PERCEIVED QUALITY OF HEALTH SERVICES AND RELATED FACTORS AMONG ICHF INSURED AND UNINSURED COMMUNITY MEMBERS ATTENDING PANGANI DISTRICT HOSPITAL

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By

Hadija R Kibamba

A Dissertation Submitted in (partial) Fulfillment of the Requirements for the Degree of Master of Public Health

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CERTIFICATION

The undersigned certifies that she has read and hereby recommends for examination by the Muhimbili University of Health and Allied Sciences a dissertation entitled **"Perceived Quality of Health Services and Related Factors Among iCHF Insured and Uninsured Community Members Attending Pangani District Hospital"** in fulfillment of the requirements for the degree of Master of Public Health of the Muhimbili University of Health and Allied Sciences.

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Dr. Happiness Saronga

(Supervisor)

Date: _____

DECLARATION AND COPYRIGHT

I, **Hadija R Kibamba,** declare that this dissertation is my own original work and that it has not been presented and will not be presented to any other University for a similar or any other degree award.

Signature……...…… Date…….....……...

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DEDICATION

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LIST OF ABBREVIATIONS

CHF	Community Health Fund
DRF	Drug Revolving Fund
HPSS	Health Promotion and System Strengthening
iCHF	Improved Community Health Fund
IMF	International Money Fund
MHIS	Micro Health Insurance Schemes
NHIF	National Health Insurance Fund
OPD	Out-Patient Department
SAPs	Structural Adjustment Programs
SPSS	Statistical Package for Social Sciences
SSA	Sub-Saharan Africa
WHO	World Health Organization

DEFINITION OF TERMS

Health care service quality: refers to services at Pangani District Hospital whose characteristics and features meet or exceed patients' needs and expectations

Perceived quality of health care: Refers to patients' opinion or judgment of quality of services delivered at Pangani district hospital

iCHF: Is a form of pre-payment scheme designed for rural Community Health Funds in Tanzania which is based on the concept of risk sharing whereby members pay a small contribution on a regular basis to offset the risk of needing to pay a much larger amount in health care user fees if they fall sick (Mulligan & 1Based, 2007)

Patient centeredness: Delivering health care which takes into account the preferences and aspirations of individual service users and the cultures of their communities (Dunn, 2006)

Timeliness: Timeliness in health care is the system's capacity to provide care quickly after a need is recognized (Services, 2016)

Accessibility: Delivering health care that is geographically reasonable, and provided in a setting where skills and resources are appropriate to medical need (Dunn, 2006)

ABSTRACT

Background: Community Health Fund (CHF) was established in 1996, targeting about 85% of the population in rural areas engaged in the informal sector, to improve their access to health care services from the accredited health care facilities. Improved CHF (iCHF) was introduced in 2016 with the aim of providing access to quality health services to its members through healthcare providers in its network nationally. Quality of healthcare is one of many important determinants of health service utilization by clients. Empirical evidence in some African countries has raised concerns on experiences of poor quality of services among insured clients. This study assessed the perceived quality of health services and related factors among iCHF insured and uninsured community members attending Pangani district hospital.

Objective: To determine perceived quality of health services and associated factors among iCHF insured and uninsured community members attending Pangani District Hospital.

Methodology: This study adopted a quantitative approach and cross-sectional analytic research design. Data was collected by using structured questionnaires. Analysis was done descriptively whereby frequency, standard deviation and mean were used to describe socio-economic characteristics of respondents. Mean score for perceived quality of care was set such that a score of 1.0-2.9 indicate positive perception and a score of 3.0-5.0 indicate negative perception. Perceived quality of care was gauged by comparing perceptions of the insured and uninsured patients. Mean quality score was calculated separately for insured and uninsured patients, t-test was used to test the differences in quality perceptions between the insured and uninsured patients. The study also applied logistic regression to establish the association between perceived quality of care, health insurance status and socio-demographic characteristics of patients.

Results: A total of 452 respondents were included in the study whereby more than half were females (62.8%). Majority of the respondents were aged between 28-38 (31.2%), 250 respondents (55.3%) had primary level of education, and 271 respondents (60.0%) were self-employed. The general findings on dimensions of perceived quality of care found that; patient-

centeredness scored a mean of 2.17 for insured and 2.38 for uninsured; timeliness shows a mean score of 2.66 for insured and 3.43 for uninsured; and the accessibility of healthcare service illustrates a mean score of 3.00 for insured and 3.32 for uninsured. The comparison of insured and uninsured in perceived quality of care show statistically significant difference in perceived patient-centeredness, and no statistically significant difference in perceived timeliness and accessibility of healthcare services. Results from logistic regression indicate statistically significant association between perceived quality health care and age (aOR;0.92895% CI 0.907-0.949:p=0.000), sex (aOR;1.903:95% CI 1.201-3.014:p=0.006), marital status (aOR;0.418:95% CI 0.217-0.805:p=0.009), occupation (aOR;3.284:95% CI 1.409-7.664:p=0.006) and education level (aOR;0.532:95% CI 0.302-0.939:p=0.0360).

Conclusion: This study concludes that there is better perception of health care quality among iCHF insured compared to uninsured community members in all quality of healthcare dimensions among users of Pangani district hospital. The study also concludes that the socio-demographic characteristics (age, sex, marital status, and occupation and education level) influence the perceived quality care.

CHAPTER ONE

1.0 INTRODUCTION

1.1 Background Information

Health is considered a fundamental human right, governments are to ensure their citizens access quality and affordable healthcare services (Waheke, 2015) . The world is still facing challenges in financing and providing quality health care services. Documents reveal that billions of poor people especially those who live in low- and middle-income countries lack access to quality health interventions largely because of the weakness in financing and health care delivery (WHO, 2017).

Quality of healthcare is one of many important determinants of health service utilization (Karthi et al., 2011). Tanzania like other countries has been struggling to ensure accessibility and affordability of quality health care services to all socio-economic groups (Waheke, 2015). (McIntyre et al., 2008), explains that after independence in 1961, the Tanzanian government provided medical services free of charge at public health facilities (McIntyre et al., 2008). The government chose to be the sole provider of social services under the social ideology and therefore it introduced a "national health system that committed itself to provide the most non-urban population with access to quality health services" (Kwesigabo et al., 2012). In the early 1990s, the government of Tanzania adopted health sector reforms that changed the financing system from free services to a mixed financing mechanism including cost sharing policies.

The system shifts from free services to mixed finance aimed at improving the quality and quantity of health services together with fostering accessibility to health care service (Kajimbwa, 2015). Various studies show health services utilization is sensitive to perceived health quality by the users (Rao & Rao, 2017). In order to promote equity in accessing health services, following the introduction of the user fee, equity-seeking mechanisms were introduced to protect the poor and other vulnerable groups who are unable to pay fees (Kida, 2014).

The initiatives included the introduction of the Community Health Fund (CHF) in 1996 and establishment of the National Health Insurance Fund (NHIF) in 2001 as the cost sharing system for accrediting the health facilities to provide insured members access to quality health service (Kida, 2014)

According to (Waheke, 2015), CHF was established in 1996, targeting about 85% of the population in rural areas engaged in the informal sector, to improve their access to health care services from the accredited health care facilities (Waheke, 2015). CHF was piloted in Igunga District then rolled out to other districts. The CHF Act was passed by parliament to be rolled out to all districts. CHF was designed to address both a serious health financing gap and poor quality of service while maintaining the government's commitment to equitable access to health services. The scheme was identified as a mechanism for granting access to basic health care services to the population in the country (Kajimbwa, 2015). CHF therefore accredit health care facilities to enable insured members with access to health care services including: maternal and child health services, laboratory services, health education and access to essential drugs, among others (Kajimbwa, 2015).

CHF was however faced with challenges that constrained members access to quality healthcare services (Waheke, 2015). (Rashid, 2017) states that in Tanzania, the old CHF coverage remained painfully low at 10% (CHF report, 2011), and in some countries in the world, community-based health insurance was absurdly less than 2% (De La Sante, 2010). Dropout was also very high due to lack of motivation to renew membership. To adjust these challenges, the improved Community Health Fund (iCHF) as a new model was initiated in 2016.

iCHF is operated differently from the original CHF because it includes some new features like separation of the role of the purchaser and that of the health care provider and mobility of members from their lower level facility to regional hospital levels (PharmAccess, 2016). According to (Lee et al., 2018) the aim of including these features is to ensure that funds collected through iCHF are utilized efficiently for the targeted purpose and ensure service availability to community as promised (Lee et al., 2018). iCHF aims to provide access to quality health services at any healthcare provider in the network nationally.

Service quality in health care institutions is an emerging phenomenon, and many hospitals are concerned about providing quality service to their patients based on information obtained by the patient's perceptions of service quality. However, the health of people in sub-Saharan Africa is a major global concern, data are weak, and little is known about how people in the region perceive their health or their health care(Deaton & Tortora, 2015). Patients often complain of long waiting time, majorly due to a significant disparity between patient and medical staff ratio (too many patients for too few medical staff). Communication between patients and medical staff is often poor, and sometimes the experiences between patients and medical staff are so poor that a switch from one hospital to another or from one physician to another becomes necessary with a few choices available for the patients (Mahmoud et al., 2019). In comparison to other regions of the world, sub-Saharan Africa has the lowest ratings for well-being and the lowest satisfaction with health care. It also has the second-lowest perception of personal health, after only the former Soviet Union and its Eastern European satellites(Deaton & Tortora, 2015).

Even with improved access to health services, it is important to understand the quality of services accessed by members in the iCHF accredited facilities. Most studies in developing countries have examined perceptions of quality of care from the perspective of patients in general, regardless of their insurance status (Abuosi et al., 2016)(Khamis & Njau, 2014a), or only insured patients (Atinga, 2012) (Mtwe, 2015). A few of the comparative studies did not place emphasis on the problem of unequal perceptions in terms of quality and treatment between insured and uninsured patients (Jehu-Appiah et al., 2011). Improving the quality of

care is critical to realizing the full benefit of health insurance schemes and may incentivize enrolment or renewal of membership of health insurance scheme. This means that the quality of health services should meet the desires and perceptions of those who need service at low cost (Kabote, 2017). This study therefore compared perceived perceptions of health services and related factor among iCHF insured and uninsured community members attending Pangani district hospital to determine whether there is any unequal treatment between insured and uninsured patients in terms of quality of care.

1.2 Problem Statement

In most of the Sub-Saharan African countries, clients are relatively unhappy with their health care: Only 42.4 percent are satisfied with the availability of quality health care in the city or area in which they live. Again, this is the lowest level of satisfaction in the world. In fact, it is less than half of the level for the highest scoring region, the non-English-speaking countries of northern Europe (Deaton & Tortora, 2015). Despite efforts by the government of Tanzania to improve the quality of healthcare services, healthcare service provision is still constrained by a number of factors such as poor infrastructure, unavailability of drugs and medical equipment, and limited human resources for health (Munga & Mwangu, 2013). One of the efforts done by the government to improve access to quality healthcare services is the establishment of the old CHF in 1996. CHF is a fund pooling mechanism that finance medical expenses by means of contributions that are pooled into a common fund to pay for health services specified in the CHF insurance policy. CHF accredit healthcare facilities to provide quality health services to insured members (Kivelege, 2015). Among the objectives of the old CHF is mobilizing financial resources from community to enable healthcare facilities to provide quality and affordable healthcare services to its members.

However, CHF failed to attain its objectives (Kivelege, 2015); as literature show contradiction in the improvement of quality of health care services. For example, Rogers *et al* (2009) argued that the CHF helped to improve quality of health services through accrediting the healthcare facilities to facilitate availability of important equipment and supplies in various hospitals. While other studies linked CHF with provision of poor-quality healthcare such that registered members were dropping out tremendously after realizing CHF did not meet their anticipations (Kivelege, 2015).

To clear the challenges experienced under the old CHF, the new improved CHF (iCHF) was introduced in 2016. However, it is not yet clear as to whether the iCHF has achieved its expectation of providing its members with access to quality health services at any healthcare facility in the network nationally. Existing literature is on the quality of health services under the old CHF (Kivelege, 2015). Many concerns have been raised about the quality of care in Tanzanian health care facilities such as long waiting time at the facilities, language abuse and a few numbers of wards. If these concerns are genuine, they have the ability to undermine successful implementation of iCHF because it depends on the quality of health services beneficiaries of the scheme receive and enjoy. Therefore, this study investigated the perceived quality of healthcare services and related factors among iCHF insured and uninsured community members attending Pangani district by comparing the perceived quality of healthcare services among insured out-patients and uninsured out-patients. Findings shed light as whether the iCHF made a difference in ensuring its members have access to quality of health care services they deserve.

1.3 Conceptual Framework

The conceptual framework for perceived quality of healthcare services below has been designed based on literature review. Different cultures have different values and priorities; for some, quality means the provision of staff and facilities, for some, it means equity and compassion, for others it means optimum clinical outcomes (Nyoni & Mtasiwa, 2011). The quality service dimensions developed by Donald Berwick 2002 which comprise of six dimensions (safety, effectiveness, patient-centeredness, timeliness, efficiency and equity) has been very helpful in drawing the conceptual framework, however only two dimensions (timeliness and patient-centeredness) are included in the study to measure perceived quality of health care. Furthermore, access was added as a dimension for health quality as identified by Maxwell in 1984 (Mosadeghrad, 2012). The socio-demographic characteristics are included in the conceptual framework as (Mahamoud, 2017) states that perceived quality of healthcare service can be influenced by socio-demographic characteristics like age, marital status, occupational status, educational level and area of residence (Mahamoud, 2017).

Therefore, in the conceptual framework below (Figure 1), it is presumed that the perceived quality of healthcare service (dependent variable) is influenced by the following independent variables: patient-centeredness, timeliness, accessibility to health care services and socio-economic and demographic characteristics of clients

- **Patient-centeredness:** Patient centeredness is about the willingness of the hospital workers to help out clients/patients and to provide prompt service to clients. When hospital workers are willing to help patients, it will influence the quality of health services. In this study patient-centeredness refers to respectful health services, willingness to help patients, confidentiality of services, and privacy in service provision.

- **Timeliness:** Timeliness in health care is the system's capacity to provide care quickly after a need is recognized (Services, 2016). In this study, timeliness will refer to waiting time before services, consultation time, time taken to get laboratory services and time taken to get prescriptions.
- **Accessibility of health services:** Access has sometimes been identified as one of the dimensions of quality of care (Maxwell, 1984), but access is a multi-faceted concept. Pechansky and Thomas (1981) suggested that the concept of access described the 'degree of fit' between clients and the health system (Levesque et al., 2013). Accessibility of health services in this conceptual framework will include availability of health care providers to the patient, access to diagnostic services, access to drugs, health care costs incurred by clients, and availability of referral services. Improved accessibility will improve perceived quality of care.

- **Socio-demographic characteristics of clients:** this refers to the characteristics of clients. The socio-demographic characteristics of a person may have an influence on the perceived quality of health service (Mahamoud, 2017). In this study socio-demographic characteristics include: age in years, gender, and marital status, level of education, occupational status and insurance status.

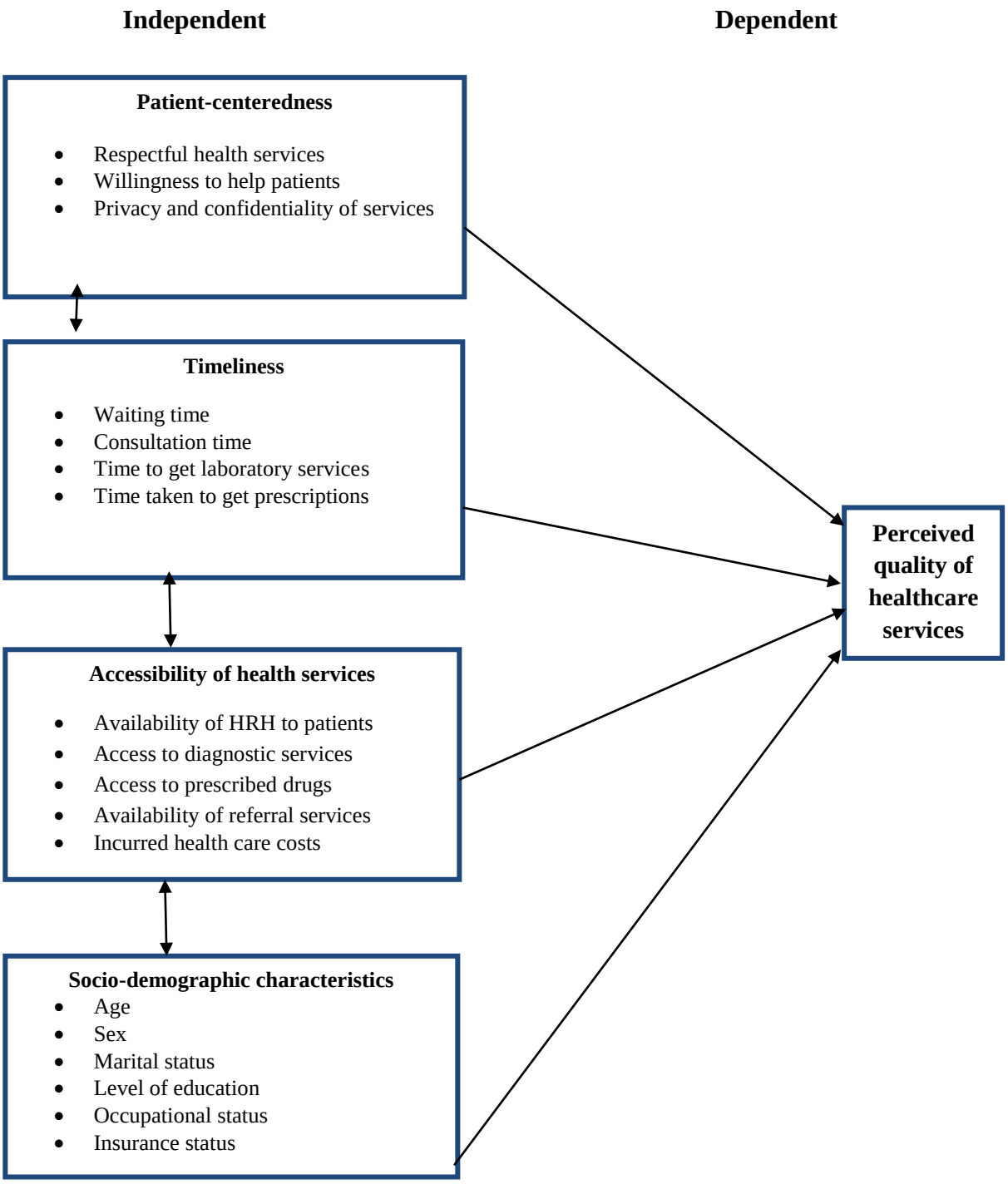

Figure 1: Conceptual Framework
Constructed by the researcher, 2020

1.4 Rationale of the Study

This study gives insights on the perceived quality of health services received by iCHF members compared to uninsured community members. This study may be used as a reference for other researchers who will be interested in conducting research concerning iCHF and its related issues. This study provides valuable insights as to whether insurance status influences quality of care as perceived by clients in the study area. This information may enable establishment of interventions to improve equity in health service provision through ensuring that all patients feel and are treated the same despite their insurance status and the health service providers should consider each difference as they address each quality component. The study is also beneficial to service users and service providers of Pangani district hospital so that they can strive to increase the quality of health care services at their facility to both insured and uninsured members.

1.5 Research Questions

1.5.1 Main Research Question

What is the perceived quality of health services among iCHF members compared to uninsured community members attending Pangani District Hospital?

1.5.2 Specific Questions

1. What is the perceived patient-centeredness of health services at Pangani District Hospital among insured iCHF members compared to uninsured community members?

2. What is the perceived timeliness of health services at Pangani District Hospital among insured iCHF members compared to uninsured community members?

3. What is the perceived accessibility of health services at Pangani District Hospital among insured iCHF members compared to uninsured community members?

4. How do socio-demographic characteristics of insured iCHF members compared to uninsured clients influence perceived quality of services at Pangani District Hospital?

1.6 Objectives

1.6.1 Main Objective

To determine perceived quality of health services among insured iCHF and uninsured community members attending Pangani District Hospital.

1.6.2 Specific Objectives

1. To determine perceived patient-centeredness of health services at Pangani District Hospital among insured iCHF members compared to uninsured community members.
2. To determine the perceived timeliness of health services at Pangani District Hospital among unsured iCHF members compared to uninsured community members.
3. To determine perceived accessibility of health services at Pangani District Hospital among insured iCHF members compared to uninsured community members.
4. To determine the influence of socio-demographic characteristics of insured iCHF clients compared to uninsured community members on perceived quality of services at Pangani District Hospital.

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Quality of Health Services

Quality of health care is an important element in transforming health services for development (Kabote, 2017). For example, (WHO, 2015) and (Itam & Adindu, 2012) confirmed that despite primary health care and reforms thereafter following the World Bank and International Monetary Fund interventions that emerged in 1970s, Sub-Saharan Africa is lagging behind of all regions in the world regarding quality health services. Literature indicates that access to quality healthcare service in developing countries was expected to improve since the 1970s after the Alma-Ata Declaration on Primary Healthcare and health for all ((Kabote, 2017); and (Streefland, 2005)) that declared health as one of the fundamental human rights.

Dimensions quality health services are context-specific (Ghotbabadi et al., 2015) and there is no single set of dimensions or measurement standard available for the evaluation of healthcare service quality (Upadhyai et al., 2019). For instance, (Mahamoud, 2017); and (Zheng et al., 2009) considered evaluation of quality health service from patients' perspectives based on various dimensions of service quality, including technical, personnel quality, infrastructure and administration. Recent literature in developed countries, however, emphasizes the importance of the patients' perceptive; Hospital administrators, community groups, and researchers have all begun to recognize the value of the insights that patients can provide (Cham, 2016). (GA et al., 2017) pointed out that perception of quality of health care service by patients can be measured through its structure, process and outcome. For example, (Khamis & Njau, 2014b) and (Yousapronpaiboon & Phondej, 2014) confirmed that structure domain (tangible and assurance) includes availability of hospital equipment including drugs, hospital cleanliness, staffing level and affordability of hospital services. The process domain (reliability, responsiveness, and empathy) includes patient-provider relationship, confidentiality, and waiting time.

The perceived quality of a health care service has been the subject of constant interests among authors. To date, and despite the fact that many hospitals in Tanzania have adopted different quality improvement initiatives, the literature on patients' perception about the quality of health service is still limited, especially in the public sector. This study tries to fill this gap by investigating the perceived quality of health service and related factors among iCHF insured and uninsured community members at Pangani District Hospital.

2.2 Perceived patient centeredness of health services

Quality of care experiences may differ between insured and uninsured patients in the same health facility, depending on the nature of the service provided or the attitude of the service provider. In the Nouna District in Burkina Faso, objective quality of care evaluations by Robyn , Sauerborn) and Bärnighausen showed that providers were less likely to weigh, take the temperature, perform a physical examination, use a stethoscope, and inform patients about the diagnosis of their illness, when the patients were enrolled in the community-based insurance (CBI) (Robyn et al., 2012) .

According to (Kajimbwa, 2015) patient centeredness of health care providers in quality health service delivery involves treatments to meet the patients' expectations despite of their insurance status. (Kapologwe et al., 2017) suggested that the effect of a quality health service could be explained through looking at patient centeredness as the output of quality service delivery. Through patient centeredness, health programs are expected to improve health seeking behavior and health service utilization for patients at community level (Kapologwe et al., 2017). However, the attitude of staff towards insured patients also differs, even in the same health facility.

In India, a focus group discussion with staff at ASHWINI hospital found that whereas some patients complain that the nurses in the hospital reproach them for 'being uninsured', some of the staff rather considered the insured patients as a nuisance(Abuosi et al., 2016). (Kajimbwa, 2015) explained there are complaints concerning patient centeredness in some healthcare facilities, as some of the health personnel use abusive language to the patients. That is unethical in the medical profession; hence health personnel need to maintain patient centeredness by being good listeners and being caring and gentle to the people who need healthcare service (Kajimbwa, 2015). There is a growing concern about perceived quality health services due to lack of patient centeredness in service delivery platform (Akter et al., 2010) therefore this study aims at determining perceived patient centeredness on health services.

2.3 Perceived timeliness of health services

The quality health services comprise the right healthcare at the right time, responding to the patients' needs and preferences, while minimizing harm and resource waste (WHO, OECD, 2018). Timelines is also included in measurements for increasing the likelihood of desired to quality health (WHO and World Bank, 2018). According to Committee on Quality of Health Care in America (2001) perceived quality healthcare is frequently associated with delays in obtaining an appointment and waiting in emergency rooms and doctors' offices (Hughes & States, 2008). Failure to maintain time in provision of health care can deny people critically needed services or allow conditions to progress and outcomes to worsen. Study done by (Fleming et al., 2006) shows that a small change in timeliness in health services delivery could be detectable and could have an impact in the quality of services provided in the health facility. The timelier a provider is, the better a patient's health outcome and their perceptions in health.

Unfortunately, there are many times when a healthcare system's lack timeliness (Lorence, 2003) . From a study done by (Abuosi et al., 2016), with respect to adequacy of resources, there was no significant difference in perceptions of quality between insured patients in all indicators except waiting time at 10 % significance level (Insured: M= 2.75, SD = 1.37; Uninsured: M= 2.94, SD = 1.30) p < 058. This implies that insured patients perceive waiting time to be longer, compared with uninsured patients. Again, Jehu- Appiah (C), Aryeetey (G), Agyepong (I), Spaan (E) and Baltussen (R) found long waiting time as causing disappointment among the insured patients in Ghana, and thus suggested an urgent action to be taken to address the problem(Jehu-Appiah et al., 2012)**.**

In Tanzania, a study done by (Schmitz et al., 2020) shows that there is a lot of time travel delays. Half of all referrals in Kigoma Region have travel time delays nearly exceeding 1 hour, and facility pairs referring to facilities providing higher levels of care also have large travel time delays(Schmitz et al., 2020). Lack of timeliness is a problem found at many health facilities and can affect both insured and uninsured patients differently therefore this study will determine perceived timeliness of health services.

2.4 Perceived accessibility of health services

Insured patients have an advantage in terms of access to quality health care compared to uninsured (Abuosi et al., 2016). Patients perception on accessibility to health service by considering the geographical locations, however, other determinants include travel time, distance, transport costs, affordability and the number of presence public or private healthcare facilities (Nkwera, 2017). It is very clear that long distance from healthcare facilities affects the access of quality healthcare service (Rashid, 2017), this is because costs for transportation is included to the cost of final product (Nkwera, 2017).

The accessibility of health service is also influenced by the availability of healthcare staffs who are guided with procedures and regulations (Nkwera, 2017). As known, the presence of healthcare staff will avoid the frustrated feelings to patients when they attend to health care facilities even at night time. Illness can come at any time without information or warning; therefore, presence of punctual and qualified healthcare providers assures to accessible quality healthcare service ; (Kwesigabo et al., 2012) and (Nkwera, 2017).

According to (Kwesigabo et al., 2012) and (McIntyre et al., 2008), they indicate that shortage of health workers is worse in rural health facilities. Most health facilities have few healthcare providers who do not meet the patients' needs hence perceived poor quality (Kwesigabo et al., 2012) and (McIntyre et al., 2008)). This study therefore intends to determine perceived accessibility of health services provided at health facilities.

2.5 Influence of socio-demographic characteristics on perceived quality of services

Perceived service quality of healthcare can be influenced by social demographic characteristics of clients like age, marital status, occupational status, educational level and area of residence (Mahamoud, 2017). In the health industry particularly, patients' needs differ based on socio-demographic characteristics and the health care seeking behaviors of different patient segments could produce experiences which influence different quality judgments, and hence influence positive or negative perception (Mahamoud, 2017).

According to (Appiah, 2015) the demographic characteristics of clients and their perception of quality health service play a major part in people's decision-making processes especially in-service utilization. Furthermore, the socio-demographic characteristics of persons may be a determinant in joining a healthcare financial scheme(Appiah, 2015). Several studies show that even though poor quality of care may affect both insured and uninsured patients in health facilities, it poses as a disincentive to enrolment or renewal of membership of health insurance scheme (Kamuzora & Gilson, 2007)**.** Therefore, this study investigated perceived quality of health care services among iCHF clients, as well as the influence of social demographic characteristics on perceived quality of services.

CHAPTER THREE

3.0 MATERIALS AND METHODS

3.1 Research Design

A cross-sectional analytical research design was adopted in this study. The design is favorable because of the nature of the study objectives which needed data to be collected at a single point in time.

3.2 Research Approach

This study employed a quantitative approach. This approach has been selected because its characteristic of expressing data in numbers. This allowed the application of statistical tests in making statements about data.

3.3 Description of the Study Area

This study was conducted in Pangani District Council which is one of the eight districts in Tanga region. The district is bordered to the north by Muheza District, to the east by the Indian Ocean, to south by the Pwani Region and to the west by the Handeni District. According to the 2012 Tanzania National Census, the population of Pangani District was 54,025 (URT, 2013) and the estimated growth rate is 2.2% per year.

Administratively, the district has 4 divisions, 14 wards, 33 villages and 96 hamlets. The district has a total of 22 health facilities. This includes 1 District Hospital, 1 Health Centre, 16 government dispensaries, 2 Sisal Plantation owned dispensaries, 1 FBO and 1 private hospital. iCHF in Pangani District Council was established in October 2019.

Pangani District was selected as a study area because iCHF is operating in the district. Secondly, in the old CHF scheme, Pangani District was among the districts in Tanga region with highest enrollment of about 76% of the total households. Lastly, because the researcher is not aware of any study conducted in Pangani District on the perceived quality of healthcare service under iCHF.

3.4 Study Population

The target population for this study comprised people living in Pangani District and who are users of health services in Pangani District Hospital. This included individuals and household members using Pangani District Hospital for medical consultation and treatment purposes (both insured iCHF and uninsured members).

3.5 Study Sample

The Cochran formula allows one to calculate an ideal sample size given a desired level of accuracy, desired confidence level, and the estimated proportion of the attribute present in the population (Cochrane, 1977). The sample size of a population was therefore calculated as follows;

$n = z^2pq/e^2$

Where:

n=required sample size,

z=Critical value corresponding to 95% confidence level=1.96,

e=Margin of error, assumed to be 5%

p= proportion, assumed to be 50%

q= 1-p

Therefore:

$$n = \frac{3.8416 \times 50 \times (100-50)}{25}$$

$$n = \frac{9604}{25}$$

$$n = 384$$

The non-response rate was assumed to be = 15%, therefore the total sample size used n=452 respondents, whereby the distribution was 226 insured patients and 226 uninsured patients because, from the Cochran formula assumed that the maximum variability to be 50, therefore there was a 50/50 chance of people being insured and or uninsured (Glen, 2020).

3.6 Sampling Techniques

3.6.1 Sample selection

Systematic sampling strategy was used to select patients to be involved in data collection. Sample selection was done with the help of the dispenser at the hospital pharmacy-*"duka la dawä* where by participants were selected on their order of arrival. From the sample size of 456 for this study, the researcher had at least 45 participants a day. Therefore, from the formula N/n (Jackson, 2014) and (Arnab & Arnab, 2017), sample interval was calculated as 456/45=10, the researcher and the data collectors therefore sampled every 10^{th} person who arrived at the *duka la dawa*. After reaching the hospital data collectors stationed themselves at the *duka la dawa* from 08:00am. They were picking participants by skipping nine participants which helped to ensure heterogeneity and so that each of the elements of the population has the same chance of being selected for the study. The process was repeated every day until the required number of respondents was reached.

3.7 Data Collection

Primary data was collected by using a structured questionnaire. The questionnaires consisted of questions for gathering information required for the study. Prior to administering questionnaires, the researcher and the data collectors provided detailed information about the research to the respondents. During this process, the researcher emphasized the purpose of this research, its significance and how it would benefit the respondents. Also, emphasis was kept on the issue of confidentiality, freedom to answer only questions they felt comfortable with, and their right to withdraw from the study anytime without facing any consequences. After giving this detailed information, the selected clients were then invited to ask questions for clarification. They were then provided with a questionnaire which was administered by the researcher and data collectors in order to minimize errors which took a maximum of 15 minutes to complete. For the purpose of confidentiality, they were asked not to write their names on any of the papers. They were also asked not to talk to each other about the questions and what they had responded to.

The questionnaire involved a Likert scale with five options ranging from 1-5 (5. Strongly disagree, 4. Disagree, 3. Neutral, 2. Agree and 1. Strongly agree). The Likert scale format allowed getting diverse responses with regards to the level of quality of care as perceived by clients. This exercise took place continuously for two consecutive weeks pooling in all patients who were present during data collection.

3.7.1 Validity and Reliability

To maintain validity, the researcher designed data collection tool (questionnaire) which matches with the research questions. The tool was designed simply with short questions that could be understood easily. The sample size was also designed to be suitable and manageable. Validity-test to measure the instrument of data collection was performed. This was done by using the Kaiser-Meyer-Olkin (KMO) test, whereas in each dimension three (3) variables were considered, the obtained results are shown in Table 1.

Table 1: Validity test of the Study Variables

Constructs	No of Items	Items	KMO
Patient-centeredness	3	Respective health services Willingness to help patients Privacy and confidentiality of services.	0.786
Timeliness services	3	Waiting time Time used to get consultation Time used to get laboratory services	0.984
Access to health care services	3	Adequate diagnostics services Access to prescribed drugs Affordable services	0.887

First, the variable patient-centeredness was tested with 3 indicators. The findings show average of 0.786, this was considered to be with strong consistence. The second variable was timelines health service which had also 3 items and shows an average of 0.984 which is also strong enough to provide valid information. The third measurement to be considered was patient-centeredness with 3 items, the findings indicate an average of 0.887, and this finding is strong for the tool to provide valid information.

In order for a researcher to maintain consistency measurements. To maintain validity, the researcher designed data collection tool (questionnaire) which matches with the research questions. The tool was designed simply with short questions that could be understood easily. The sample size was also designed to be suitable and manageable. Validity-test to measure the instrument of data collection was performed. This was done by using the Kaiser-Meyer-Olkin (KMO) test, whereas in each dimension three (3) variables were considered, the results of reliability test are presented in table 2.

Table 2: Reliability test of the Study Variables

Constructs	No of Items	Items	Cronbach Alpha
Patient-centeredness	3	Respective health services Willingness to help patients Privacy and confidentiality of services.	0.844
Timeliness services	3	Waiting time Time used to get consultation Time used to get laboratory services	0.878
Access to health care services	3	Adequate diagnostics services Access to prescribed drugs Affordable services	0.799

The first independent variable that reliable test was done was patient-centeredness with 3 items and the obtained results show 0.844 Cronbach Alpha which is regarded to be large enough to provided needed information. The same obtained in timeliness services (0.878) and access to health care services (0.799).

3.8 Variables

3.8.1 Dependent Variables

The dependent variable for this study was the Perceived Quality of Healthcare Services. A researcher created a summative composite index of perceived quality care from there dimensions of perceived quality health care. The questions based on quality healthcare were formulated in a Likert scale of five options (strongly disagree, disagree, neutral, agree and strongly agree). The questions were (1) patients obtain timelines health care services while in healthcare facilities? (2) Patient-centeredness is maintained in healthcare facilities? And (3) patients access quality care in healthcare facilities. The Cronbach's was used to calculate the consistency of the Likert scale.

3.8.2 Independent Variables

The independent variables for this study as indicated in Table 3 included timeliness, patient centeredness, and accessibility, socio-demographic characteristics.

Table 3: Variables and their indicators

s/n	Independent variables	Indicators
1	**Patient-centeredness**	Respectful health services
		Willingness to help patients
		Privacy and confidentiality of services
2	**Accessibility to quality health service**	Availability of HRH to the patient
		Access to diagnostic services
		Access to drugs
		Incurred health care costs
		Availability of referral services
3	**Timeliness**	Waiting time
		Consultation time
		Time taken to get laboratory services
		Time taken to get prescriptions
4	**Socio-demographic characteristics**	Age
		Sex
		Marital status
		Level of education
		Occupational status
		Insurance status

3.9 Inclusion Criteria

Patients 18 years of age and above who attended at the hospital on the day of data collection who were willing to participate in this study were included. Exclusion criteria considered all in-patients (insured and uninsured)

3.10 Data Management and Analysis

In data management, all data which were collected through questionnaires were checked and cleaned so as to ensure accuracy, quality and consistency. for effective data management, data storage was done in a computer with protected passwords. This helped to avoid those who are not concerned with the study to see or destroy the data set file.

Data analysis was done by using a Statistical Package for Social Science (SPSS) Version 23. Descriptive analysis was employed whereas frequency, mean and standard deviation were used to describe socio-economic characteristics of respondents, patients' centeredness services, timeliness services and perceived healthcare accessibility. Mean quality score was calculated separately for the insured and uninsured patients. Data was transformed to compute a summative index of perceived quality care which were termed as low or high perception (0=low, 1=high). T-test statistic was also used to test the differences in quality-of-care perceptions between the insured and the uninsured patients. Independent sample t-test was used to compare the mean scores of two different groups (insured and uninsured). As it is known, independent t-tests are normally used to when you have two different groups and you are interested in comparing their scores.

Univariate logistic regression was employed to find the association between one predictor of perceived care and quality care. Here, each variable was involved independently to find the relationship between that variable and quality care.

Multivariate logistic regression was used to establish the relationship between quality of care and socio-economic characteristics. Before running the model, the level of five Likert scales (Strongly disagree, Disagree, Neutral, Agree and Strongly Agree) were converted to two levels of scale (Disagree and Agree). This means strongly disagree and disagree were combined to "*disagree*", strongly agree and agree combined to be "*agree"* and neutral was ignored. The neutral group was ignored because being neutral means there is no decision hence it is the same as an empty set of data (Spector, 2014)**.** The $p \leq 0.05$ was used to measure the significance level of the association between dependent and independent variables, in addition, data were converted to dummy variables as 0 or 1 (0,1). Additionally, Ex(B) was used to determine odds ratios (OR) which were coded as 0 for low perception and 1 for high perception

The binary logistic regression model is specified as follows:

$$Log\ (p/1\text{-}p) = B_0 + B_1X_1 + B_2X_2 + \ldots\ldots\ldots\ldots\ e_i$$

Where: Log [p/(1-p)] is a logarithm chance of perceived quality of care. The dependent variable (perceived quality of care) was coded as (0=low perception, 1=high perception).

$B_1X_1 + B_2X_2 + B_3X_3 \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ B_nX_n + e$

e = Error term

$X_1 - X_n$ = Predictors

X_1 = Age (0 = young age ($\leq$ 45 years, 1 = older age (> 45 years)).

X_2 = Sex (0 = female, 1 = male)

X_3 = Marital status (0 = not married, 1 = married)

X_4 = Occupation status (0 = unemployed, 1 = employed)

X_5 = education level (0=informal, 1=formal)

Therefore, the reference categories are young age, female, not married, unemployed and informal education.

3.11. Ethical Issues

Muhimbili University of Health and Allied Sciences ethical review board reviewed the study proposal for ethical issues and for approval before data collection. Permission was sought from the Region and Pangani District Council.

Confidentiality was ensured by giving numbers (participants codes)to each of the questionnaire to avoid using their names and the use of a password protected computer for further security of the participants and the data. Data collection was performed in a separate room next to the *duka la dawa* which ensured privacy of the participants.

The study involved participants who signed a consent form to indicate their willingness to participate in the study. Participants were given freedom to withdraw from the study at any time. Data collected were kept confidential and were only used for the purpose of this study alone.

CHAPTER FOUR

4.0 RESULTS

4.1 Socio-demographic characteristics

The study had a total of 452 respondents, whereby more than half were females (62.8%). Majority of the respondents were aged between 28-38 (31.2%), 250 respondents (55.3%) had primary level of education and more than a half, 271(60.0%) were self-employed.

Table 4- Socio-demographic characteristics of respondents (n=452)

Variable	Category	Frequency (n=452)	Percentage (%)
Age	18-27 years	107	23.7
	28-37 years	141	31.2
	38-47 years	94	20.8
	Above 47	110	24.3
Sex	Male	168	37.2
	Female	284	62.8
Marital status	Single	67	14.8
	Married	305	67.5
	Widow/widower	55	12.2
	Divorced/separated	25	5.5
Education level	Non-formal	92	20.4
	Primary	250	55.3
	Secondary	104	23.0
	College/university	6	1.3
Occupation status	Employed	47	10.4
	Self-employed	271	60.0
	Unemployed	134	29.6
Insurance status	Member of iCHF	226	50.0
	Not a member of iCHF	226	50.0

4.2 Perceived patient-centeredness of health services

Table 5 shows the findings based on the perceived patient-centeredness of the health services received from Pangani District Hospital by both insured and uninsured patients. Respectful health service quality scores observed in insured patients (mean=2.10; Std=0.304) and uninsured patients (mean=2.97; Std=0.179). It is important to note that, the mean scores in this study were set at ≤ 2.5 to mean *agree* (a positive perception of quality of health care) and > 2.5 to mean *disagree (a negative perception of quality of health care).*

Table 5 Perceived patient-centeredness of health services

Quality care	Insured (n=226)		Uninsured (n=226)			
Patient-centeredness	**mean**	**Std. dev.**	**Mean**	**Std. dev.**	**p-Value**	***t***
Respectful health services	2.10	0.304	2.97	0.304	0.000	0.245
Willingness to help patients	2.09	0.294	2.96	0.186	0.000	0.227
Privacy and confidentiality of services	2.19	0.390	2.89	0.310	0.000	0.238

Table 5 also illustrates quality scores for willingness to help patients for the insured and uninsured patients, (insured: mean=2.09, Std=0.294; uninsured: m=2.96, Std=0.186).

The findings in Table 3 show privacy and confidentiality quality scores for insured patients (mean=2.19, Std=0.390) and uninsured patients (mean=2.89, Std=0.310).

Table 5 shows there is a statistically significant difference in perceived patient-centeredness of the health services (p=0.000) between insured and uninsured patients.

4.3 Perceived timeliness of health services

Table 6 shows the mean score of waiting time to insured to be 2.77 and the standard deviation is 1.33, while for uninsured mean score of waiting time is 4.12 and standard deviation 1.61.

Table 6 Perceived timeliness of health services

Quality care	Insured (n=226)		Uninsured (n=226)			
Timeliness	**Mean**	**Std. dev.**	**Mean**	**Std. dev.**	**p-Value**	***t***
Waiting time	2.77	1.33	4.12	1.61	0.013	1.366
Time used to get consultation	2.17	0.38	2.81	0.39	0.008	1.330
Time used to get laboratory services	2.56	1.14	3.96	1.34	0.228	0.994
Time spent at *duka la dawa.*	2.53	0.41	2.82	0.39	0.989	1.001

The findings in Table 6 indicate that the time used to get consultation is perceived to be better among insured patients, (insured: m=2.17, Std=0.38) and (uninsured: m=2.81, Std=0.39).

Table 6 shows the quality scores of times used to get laboratory services (insured: m=2.56, Std=1.14; uninsured: m=3.96, Std=1.34). This findings of above 2,5 in both categories mean that both insured and uninsured patients disagreed to get timeliness in laboratory services.

Table 6 shows the mean score of perceived timeliness of pharmacy services for insured patients to be 2.53 and its standard deviation 0.41 and the mean for uninsured patients is 2.82 and its standard deviation is 0.39.

4.4 Perceived accessibility of health services

The findings in Table 7 show the mean quality score of availability of healthcare workers for insured patients to be 3.01 while its standard deviation is 0.08, the mean for uninsured patients is 3.94 and standard deviation is 0.23. As the mean to score ranges from ≥ 2.5 *agree*, and > 2.5 *disagree*, these findings show both insured and uninsured patients disagreed to unavailability of access to healthcare workers.

Table 7: Perceived accessibility of health services

Quality care	**Insured (n=226)**		**Uninsured (n=226)**			
Accessibility	**Mean**	**Std. dev.**	**Mean**	**Std. dev.**	**p-Value**	**t**
Availability of healthcare workers	3.01	0.08	3.94	0.23	0.273	0.899
Adequate diagnostic services	3.01	1.12	3.89	1.27	0.989	0.889
Prescribed drugs	2.48	1.21	3.01	1.06	0.010	0.838
Affordable services	3.19	1.32	3.00	1.44	0.301	0.898
Referral services	2.75	1.33	2.99	1.39	0.821	0.938

The findings show the mean quality score of adequate diagnostic services for insured patients to be 3.01 and standard deviation of 1.12 and the mean for uninsured to be 3.89 with standard deviation of 1.27. The mean value score of above 2.9 in both categories show that both insured and uninsured patients perceive diagnostic services to be inadequate at Pangani District Hospital.

Table 7 shows the mean quality score of prescribed drugs for insured patients to be 2.48 and its standard deviation to be 1.21 and for uninsured patients the mean is 3.01 and standard deviation 1.06.

The mean quality score for affordable health services for insured patients is 3.19 with a standard deviation of 1.32, while for uninsured patients the mean is 3.00 with standard deviation of 1.44. This implies that both categories perceived health services to be unaffordable (mean is above 2.9).

Table 7 shows that the mean quality score of referral services for insured patients is 2.75 with standard deviation of 1.33, the mean and standard deviation for uninsured are shown to be 2.99 and 1.39 respectively.

4.5 General findings of dimensions of quality of care

The mean total scores for perceived healthcare quality based on quality score dimensions are illustrated in Table 8 below. The findings show that the mean of patient-centeredness for insured patients was found to be 2.13 while its standard deviation is 0.33 while the mean for uninsured patients is 2.94 and its standard deviation is 0.23. This means that most of the insured agreed to obtain patient-centeredness components whereas most of the insured disagreed.

Table 8 also shows the mean quality score of timeliness for insured to be 2.51 and its standard deviation is 0.86, while for uninsured patients the mean is 3.18 and standard deviation is 0.93.

Lastly, the findings in Table 8 show the mean quality score of accessibility dimension for insured patients as 3.11 and its standard deviation is 0.80. For uninsured patients, the shown mean is 3.57 and its standard deviation is 0.89.

Table 8: General findings of dimensions of quality of care

Quality care	**Insured (n=226)**		**Uninsured (n=226)**			
Dimensions	**Mean**	**Std. dev.**	**Mean**	**Std. dev.**	**p-Value**	***t***
Patient-centeredness	2.13	0.33	2.94	0.23	0.000	0.237
Timeliness	2.51	0.86	3.18	0.94	0.566	1.173
Accessibility	3.11	0.80	3.57	0.89	0.479	0.892

4.6 Association between perceived quality of care and socio-demographic characteristics

In the univariate analysis, Table 9, all independent variables have significant association with perceived quality of care. Older participants had lower odds of perceiving quality of care as good. Male participants had higher odds of perceiving quality of care as good. The married participants had lower odds of perceiving quality of care as good. Participants with formal education had lower odds of perceiving quality of care as good. Employed participants had lower odds of perceiving quality of care as good. These variables were included in the multivariate logistic regression.

Table 9 Univariate analysis showing the relationship between perceived quality of care and socio-demographic characteristics

Characteristics	COR	95% C.I		p-value
		Lower	Upper	
Age	0.940	0.920	0.960	0.000
Sex	1.878	1.223	2.884	0.004
Marital status	0.369	0.199	0.683	0.002
Education	0.555	0.331	0.931	0.026
Occupation	3.655	1.647	8.113	0.001

Dependent variable: Perceived quality of care

Odds Ratio (OR) = (0=Lower perception, 1=Higher perception)

For multivariate analysis, a logistic regression model was considered.

The findings in Table 10 show that all independent variables have significant association with perceived quality of care. Older participants had lower odds of perceiving quality of care as good. Male participants had higher odds of perceiving quality of care as good. The married participants had lower odds of perceiving quality of care as good. Participants with formal education had lower odds of perceiving quality of care as good. Employed participants had higher odds of perceiving quality of care as good.

Table 10: Multivariate analysis showing the relationship between perceived quality of care and socio-demographic characteristics

Quality of care Socio-demographic characteristics	AOR	95% C.I Lower	 Upper	p-value
Age	0.928	0.907	0.949	0.000
Sex	1.903	1.201	3.014	0.006
Marital status	0.418	0.217	0.805	0.009
Occupation status	3.284	1.409	7.664	0.006
Education level	0.532	0.302	0.939	0.030

Dependent variable: Perceived quality of care

Odds Ratio (OR) = (0=Lower perception, 1=Higher perception)

CHAPTER FIVE

5.0 DISCUSSION

5.1 Patient-centeredness

The findings show a positive perception on patient-centeredness among the insured and uninsured patients. Patient-centeredness for insured people is shown to reflect the expectations of the patients. (Tzelepis et al., 2015) found that insured people consider patient-centeredness as crucial element to quality health care, the expected patient-centeredness status is to include respectfulness to patients' values, preferences and expressed needs, coordinated and integrated, provided information, ensure physical comfort and provide emotional support (Tzelepis et al., 2015). In this study insured patients reported measures of patient-centeredness to be undergone well without biasness. The indicators used to examine patient-centeredness for iCHF insured patients include; respectful health services, willingness to help patients and privacy and confidentiality. All mentioned three indicators were found to be done effectively and reflecting the patients' desires for quality health care. The findings are in line with the study by (Ha & Longnecker, 2010) who found that patient centeredness delivered by healthcare providers has been associated with patients' emotional health and patient psychological adjustment (Ha & Longnecker, 2010).

The same findings were obtained from uninsured patients who also agreed for being provided with patient-centeredness including; respectful health services, willingness to help patients and privacy and confidentiality of services. These findings go hand in hand with the study done by (Rashid, 2017) where by generally, the previous conventional CHF members were being abused and discouraged from accessing health services has changed; CHF members are now courteously welcome in health facilities. Further, in a show of sympathy for the costs they incur, clients paying out of their pocket are advised by health workers to join CHF. However, the general score show that the insured have better perception on the quality of patient-centeredness of the hospital services compared to uninsured. These findings do not concur with the recommendation developed by (Ekman et al., 2011) and (Smith, 2016) who after

finding differences in perception between insured and uninsured established a recommendation that the health facilities through the healthcare providers are to maintain patients-centeredness to all patients without considering their status of being insured or uninsured.

5.2 Perceived timeliness

Insured patients had positive perception on timeliness of health care services at the hospital. The insured patients perceive to obtain healthcare services timely; these services include; consultation service, laboratory services and medication services. The findings are in line with a suggestion made by (Mtei et al., 2007) that community health insurance schemes and key stakeholders have to work hand in hand looking for solutions with regards to provision of quality services timely. The comprehensive benefits of healthcare packages covered under the iCHF are based on the timeliness of services. The cardholders, including patients in private and public accredited facilities, are entitled to the services of medical consultation with doctor, clinical officer or nurses; laboratory investigations; drugs and essential medical supplies.

General findings show that uninsured patients did not agree about receiving health services timely. This shows that uninsured patients were not able to get healthcare service timely. According to (Levesque et al., 2013) timely access of healthcare is important to be considered to all patients who visit in healthcare facilities, as it might enable patients to control and prevent illness complication conditions, unfortunately, for uninsured patients' timeliness of services depends on the ability of patient to pay for services because all delivered services are to be paid before provision. If the patient has no money to pay for services, it is difficult for him/her to obtain healthcare services timely. This concurs with the findings by (Majerol et al., 2015) who found that in the United States, lack of health insurance can be a barrier to accessing timely, quality health care services. It is clear that uninsured individuals are less likely than the insured to receive preventive care, recommended screenings and follow-up care (Majerol et al., 2015). They are also more likely to postpone for care (Robbins et al., 2015).

Timeless healthcare service is seen not to be done effectively to both insured and uninsured patients. Broadly speaking, time used to get laboratory services and spent at *duka la dawa* is described in findings not to show any statistically significant different for both groups. This means the healthcare services provided to insured and uninsured patients do not differ in timeliness factor. Contrary to the findings of this study, , Aryeetey (G), Agyepong (I), Spaan (E) and Baltussen (R) found long waiting time as causing disappointment among the insured patients in Ghana, and thus suggested an urgent action to be taken to address the problem (Jehu-Appiah *et al.*, 2012)**.** Findings from (Dansky & Miles, 1997); and (Andaleeb, 2001) show that timely healthcare delivery, is very significant in predicting expectations of service users. As the clients believe that, in emergency situations, delays in receiving appropriate treatment may also lead to preventable deaths which indicates poor quality of services for that given health facility (Leiba et al., 2002).

5.3 Perceived accessibility

In general, the findings show that among the five indicators used to measure perceived accessibility of healthcare services only one indicator (referral services) had a better perceived quality score among insured patients. In line with these views, (Fenny et al., 2014) stipulates that the perception on quality healthcare services to patients gets influence from strong referral system, the simplest procedures to coordinate referral processes are to be developed in all facilities within districts (Fenny et al., 2014). The findings also prove the improvement of perceptions of iCHF clients on quality health care compared to the period of the old CHF, as found by (Mtei et al., 2007) that the reason of poor enrolment during the old CHF was caused by some factors which included non-coverage of referral care which led to bad perceptions on quality of health care services at accredited facilities (Mtei et al., 2007). But in this period of the current iCHF, referral services are not barriers for accessing quality health care, patients including insured and uninsured are provided with referral services whenever it is necessary.

The remaining four indicators show the mean value scores to be above 2.5 which indicate negative perception among the insured patients. These indicators include; availability of healthcare workers, adequate diagnostic services, prescribed drugs, and affordable services. These findings differ from (Sackey & Amponsah, 2017) who states that to reinforce the accessibility of healthcare service under health insurance it is important to ensure uniform utilization of the healthcare services which include; access to a doctor clinical officer or nurse, access to drugs and medical supplies, hospitalization and referral service where necessary.

For the uninsured patients' results have also shown that among the five indicators of perceived accessibility only referral service is perceived to be obtained effectively by uninsured patients. Although there are some notions that because uninsured patients prefer to pay by cash at the point of service, it is difficult for them to access desired healthcare services (O E et al., 2020) . These notions prove wrongly in this study based on the access to referral service which was found to be provided equally to both insured and uninsured patients. The findings reveal that uninsured patients get chance to obtain healthcare services in different level of healthcare facilities through referrals. This means capacity for health service delivery is rationalized around different levels of care without considering if the patient is insured or uninsured. However, there is a lack of uniformity with perceived accessibility in other indicators which are perceived not to function well to uninsured patients especially when they reach health facilities and they are require to pay out of pocket for the services that they receive.

5.4 General dimensions of quality of care

The inferential results through the *t-test* of all findings have shown the significant difference ($p=0.000$, $p=0.008$) of perceived patient-centeredness and perceived timeliness health services respectively. The insured patients are perceived to obtain health services including prescribed drugs with no challenges compared to uninsured patients who are usually needed to buy from private pharmacies. These findings differ from the findings of who conducted a research in India to compare services provided to both insured and uninsured, different from the findings of this study, (Desai et al., 2014) found uninsured to be mostly favored compared to insured patients, the overall performance of their research showed significantly higher ratings of

excellent/good (81%) services to uninsured compared to (71%) for insured patients. Through the general findings of each of the dimensions it is clear that the healthcare providers practice patient-centeredness to all patients without considering their health insurance status. (Bauchet et al., 2010) and (Commission, 2009) agrees with the findings of this study that being insured is not significantly associated with receiving better-quality care, even when controlling for several patient and facility characteristics. Also, a study done by (Juma & Manongi, 2009) insists that, when clients/patients are welcomed with respect and compassion, they assume that other services are good too.

In timeliness dimension however, an inference could be made from the findings that only insured patients were able to obtain quality care timely. This means for those who were not insured (uninsured) they take a long time to either see the doctors, obtaining medicines or laboratory services. This is contrary to findings of (Dalinjong & Laar, 2012) and (Bruce et al., 2008) whose findings suggests that long waiting times tended to affect insured clients more, compared with the uninsured.

However, perceived accessibility is shown to differ from other two mentioned dimensions, perceived accessibility shows no statistically significant difference ($p=0.114$) to insured and uninsured patients. This means, in the case of accessibility dimension, all insured and uninsured patients have accessibility issues, uninsured patients are more challenged compared to insured. This implies that to a great extent, iCHF is beneficial to patients. Finding from a study done by (H.T. et al., 2011) are similar to these findings in a way that, they indicated despite there being challenges in accessibility in terms of extra costs incurred, the insured paid much less compared to the uninsured (H.T. et al., 2011).

5.5 Association between perceived quality of care and socio-demographic characteristics

It is proven in this study that, when age of people increases it increases also their negative perception of quality of healthcare services. According to the results found, the patients aged above 45 years old have negative perception towards quality healthcare service provided compared to those aged below 45 years old. These results match results from a study by (Ga et al., 2016) who found that patients aged 45 and below years or younger were found to have positive perceptions towards quality healthcare services than patients aged above 45 years.

Sex is also seen to have direct relationship with the perceived quality health care, male have more positive perception of quality of health care services compared to female. This is contrary to the findings of (Rumi et al., 2021) where women are more positive with the health services they receive. Female patients have fewer expectations from the service providers at UHC because of their weak socioeconomic conditions (Jameel et al., 2019). That is why the average quality of service from UHC is making them comparatively happier than male patients (Rumi et al., 2021).

Unmarried people have positive perception of quality of healthcare services compared to the married. Most of married people were found not to have health insurance. The possession of health insurance to unmarried patients helps them to obtain quality health care services through perceived patient-centeredness, timeliness and accessibility of healthcare services. The findings by (Andaleeb, 2001) contrast with the findings of this study as his findings show that married patients denote a higher score of perceived quality healthcare than unmarried patients (Andaleeb, 2001).

Different from age, sex and marriage, another socio-demographic characteristic which show relationship with perceived quality healthcare service is occupational status. The most of employed patients were found to have positive perception about quality of healthcare services compared to unemployed. These people with good economic activities join in an insurance scheme because they expect to receive quality healthcare services in all accredited health facilities. Apart from age and gender, (Venn & Fone, 2005) stated clearly that

employment status was associated with the perceived quality of healthcare services, this means that the employed persons have got positive perceptions on quality health care services compared to unemployed who most of them lack health insurance.

Education level influences perceptions of people about quality healthcare services. Most of the educated persons were found to possess insurance cards but perceived negatively on quality of health care services compared to uneducated. These findings concur with (Mahmoud et al., 2019) research results which explain about the effect of education on perceived quality healthcare, the perception of quality healthcare was found to be high in patients who never attended school compared to those with primary or secondary education in which their level of perception was found to be moderate which was the same as for college and university patients. Perception differs with education level because when a person is educated his/her level of understanding increases as well as their ability of reasoning.

5.6 Study limitations and mitigation

1. This study was conducted in a hospital in Pangani where the quality of care could be higher than that found in lower health facilities in the nation therefore the findings of this study cannot be used to represent the perceptions of all people insured iCHF members and community members.

2. This research is a quantitative research, thus, combining qualitative and quantitative research on the evaluation of service quality dimensions and its associated factors could deliver more insightful findings in future research.

3. The study focused on outpatient department only and excluded the in patients. Therefore, comparison has to be done with caution, since in-patients' perceptions of quality of care may differ with those of outpatients because of differences quality of health care expectations.

CHAPTER SIX

6.0 CONCLUSION AND RECOMMENDATIONS

6.1 Conclusion

The study concludes that healthcare providers deliver respectful services; they show willingness to help patients and ensure privacy and confidentiality of the services they give. Although patient-centeredness is shown to be practiced well in Pangani district hospital, the *t*-test results lead to the conclusion that, there is a statistically significant difference in perceived patient centeredness between insured and uninsured patients. This means the patient-centeredness is more maintained and favorable to insured patients than to uninsured patients.

In general, timeliness of healthcare services is more effective to insured patients compared to uninsured patients who do not get consultation services, laboratory services and services at *duka la dawa* at the right time. This conclusion means that mostly the insured patients obtain expected quality healthcare services timely because their services are pre-paid by the scheme.

The study also concludes that both uninsured and insured patients have problems in accessing healthcare services. The problems are associated with the unavailability of healthcare workers, inadequate diagnostic services and lack of access to prescribed medicines.

The study also concludes that the perceived quality care is associated with the socio-demographic characteristics. Increase of age is associated with negative perceived quality health care. Male have more positive perception of quality of health care services compared to female. Unmarried people have positive perception of quality of healthcare services compared to the married Also, on occupational status, it is shown that the employed persons have positive perceived quality of healthcare services compared to unemployed. However, educational status has been concluded to show direct relationship with perceived quality healthcare services, those with formal education/higher education have negative perception on quality healthcare services which include; patient-centeredness, timeliness, and accessibility of healthcare services.

6.2 Recommendations

Based on the findings, the following recommendations have been established.

- Because the results have shown the patient-centeredness dimension to be done well to insured patients compared to uninsured patients, the Pangani district hospital should improve healthcare service delivery particularly on the patient-centeredness dimension to both insured and uninsured patients. Both insured and uninsured patients in Pangani district hospital should be given respectful health services, the healthcare providers should be willing to help both insured and uninsured patients and ensuring privacy and confidentiality is maintained to both insured and uninsured.

- The insured patients have been shown in results to be mostly favored compared to uninsured in timeliness dimension, in order for the Pangani district hospital to avoid bias when offering healthcare services to both insured and uninsured patients, efforts should be added by the healthcare providers and health insurance officers to encourage more people in the community to join in health insurance schemes. The encouragement could be done through village meetings and whenever uninsured patients visit the hospital; he/she could be encouraged to join in the scheme by being told the benefit packages covered by the scheme.

- To improve accessibility of healthcare services in Pangani district to both insured and uninsured patients. Human resources including; physicians, nurses and midwives should be provided with frequent training on how to maintain patient-centeredness and provide services timely to all patients without bias. The insured patients should also be provided with all the prescribed drugs so that they can avoid extra costs they incur.

- Pangani District Hospital should conduct a qualitative study so as to find out the exact reason why patients have negative perceptions on some indicators of health care quality.

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APPENDICES

Appendix 1: English Questionnaire

A: BACKGROUND INFORMATION

ID NUMBER ……..

1. What is your age? (years)……
2. Your gender/sex is……
    a) Female ( )
    b) Male ( )
3. Your marital status is…….
    a) Single ( )
    b) Married ( )
    c) Widow/widower ( )
    d) Divorced ( )
4. Your highest level of education is…….
    a) Non-formal ( )
    b) Primary ( )
    c) Secondary ( )
    d) University ( )
5. Your occupation status……..
    a) Employed ( )
    b) Self-employed ( )
    c) Unemployed ( )
6. Are you a member of any health insurance schemes?
    a) Yes
    b) No

7. Which health insurance scheme do you belong to?
    a) NHIF
    b) iCHF
    c) Others
8. In the next section, I am going to ask you about your views on the quality of health care services provided at Pangani District Hospital *(Please tick in the box that is relevant to the statements*)

No		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
8a	PATIENT CENTEREDNESS					
i.	Pangani district Hospital provides respectful health services					
ii.	Staff at Pangani District hospital are willing to help me					
iii.	Pangani district hospital staff normally uphold confidentiality in service provision and privacy of services					
8b	Timeliness					
i.	Waiting time at Pangani district hospital is reasonable					
ii.	I spend reasonable time at Pangani district hospital					

	getting consultation					
iii.	I use reasonable time to access laboratory services at Pangani district hospital.					
iv.	I spend reasonable time at the *duka la dawa* for my prescriptions at Pangani district hospital					
8c	Accessibility of healthcare service					
i.	Pangani district hospital health care workers are available to serve me					
ii.	I can access adequate diagnostic services at Pangani district hospital					
iii.	I receive all prescribed drugs at Pangani district hospital					
iv.	Healthcare service is affordable in Pangani district hospital.					
v.	I normally get referral services through Pangani district hospital when it becomes necessary.					

Appendix 2: Swahili questionnaire

NAMBA YA UMBULISHO …….

1. Una umri gani? ……..
2. Jinsia gani?
    a) ke
    b) me
3. hali yako ya ndoa
    a) hajaoa/hajaolewa
    b) ameoa/ameolewa
    c) mjane
    d) wameachana
4. una kiwango gani cha elimu?
    a) Elimu isiyo rasmi
    b) Elimu ya msingi
    c) Elimu ya sekondari
    d) Elimu ya juu
5. Unafanya kazi ya aina gani?
    a) Nimeajiriwa
    b) Nimejiajiri
    c) Sina ajira
6. Je, wewe ni mwanachama wa mfuko wa BIMA yoyote ya afya
    a) Ndio
    b) Hapana
7. Unatumia mfuko gani wa BIMA ya afya
    a) NHIF
    b) iCHF
    c) nyinginezo

8. Kwenye kipengele kifuatacho nitakuuliza kuhusu ubora wa huduma za afya unazozipata hospitalini hapa (tafadhali jibu kwenye kisanduku ambacho ni muhimu)

NA	Matarajio	Nakubali sana	Nakubali	Sijui	Sikubali	Sikubali kabisa
8a	Uzingatiwaji wa wagonjwa					
i.	Huduma za afya hutoewa kwa heshima katika Hospitali ya Wilaya ya Pangani					
ii.	Wafanyakazi wa Hospitali ya Wilaya ya Pangani wapo tayari kuwasaidia wagonjwa					
iii.	Wafanyakazi wa Hospitali ya Wilaya ya Pangani huzingatia usiri wanapotoa huduma					
8b	Muda wa huduma					
i.	Huduma za afya hutolewa kwa wakati katika Hospitali ya Wilaya ya Pangani					
ii.	Naonana na daktari kwa wakati kwa ajili ya mashauriano nifikapo katika Hospitali ya Wilaya ya Pangani					
iii.	Ninapata huduma za maabara kwa wakati katika Hospitali ya Wilaya ya Pangani					

iv.	ninapata huduma katika duka la dawa kwa wakati katika Hospitali ya Wilaya ya Pangani					
8c	Ufikiaji wa huduma za afya					
i.	Hospitali ya Wilaya ya Pangani inawafanyakazi wa kutosha					
ii.	Hospitali ya Wilaya ya Pangani ina huduma za uchunguzi za kutosha					
iii.	Ninapata dawa zote katika Hospitali ya Wilaya ya Pangani					
iv.	Ninazimudu huduma za afya katika Hospitali ya Wilaya ya Pangani					
v.	Hospitali ya Wilaya ya Pangani inatupatia huduma za rufaa inapohitajika					

Appendix 3: Informed Consent form

Consent to participate in research

I.D NO: …….

Greetings, my name is HADIJA R KIBAMBA, a student from Muhimbili University of Health and Allied Sciences, Dar es salaam. I would like to talk to you about your perceptions of health care at Pangani District Hospital. At the moment we are carrying out a study on **PERCEIVED QUALITY OF HEALTH SERVICES AND RELATED FACTORS AMONG iCHF INSURED AND UNINSURED COMMUNITY MEMBERS ATTENDING PANGANI DISTRICT HOSPITAL.**

Purpose of this study

The aim is to determine perceived quality of health services received by iCHF members at Pangani District Hospital.

Participation

You will sit with a trained data collector and you will be given a questionnaire which will have questions about perceived quality of health services. Your responses will be recorded in the questionnaire by the data collector. The questionnaire will take no more than 15 minutes of your time. Participation in this study is voluntary and you can withdraw at any time with no negative consequences.

Confidentiality

Your information will be kept confidential and no unauthorized person will have access to it except research team members.

Risks

We do not anticipate any risks associated with this research, nonetheless, some of the questions asked may be of a sensitive nature. You should not feel pressured to answer these and I hope that you will feel comfortable to ask me about any questions or concerns you might have at any point during the survey process.

Benefits

This study has no direct benefits to you, but your participating in this study allows us to get your thoughts on the quality of health services provided to you in this hospital today.

Who to Contact

In case you encounter problems or you have questions, you may contact me through this address: Hadija R Kibamba MUHAS, P.O. BOX 65015 Dar es salaam, Phone number 0716 429 985, Or if you have serious issues about your rights as a participant you may contact Dr. Bruno Sunguya, Director of Research and Publications at MUHAS P.O. BOX 65001.Dar es salaam. Tel 2150302-62152489.

Agreement

May I have your consent to continue with the questionnaire?

Yes……. No…….. (Tick appropriate)

I, ……. have read and understood the contents in this form. My questions have been answered. I agree to participate in this study.

Signature of the respondent ……. Date……

Data collector signature…….. Date…….

Appendix 4: Informed Consent form, Swahili Version

Fomu ya Makubaliano ya kushiriki katika utafiti

Namba ya utambulisho: ……

Habari; Jina langu ni Hadija R Kibamba, ni,mwanafunzi wa Chuo Kikuu cha Sayansi za Afya na Sayansi Shirikishi Muhimbili. Ningependa nizungumze nawe kuhusu mtazamo wako juu ya huduma za afya. Kwa sasa tunafanya utafiti kuhusu mtazamo wa huduma za afya zinazopatikana katika hospitali hii.

Dhumuni Kuu

Dhumuni la kufanya utafiti huu ni kujua ubora wa huduma za afya zinapokelewa na wanachama wa CHF iliyoboreshwa katika Hospitali ya Wilaya ya Pangani.

Ushiriki

Utakuwa na mkusany taarifa atakaye kupa karatasi ya maswai juu ya CHF iliyoboreshwa na ubora wa huduma za afya. Dodoso hili halitachukua Zaidi ya dakika 15 na majibu yao yote yataandikwa kwenye dodoso. ushiriki katika utafiti huu ni wa hiari na unaweza kujiondoa wakati wowote bila athari yoyote.

Usiri

Taarifa zako zote kama mshiriki zitatunzwa kwa usiri na kamwe hazitatolewa kwa mtu yeyote asiyehusika isipokuwa kwa mtafiti na wasaidizi wake tu.

Hasara

Hatitarajii hatari zozote zinazohusiana na utafiti huu japokua baadhi ya maswali yatakayoulizwa yanaweza kua na hali nyeti. Usijiskie kushinikizwa kujibu maswali haya na natumai kuwa utakua na uwezo wa kuniulizwa juu ya maswali au endapo utakua na wasiswasi wowote wakati tunaendelea na mchakato wa uchunguzi.

Faida

Utafiti huu hauna faida ya moja kwa moja, lakini ushiriki wako katika utafiti huu unasaidia sisi kupata maoni yako juu ya ubora wah huduma za afya uliyopewa katika Hospitali hii.

Mawasiliano

Kama utakua na tatizo au utakua na maswali Zaidi, unaweza kuwasiliana nami kwa barua, ukiniandikia kupitia anuani hii: Hadija R Kibamba, MUHAS, S.L.P. 65015 Dare es salaam Simu: 0716 429 985. Au endapo utakua na maswali Zaidi za haki zako kama mshiriki unaweza kufanya mawasiliano na Dr.Bruno Sunguya, Mwenyekiti wa kamati ya bodi ya chuo ya utafiti na uchapishaji,S.LP. 65001, Dar es salaam. Simu:2150302-62152489.

Kipengele cha Makubaliono

Je unakubali umekubali kushiriki katka utaafiti huu?

Ndiyo…….. Hapana……..(Weka tiki panapostahili)

Mimi…… nimesoma maelezo ya fomu hii.Maswali yangu yote yamejibiwa na ninakubali kwa hiyari yangu mwenyewe kushiriki kwenye utafiti huu.

Saini ya Mshiriki……. Tarehe……..

Saini ya mtafiti…… Tarehe……

Appendix 5: Ethical Clearance Letter

MUHIMBILI UNIVERSITY OF HEALTH AND ALLIED SCIENCES

OFFICE OF THE DIRECTOR OF RESEARCH AND PUBLICATIONS

P.O. Box 65001
DAR ES SALAAM
TANZANIA
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Direct Line: +255-22-2152489
Telefax: +255-22-2152489
E-mail: drp@muhas.ac.tz

Ref. No.DA.282/298/01.C/

Date: 26/08/2020

MUHAS-REC-08-2020-360
Hadija R Kibamba
Master in Public Health (MPH), Shool of Public Health and Social Sciences
MUHAS

RE: APPROVAL FOR ETHICAL CLEARANCE FOR A STUDY TITLED: IMPROVED COMMUNITY HEALTH FUND AND PERCEIVED QUALITY OF HEALTH SERVICES: A CASE OF PANGANI DISTRICT COUNCIL

Reference is made to the above heading.

I am pleased to inform you that the Chairman has on behalf of the University Senate, approved ethical clearance of the above-mentioned study, on recommendations of the Senate Research and Publications Committee meeting accordance with MUHAS research policy and Tanzania regulations governing human and animal subjects research.

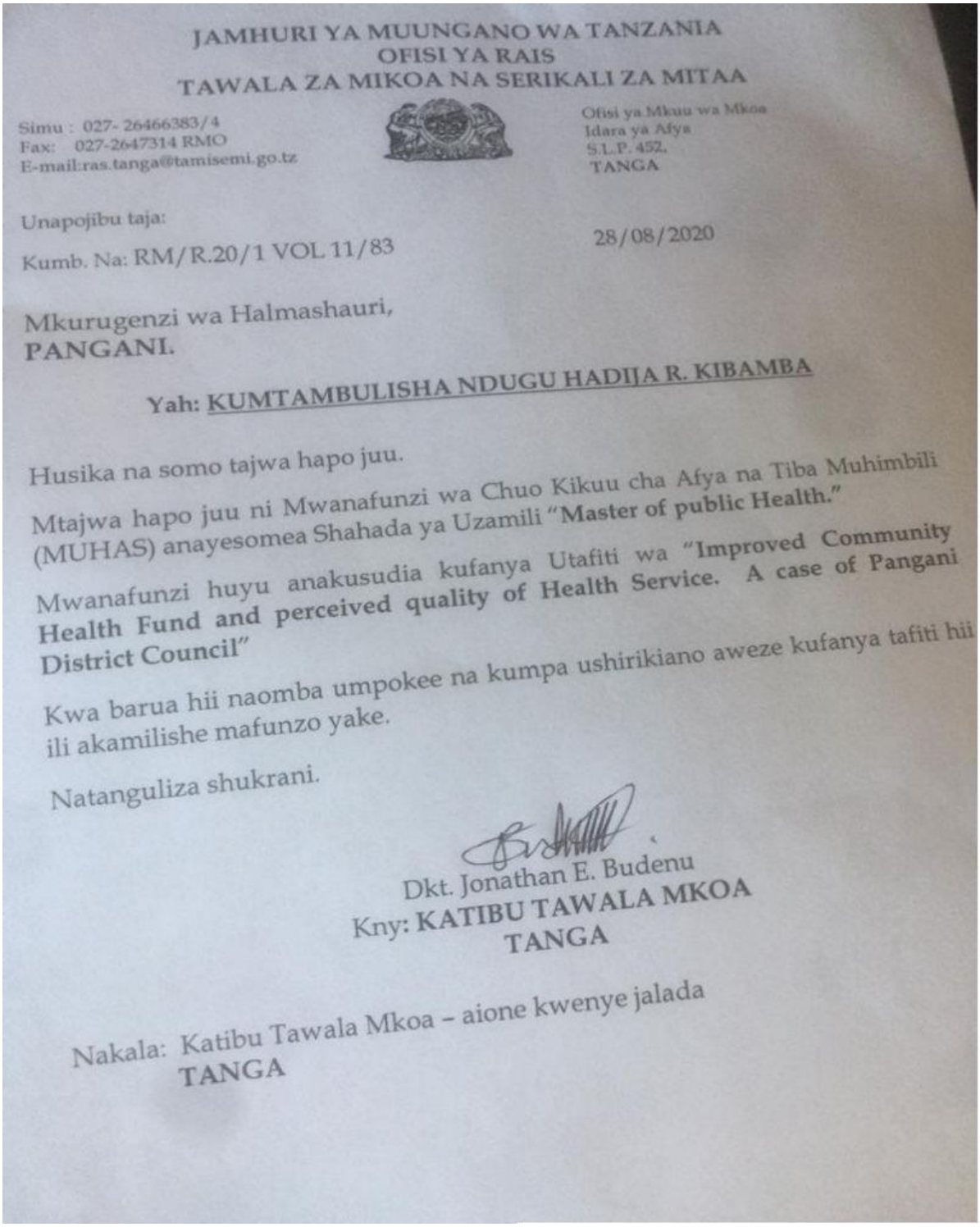
APPROVAL DATE: 26/08/2020
EXPIRATION DATE OF APPROVAL: 25/08/2021

STUDY DESCRIPTION:

Purpose:
The purpose of this observational cross sectional study design is to determine perceived quality of health services received by iCHF members at Pangani District Hospital.

The approved protocol and procedures for this study is attached and stamped with this letter, and can be found in the link provided:
https://irb.muhas.ac.tz/storage/Certificates/Certificate%20-%20136.pdf and in the MUHAS archives.

Appendix 6: Research Permit



JAMHURI YA MUUNGANO WA TANZANIA
OFISI YA RAIS
TAWALA ZA MIKOA NA SERIKALI ZA MITAA

Simu : 027- 26466383/4
Fax: 027-2647314 RMO
E-mail:ras.tanga@tamisemi.go.tz

Ofisi ya Mkuu wa Mkoa
Idara ya Afya
S.L.P. 452,
TANGA

Unapojibu taja:

Kumb. Na: RM/R.20/1 VOL 11/83

28/08/2020

Mkurugenzi wa Halmashauri,
PANGANI.

Yah: KUMTAMBULISHA NDUGU HADIJA R. KIBAMBA

Husika na somo tajwa hapo juu.

Mtajwa hapo juu ni Mwanafunzi wa Chuo Kikuu cha Afya na Tiba Muhimbili (MUHAS) anayesomea Shahada ya Uzamili "**Master of public Health.**"

Mwanafunzi huyu anakusudia kufanya Utafiti wa "**Improved Community Health Fund and perceived quality of Health Service. A case of Pangani District Council**"

Kwa barua hii naomba umpokee na kumpa ushirikiano aweze kufanya tafiti hii ili akamilishe mafunzo yake.

Natanguliza shukrani.

Dkt. Jonathan E. Budenu
Kny: **KATIBU TAWALA MKOA**
TANGA

Nakala: Katibu Tawala Mkoa – aione kwenye jalada
TANGA