in a robotic manner which disregards their feelings.

Furthermore, reliability with a mean value of 2.7(67.7%) was the third-highest domain of satisfaction. According to (Arlen, 2008; Yousapronpaiboon & C. Johnson, 2013), reliability shows how much the health providers in the hospital can deliver all the services they promised to deliver. It is normally found to be very vital to clients visiting the hospital.

Moreover, tangibility with the mean value of 2.5(61.8%) was ranked fourth when comparing the domains of satisfaction. The study by (Yousapronpaiboon & C. Johnson, 2013) shows that tangibility means how neat or clean the environment looks to the patient. This is in agreement with the study by Nwabueze *et al.,* 2010 at Onitsha (Nigeria) which reports that 18.7% of patients they performed the research on said the cleanness of the hospital, influences their level

of satisfaction. Also, (Ofosu-Kwarteng, 2012) reported that even though 67% of the respondent described the environment as neat, 64.6% reported that the washroom is very unclean.

Finally, the least domain of satisfaction was assurance with the mean value of 2.0(50.4%). A study by (Daniel & Berinyuy, 2010) defined assurance as being made up of the provider's knowledge and technical skills from the patient's perspective. Assurance was said to be ranked the least domain experienced by clients because according to (Platt & Keating, 2017), there is a big communication gap between the health care providers and patients. The healthcare providers use biomedical factors in representing the illness to patients. However, the patients use the social and behavioral aspects in representing the illness. In effect, health care providers need to make it possible to bridge the communication gap between themselves and their clients.

5.8. Association between Physician-Patient Communication and Patient Satisfaction

The study showed that patients who had a high level of satisfaction with healthcare services were more likely to have responded to have good physician-patient communication with an odds ratio of 1.95(1.09,3.50) $P<0.025$. This is in agreement with (Gesell, Clark, and Williams 2014), where there was a significant association between physician-patient communication and patient's satisfaction with health care. Besides, other studies by (Williams, Weinman, & Dale, 2014) says physicians who have built good communication skills with patients can prevent a lot of high-cost interventions and also lead to quality outcomes and much better satisfaction.

5.9. Limitation

1. From the observational study, the researcher noticed that two physicians share the same consulting room. This affected the level of privacy every patient received when communicating with the doctor in the consulting room.

2. Since the study adopted a quantitative approach using a structured questionnaire to collect data from patients, it was difficult to investigate the issues from the perspectives of the patients themselves through researcher-researched interactions.
3. The observational study on the physicians may lack validity due to the Hawthorne effect/demand characteristics, where when participants know they are being watched they may act differently.

CHAPTER SIX

CONCLUSION AND RECOMMENDATION

6.1. Introduction

This chapter summarizes the findings of the study in a form of a conclusion with some recommendations based on the findings of the study.

6.2. Conclusion

A physician's ability to communicate effectively is said to be a fundamental skill that aids them to develop other clinical capacities (Luis, Angel Perula de Torres, Roger Ruiz-Moral & Esperanza Perez Rodriguez, 2006). The study showed that patients who had a high level of satisfaction with healthcare services were more likely to have good physician-patient communication with an odds ratio of 1.95(1.09,3.50) P<0.025.

There was a 56.1% prevalence of good physician-patient communication experience at the OPD among the patient and the physicians were observed to show 60% of good physician-patient communication in the consulting room. Majority (65.4%) of the patients at the hospital were satisfied with the healthcare services they received at the OPD during their visit.

Moreover, the result showed that the highest mean score of the domains of physician-patient communication was listening with the mean value of 3.2 (80.1%). This is followed by empathy with the mean value of 3.1(77.5%), decision making with the mean value of 2.7(66.9%), respect with a mean value of 2.6(65.2%) and the least was information with a mean value of 2.5(63.3%).

Furthermore, 40% of the physicians were observed to have used negative talk when communicating with patients and also 40% of the physicians did not engage the patients in open-structured questions and social non-medical conversation.

6.3. Recommendation

This section presents the recommendations for consideration by health policymakers and practitioners. The study makes the following recommendations based on the findings for consideration by health policymakers and practitioners towards physician-patient communication and its influence on patient satisfaction with healthcare received in health institutions:

1. This study could be replicated in other regions to enable us to compare the unique results from the various regions.
2. The need of management to encourage public health education policies which would implement health communication programs organised on regular basis to empower patients to be confident to ask the right questions to the physicians concerning their health in order to experience quality health outcomes.
3. Policies should be instituted to observe and award physicians who are excelling in maintaining good physician-patient communication in order to encourage other physicians to emulate.

BIBLIOGRAPHY

Abdulai, M., Alhassan, A. R. K., & Sanus, K. M. (2019). Exploring dialectal variations on quality health communication and healthcare delivery in the Sissala District of Ghana. *Language and Intercultural Communication*, *19*(3), 242–255. https://doi.org/10.1080/14708477.2019.1569671

Aelbrecht, K., Hanssens, L., Detollenaere, J., Willems, S., Deveugele, M., & Pype, P. (2019). Determinants of physician-patient communication: The role of language, education, and ethnicity. *Patient Education and Counseling*, *102*(4), 776–781. https://doi.org/10.1016/j.pec.2018.11.006

Alrubaiee, L., & Alkaa'ida, F. (2011). The mediating effect of patient satisfaction in the patients' perceptions of healthcare quality-patient trust relationship. *International Journal of Marketing Studies*, *3*(1), 103.

Amabile, T., & Kramer, S. (2011). The progress principle: Using small wins to ignite joy, engagement, and creativity at work. Harvard Business Press.

Andaleeb, S.S. 2017. Service quality perceptions and patient satisfaction: A study of hospitals in a developing country. Social Science and Medicine 52: 1359-1370. https://doi.org/10.1016/S0277-9536(00)00235-5

Bertakis, K. D. (2009). The influence of gender on the doctor-patient interaction. Patient Education and Counseling, 76(3), 356–360.

Berger, Z., Dembitzer, A., & Beach, M. C. (2013). Reason for hospital admission: a pilot study comparing patient statements with chart reports. *Narrative inquiry in bioethics*, *3*(1), 67-79.

Berger, Z. D., Boss, E. F., & Beach, M. C. (2017). Communication behaviors and patient autonomy in hospital care: A qualitative study. *Patient Education and Counseling*, *100*(8), 1473–1481. https://doi.org/10.1016/j.pec.2017.03.006

Blaise P, Kegels G. A realistic approach to the evaluation of the quality management movement in health care systems: a

comparison between European and African contexts based on Mintzberg's organizational models. *Int J Health Plann Manage*

2004;19:337–64.

Buller, M. K. (2019). *Physicians ' Communication Style and Patient Satisfaction Author (s): Mary Klein Buller and David B. Buller Source : Journal of Health and Social Behavior, Vol . 28, No . 4 (Dec ., 1987), pp. 375-388 Published by American Sociological Association*. *28*(4), 375–388.

Charon, R. (2009). Narrative medicine a witness for the self-telling body. Journal of Applied Communication Research, 37(2), 118–131.

Committee on Improving the Quality of Cancer Care: Addressing the Challenges of an Aging Population; Board on Health Care Services; Institute of Medicine; Levit L, Balogh E, Nass S, (2013). Delivering High-Quality Cancer Care: Charting a New Course for a System in Crisis. Washington (DC): National Academies Press (US); Patient-Centered Communication and Shared Decision Making. Available from: https://www.ncbi.nlm.nih.gov/books/NBK202146

Committee on Patient Safety and Quality Improvement Committee on Health Care for Underserved Women. (2014). *Effective Patient-Physician Communication Committee on Patient Safety and Quality Improvement Committee on Health Care for Underserved Women*. (587).

Coulter, R. a, & Ligas, M. (2010). The Long Good-Bye: The Dissolution of Customer-Service Provider Relationships. *Psychology & Marketing*, *17*(8), 669–695. https://doi.org/10.1002/1520-6793(200008)17:8<669::AID-MAR2>3.0.CO;2-T

Daniel, C. N., & Berinyuy, L. P. (2010). Using the SERVQUAL Model to assess Service Quality and Customer Satisfaction. An Empirical Study of Grocery Stores in Umea. *Umea School of*

University of Ghana http://ugspace.ug.edu.gh 59 *Business*, 1–78. Retrieved from http://umu.diva-portal.org/smash/record.jsf?pid=diva2:327600

de Haes, H., & Bensing, J. (2009). Endpoints in medical communication research, proposing a framework of functions and outcomes. *Patient Education and Counseling*, *74*(3), 287–294. https://doi.org/10.1016/j.pec.2008.12.006

Dibbelta, S., Schaidhammera, M., Fleischerb, C., & Greitemanna, B. (2009). Patient-doctor interaction in rehabilitation: The relationship between perceived interaction quality and long-term treatment results. Patient Education and Counseling, 76(3), 328–335.

Epstein, R. M., & Street, R. L., Jr (2011). The values and value of patient-centered care. Annals of family medicine, 9(2), 100–103. https://doi.org/10.1370/afm.1239

Essilfie-Bonzie, E. (2018). Factors Influencing Patient Satisfaction at the Out-Patient Department of Pentecost Hospital, Greater Accra Region (Doctoral dissertation, University of Ghana).

Flickinger, T. E., Saha, S., Roter, D., Korthuis, P. T., Sharp, V., Cohn, J., ... & Beach, M. C. (2016). Respecting patients is associated with more patient-centered communication behaviors in clinical encounters. *Patient education and counseling*, *99*(2), 250-255.

Given, L. M. (Ed.). (2008). *The Sage encyclopedia of qualitative research methods*. Sage publications.

Ge, G., Burke, N., Somkin, C. P., & Pasick, R. (2009). Considering culture in physician-patient communication during colorectal cancer screening. Qualitative Health Research, 19(6), 778–789.

Ha, J. F., & Longnecker, N. (2010). Doctor-patient communication: a review. The Ochsner journal, 10(1), 38–43.

Hall, J.A., Harrigan, J.A., & Rosenthal, R. (1995). Nonverbal behavior in clinician-patient in all, J. A., & Roter, D. L. (2019). *Oxford Handbooks Online Physician-Patient Communication Evolving Models of the Physician-Patient Relationship*. https://doi.org/10.1093/oxfordhb/9780195342819.013.0014

Hall, J. A., & Roter, D. L. (2019). *Oxford Handbooks Online Physician-Patient Communication Evolving Models of the Physician-Patient Relationship*. https://doi.org/10.1093/oxfordhb/9780195342819.013.0014

Hardavella, G., Aamli-Gaagnat, A., Frille, A., Saad, N., Niculescu, A., & Powell, P. (2017). Top tips to deal with challenging situations: doctor-patient interactions. Breathe (Sheffield, England), 13(2), 129–135. https://doi.org/10.1183/20734735.006616

Haskard, K.B., Williams, S.L., DiMatteo, M.R., Heritage, J., & Rosenthal, R. (2008). The provider's voice: Patient satisfaction and the content-filtered speech of nurses and physicians in primary medical care. *Journal of Nonverbal Behavior, 32*, 1–20.

Hochman, O., Itzhak, B., Mankuta, D., Vinker, S. (2008). The relation between good communication skills on the part of the physician and patient satisfaction in a military setting. Military Medicine, 173, 9:878.

Jangland, E., Gunningberg, L., & Carlsson, M. (2009). Patients' and relatives' complaints about encounters and communication in health care: Evidence for quality improvement. *Patient Education and Counseling*, *75*(2), 199–204. https://doi.org/10.1016/j.pec.2008.10.007

King, A., & Hoppe, R. B. (2013). "Best practice" for patient-centered communication: a narrative review. Journal of graduate medical education, 5(3), 385–393. https://doi.org/10.4300/JGME-D-13-00072.1

Lusk, J. M., & Fater, K. (2013, April). A concept analysis of patient-centered care. In Nursing forum (Vol. 48, No. 2, pp. 89-98).

Maxwell, J. A. (2019). Qualitative Research Design. In P. Atkinson, S. Delamont, A. Cernat, J.W. Sakshaug, & R.A. Williams (Eds.), *SAGE Research Methods Foundations.* doi: 10.4135/9781526421036788354

Matusitz, J., & Spear, J. (2014). Effective doctor–patient communication: an updated examination. Social work in public health, 29(3), 252-266.

Moyo, R., & Salawu, A. (2017). Patients' Perception of Doctor-Patient Health Communication in a Rural Community. *Communitas*, *22*(1). https://doi.org/10.18820/24150525/comm.v22.8

Nowak P. Synthesis of qualitative linguistic researchĐA pilot review integrating and generalizing findings on doctor±patient interaction. Patient Educ Couns. 2011; 82(3):429±41. https://doi.org/10.1016/j. pec.2011.01.022 PMID: 21295936

Nwabueze, S. A., Adogu, P., Llika, A. L., & Asuzu, M. C.,(2010). Comparative analysis of patient satisfaction level in HIV/AIDS care in secondary and tertiary healthcare facilities in Nigeria. *Afrimedic Journal*, 1(2), 1-9.

Nyblade, L., Stockton, M.A., &Giger, K.,(2019) Stigma in health facilities: why it matters and how we can change it. BMC Med 17, 25. https://doi.org/10.1186/s12916-019-1256-2

Ogunfowakan, O., Mora, M.2012. Time, Expectation, and Satisfaction: Patients' experience at National Hospital Abuja. *Nigeria African Journal Prim Health care family med* 4 (1)398.

Ofili A. N, Oforwe CE (2005). Patients' assessment of efficiency services at a teaching hospital in a developing country. *Ann African Med*; 4: 150-3.

Ofosu-Kwarteng, J. (2012). *Healthcare delivery and customer satisfaction in Ghana. A case study of the Koforidua Regional Hospital*. Doctoral Dissertation, Institute of Distance Learning, Kumasi, Ghana: Kwame Nkrumah University of Science and Technology

Olawoye O.O (2008). Patient Satisfaction with cataract surgery and posterior chamber intraocular lens at University College Hospital Ibadan and St Mary Hospital Ago-Iwoye, Nigeria. A dissertation submitted to the National Postgraduate Medical College of Nigeria, p. 9-10.

Oliver, R. L. (2014). Satisfaction: A behavioral perspective on the consumer: A behavioral perspective on the consumer. Routledge.

Olson, D. P., & Windish, D. M. (2010). Communication discrepancies between physicians and hospitalized patients. Archives of internal medicine, 170(15), 1302-1307.

Oljira LL and Gebere-selassie (2001) Satisfaction without outpatient health services at Jimma hospital. Ethiop J Health Dev. 15 (3):179-184.

Olusina AK, Ohaeri JU, Olatawura MO (2004).Patient and staff satisfaction with the quality of in- patient psychiatric care in a Nigerian general hospital. Soc Psychiatr Epidemio; 37: 283- 88

Oswald (1998) Quality Determinants and Hospital Satisfaction, Marketing Health Services, Spring, v18 n1: 19

Parasuraman, A., Zeithaml, V.A. and Berry, L.L. (2015), "SERVQUAL: a multi-item scale for measuring consumer perceptions of the service quality", Journal of Retailing, Vol. 64, No. 1, pp. 12

Peprah, A. A. (2014), "Determinant of Patients' Satisfaction at Sunyani regional Hospital, Ghana". International Journal Business and Social Research (IJBR), Vol 4, No 1. Pp. 96-108

Ranjan, P., Kumari, A., & Chakrawarty, A. (2015). How can Doctors Improve their Communication Skills?. Journal of clinical and diagnostic research : JCDR, 9(3), JE01–JE4. https://doi.org/10.7860/JCDR/2015/12072.5712

Ravn, A. (2012). Distribution channel strategy design: Application and implementation in healthcare.

Repository, L. I. (2012). *City Research Online City , University of London Institutional Repository*.

Sandhua, H., Adamsa, A., Singletona, L., Clark-Carterb, D. C., & Kidda, J. (2009). The impact of gender dyads on doctor–patient communication: A systematic review. Patient Education and Counseling, 76(3), 348–355.

Sears J, Khan K, Ardern CI, Tamim H. Potential for patient–physician language discordance in Ontario. BMC Health Serv. Res. 2013;28: 13:535.

Setia, Maninder. (2016) Setia, Maninder. (2016). Methodology Series Module 3: Cross-sectional Studies. Indian Journal of Dermatology. 61. 261-264. 10.4103/0019-5154.182410.. Methodology Series Module 3: Cross-sectional Studies. Indian Journal of Dermatology. 61. 261-264. 10.4103/0019-5154.182410.

Simpson, M., Buckman, R., Stewart, M., Maguire, P. Lipkin, M., Novack, D., & Till, J. (1991). Doctor–patient communication:The Toronto consensus statement. British Medical Journal, 303, 1385–1387.

Street, R. L. (2013). How clinician-patient communication contributes to health improvement: Modeling pathways from talk to outcome. *Patient Education and Counseling*, *92*(3), 286–291. https://doi.org/10.1016/j.pec.2013.05.004

Street, R. L., Makoul, G., Arora, N. K., & Epstein, R. M. (2009). How does communication heal? Pathways linking clinician-patient communication to health outcomes. *Patient Education and Counseling*, *74*(3), 295–301. https://doi.org/10.1016/j.pec.2008.11.015

Sustersic, M., Gauchet, A., Kernou, A., Gibert, C., Foote, A., Vermorel, C., & Bosson, J. L. (2018). A scale assessing doctor-patient communication in a context of acute conditions based on a systematic review. PloS one, 13(2), e0192306.

Verlinde E, De Leander N, De Maesschalck S, Deveugele M, Willems S. The social gradient in doctor–patient communication. Int. J. Equity Health 2012;11:1–14.

WHO (2016). Mental Health, Ghana - Situational Analysis. Retrieved October, 2016.

Yousapronpaiboon, K., & C. Johnson, W. (2013). Measuring hospital out-patient service quality in Thailand. *Leadership in Health Services*, *26*(4), 338–355. https://doi.org/10.1108/LHS-07-2012-0023

APPENDICES

APPENDIX I: PARTICIPANTS INFORMATION SHEET (PATIENTS)

Title of Study

Physician-Patient communication and its influence on the satisfaction of health care services received by patients attending the Outpatients department in Legon hospital in Accra, Ghana.

Introduction

My name is Diana Makafui Tuekpe. P. O. Box LG 1141, Legon., Graduate student, School of Public Health, University of Ghana, 0201870728, makiedian@gmail.com.

Background and Purpose of research

The doctor-patient relationship is the cornerstone of health care. Regardless of increasing evidence of the impact of patient-doctor communication on health outcomes in developed countries, the quality and influence of physician-patient communication in low- and middle-income countries has not been documented well. The purpose of the study is to determine the influence of physician-patient communication behavior on the satisfaction of healthcare received by patients attending OPD in Legon hospital in Accra, Ghana.

Nature of research

The study is to determine the influence of physician-patient communication behavior on the satisfaction of healthcare received by patients attending OPD. The study would involve physicians who work at the out-patient department and patients who visit the out-patient department. For this study, data would be gathered from the entire population of doctors who work at the OPD during the data collection period would.

Participant's Involvement

For the patients at the OPD, a questionnaire would be used to gather data.

The first part of the patient's questionnaire would consist of the patient's demographic factors.

The second part would focus on gathering data on physician-patient communication behavior.

The final part of the patient questionnaire would focus on the level of satisfaction of healthcare received by patients at OPD in legon hospital using the SERVQUAL Model.

Potential Risks/Benefits of the Study

This study would take the time of the patients and because they would have to spend some time filling the questionnaire. However, the study would give new knowledge, specifically on how physician-patient communication behavior could influence patient satisfaction of quality of care in Legon Hospital.

Cost / Funding

There would be some cost incurred in transportation to the venue and printing of the questionnaires. The principal investigator would use her funds to sponsor the project.

Consenting and assenting process

Before interviewing or giving any participants any questionnaire, the respondents would be made to sign an informed written consent to seek their permission.

Privacy and confidentiality

Patients' privacy will be ensured as the interview will be carried out in a consulting room away from the hearing of other patients. To ensure that this information is confidential questionnaires will be coded and information on computers will be password protected. Study materials will also be kept in locked cabinets.

Data storage/security and usage

Participants' names will not be indicated on the questionnaires for confidentiality and data security. Each questionnaire will therefore have a unique identification number. All materials

related to the study will be stored in a locked cabinet accessible to only the principal investigator and the research assistants. All study files on the computer will be password protected. Data collected will be only be submitted in partial fulfillment of the award of a master's in public health. It will be presented at scientific gatherings and be submitted for publication in a peer-reviewed journal.

Voluntary withdrawal

Participation in this study is voluntary and respondents can choose not to answer any individual question or all the questions. They will however be urged to answer all questions to provide enough data. They can withdraw from the study at any time and this would in no way affect the quality of care given to them at the hospital.

Compensation to study participants

There will be no compensation paid to the study participants.

Conflict of interest

As far as the study is concerned, the principal would ensure that there is no conflict of interest.

Measure to reduce the spread of COVID-19 infection

The principal investigator would provide and ensure that study participants undergo handwashing with soap under running water or use alcohol-based hand sanitizer at the study site. Participants would also be provided with a face mask at no cost while observing physical distancing before and during the interview. The principal investigator would also adhere to these preventive measures outlined.

Who to Contact for Further Clarification/Questions

If you have any questions concerning the study, please do not hesitate to ask at any point in time. For more information about the study contact me: Diana Makafui Tuekpe, 0201870728, makiedian@gmail.com.

You can contact the administrator of the GHS Ethics Review Committee, Nana Abena Apatu on 0503539896 and also at ethics.research@ghmail.org for ethical issues and rights to participation.

APPENDIX II: CONSENT FORM (PATIENT)

STUDY TITLE: Physician-Patient communication and its influence on the satisfaction of healthcare services received by patients attending the Outpatients department in Legon hospital, Accra-Ghana.

PARTICIPANT'S STATEMENT

I admit that I have taken time to read thoroughly the purpose and contents of the Participants' Information Sheet and it was explained to me in a language I understand better (Twi/English /Ewe). I fully understand the contents and any potential implications as well as my right to decline from the study even after I have signed this form.

I voluntarily agree to be part of this research.

Name of Participant…….

Participants' Signature ……...OR Thumb Print……

Date:…….

INTERPRETERS' STATEMENT

I interpreted the purpose and contents of the Participants' Information Sheet to the aforenamed participant to the best of my ability in the (Twi/English/Ga) language to his proper understanding.

All questions, appropriate clarifications sort by the participant and answers were also duly interpreted to his/her satisfaction.

Name of Interpreter……

Signature of Interpreter……..

Contact Details: ……. Date:……

STATEMENT OF WITNESS

I made sure I was around when the contents of the Participant Information Sheet was read and explained satisfactorily to the participant in the language, he/she understood (Twi/English/Ewe)

I confirm that he/she was allowed to ask questions/seek clarifications and the same were duly answered to his/her satisfaction before voluntarily agreeing to be part of the research.

Name:……

Signature…….... OR Thumb Print …….....

Date:……

INVESTIGATOR STATEMENT AND SIGNATURE

Brief statement or declaration that the investigator has given enough information to participants to make informed decisions.

I certify that the participant has been given ample time to read and learn about the study. All questions and clarifications raised by the participant have been addressed.

Researcher's name…….

Signature …….

Date…….

APPENDIX III: CONSENT FORM (PHYSICIAN)

STUDY TITLE: Physician-Patient communication and its influence on the satisfaction of healthcare services received by patients attending the Outpatients department in Legon hospital, Accra-Ghana.

PARTICIPANTS' STATEMENT

I acknowledge that I have read or have had the purpose and contents of the Participants' Information Sheet read and satisfactorily explained to me in a language I understand (English). I fully understand the contents and any potential implications as well as my right to change my mind (i.e. withdraw from the research) even after I have signed this form.

I voluntarily agree to be part of this research.

Name of Participant……..

Participants' Signature ……...OR Thumb Print……

Contact Details: ……Date:…….

INVESTIGATOR'S STATEMENT AND SIGNATURE

Brief statement or declaration that the investigator has given enough information to participants to make informed decisions.

I certify that the participant has been given enough time to read in this study. All questions and clarifications by the participant have been tackled.

Researcher's name…….
Signature …….
Date…….

APPENDIX IV: QUESTIONNAIRE AND CHECKLIST

	i. Questionnaire on Physician-Patient communication and its influence on the satisfaction of health care services received by patients attending OPD in Legon hospital in Accra, Ghana.				
	This study tries to understand the physician-patient communication behaviors practiced during OPD consultation at Legon hospital and measure the level of satisfaction of patients to service delivery at the OPD. You are required to share your experience by responding to the following questions.				
Questions		Coding Categories	Skip to		Codes
	Section 1: SOCIO-DEMOGRAPHIC FACTORS				
a	Sex	Male……1 Female……2			SEX
b	Age (state your last birthday age)	……			AGE
c	Marital status	Single…….……1 Married…….……...2 Divorced…….……....3 Widowed……4			MSTAT

d	Educational level	No formal education ….……...1 Primary level…….…….2 Secondary…….…….3 Tertiary……...…….……4			EDUC
e	Occupation	Employed…….1 Unemployed…….2 Retired……3			OCCP

Section 2: Physician-patient communication.

For this section, you tick any of the boxes (No, possibly no, Yes, possibly yes).

QUESTIONS	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. The doctor listened to me carefully during the consultation on this visit.					
2. The doctor encouraged me to express myself on this visit.					
3. The doctor encouraged me to express myself on this visit.					
4. I feel that the doctor understood me on this visit.					

5. It was easy to understand what the doctor said while examining me on this visit.					
6. I feel I was not given all the necessary information by the doctor concerning my health on this visit.					
7. The doctor explains the advantages of the treatment to me on this visit.					
8. The doctor explained the disadvantages of the treatment to me on this visit.					
9. The doctor involved me in the decision-making concerning treatment options on this visit.					
10. I do not think the doctor was respectful when communicating on this visit.					
11. The doctor made sure that I understood all explanations and instructions on this visit.					
12. I feel I have confidence after talking to the doctor on this visit.					
13. The doctor replied to all my expectations and concerns on this visit.					
14. I believe the doctor in general was able to communicate with me effectively on this visit.					

	Section 3: SATISFACTION WITH QUALITY OF CARE For the next set of questions, TICK(√) whether you: 1-Strongly disagree, 2-Disagree, 3-Agree, 4-StronglyAgree

SATISFACTION WITH QUALITY OF CARE	1	2	3	4	Code
TANGIBLES (STRUCTURE)					TT
1.“I am not satisfied because OPD does not appear clean on visit”.					TT1
Reliability (Process)					
2. “I am satisfied that staff of the OPD has great communication and data skills on visit”.					TT2
3. ‘I am satisfied that OPD staff has given me good drugs as prescribed (essential drugs).					TT3
Responsiveness (Process)					
4.“I am satisfied that the staff of OPD spend sufficient time (at least 10 min) while attending to my needs to visit”.					TT4
Assurance (Structure)					

5.“I am not satisfied that OPD does not have adequate staff to take care of its clients.					TT5
6. I am satisfied that the Laboratory results of this OPD are timely availed.					REL1
Empathy (Process)					REL2
7.“I am satisfied that OPD staffs were Compassionate to me”					REL3
8.Generally, I am satisfied with all the services received at the OPD during today's visit.					RES4
9.“I am satisfied that I can recommend this OPD services to other people”					RES

OBSERVATIONAL STUDY CHECKLIST FOR PHYSICIAN-PATIENT COMMUNICATION

Date …… Time or length of observation of patient…….

Consulting room number……

Patient ……

Physician's Description: Age…… Gender…….

Number of Years of Practice…… Level of Speciality……

Ethnic group……Religion……

Marital Status……

	Description	Tick	Always	Never	Sometimes	
Non-verbal communication	Good eye contact					
	Warm Smile					
	Nodding					
Empathy	Being able to show sympathy whiles talking					
Language Barrier	Can communicate clearly to patients in the patient's language					
Clear information	Able to make patient understand what the problem is					

	without sounding technical					
Listening time	Between 5-8 minutes of uninterrupted listening to patient					
Understanding patient's disease	symptoms					
	Ideas					
	Feelings					
	Expectation					
Understanding wholeness of patient explores the context of a patient's life setting	family,					
	Work					
	Social support					
	stage of personal development (e.g., life cycle)					
Finding common grounds	Mutual understanding and agreement on the nature of the problems and					
	Priorities, the roles of the doctor and patient.					
	the goals of treatment and management					
Open structured questions	(e.g., "Tell me about your leg pain. What seems to be the problem?").					

Closed structured question	usually yes or no, is expected (e.g., "Are your leg symptoms worse after standing for several minutes?").					
Positive talk	Approval (e.g., blood pressure is great! good job on your diet and taking your pills					
Negative talk includes disagreements, confrontations, and antagonisms	("You've gained weight since your last visit, and I am disappointed in you. You're not really trying at all").					
Social non-medical conversation	chit-chat initially, to put people at ease Greetings					

APPENDIX V: ETHICAL CLEARANCE

GHANA HEALTH SERVICE ETHICS REVIEW COMMITTEE

In case of reply the number and date of this Letter should be quoted.

Research & Development Division
Ghana Health Service
P. O. Box MB 190
Accra
GPS Address: GA-050-3303
Tel: +233-302-681109
Fax + 233-302-685424
Email: ethics.research@ghsmail.org

MyRef: GHS RDD ERC Admin/App 20199
Your Ref. No.

12th March, 2020

Diana Makafui Tuekpe
P. O. Box 507
Shopping Center - Tema

The Ghana Health Service Ethics Review Committee has reviewed and given approval for the implementation of your Study Protocol.

GHS-ERC Number	**GHS-ERC 029/02/20**
Project Title	Physician-Patient Communication and its Influence on Satisfaction of Healthcare Services Received by Patients Attending Outpatients Department in Legon Hospital, Accra - Ghana
Approval Date	12th March, 2020
Expiry Date	11th March, 2021
GHS-ERC Decision	**Approved**

This approval requires the following from the Principal Investigator

- Submission of yearly progress report of the study to the Ethics Review Committee (ERC)
- Renewal of ethical approval if the study lasts for more than 12 months,
- Reporting of all serious adverse events related to this study to the ERC within three days verbally and seven days in writing.
- Submission of a final report after completion of the study
- Informing ERC if study cannot be implemented or is discontinued and reasons why
- Informing the ERC and your sponsor (where applicable) before any publication of the research findings.
- Please note that any modification of the study without ERC approval of the amendment is invalid.

The ERC may observe or cause to be observed procedures and records of the study during and after implementation.

Kindly quote the protocol identification number in all future correspondence in relation to this approved protocol

SIGNED.....
Dr. Cynthia Baiseraman
(GHS-ERC Chairperson)

Cc: The Director, Research & Development Division, Ghana Health Service, Accra

UNIVERSITY OF GHANA
DEPARTMENT OF SOCIAL AND BEHAVIOURAL SCIENCES
SCHOOL OF PUBLIC HEALTH

Ref. No.:

6th July, 2020

The Administrator
University of Ghana Hospital
Legon- Accra
Dear Sir

Dear Sir/Madam,

LETTER OF INTRODUCTION
DIANA MAKAFUI TUEKPE

I write to introduce Diana Makafui Tuekpe, a Master of Public Health student in the Department of Social and Behavioural Sciences, School of Public Health, University of Ghana, Legon.

Ms. Tuekpe's dissertation is entitled: **"Physician-Patient Communication and its Influence on Satisfaction of Healthcare Services Received by Patients Attending OPD in Legon hospital, Accra Ghana."**

Ms. Tuekpe will pay a visit to your outfit to collect data for her work. I would be grateful if you could give her the necessary assistance to enable her conduct the study.

Thank you and counting on your co-operation.

Yours faithfully,

Dr. Phyllis Dako-Gyeke
(Head of Department)

ADMINISTRATOR
UNIVERSITY HOSPITAL
LEGON