DEVOLVED HEALTHCARE FINANCING AND DELIVERY OF HEALTH SERVICES AMONG PUBLIC HEALTH FACILITIES IN WESTERN COUNTIES

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DECLARATION

I, the undersigned, declare that this research proposal is my original work and has not been presented to any institution or university other than the University of Nairobi for examination.

Signed:  Date: 25-11-2021

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This research project has been submitted for examination with my approval as the University Supervisor.

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DEDICATION

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ABBREVIATIONS AND ACRONYMS

ANOVA	**:**	Analysis of Variance
CRF	**:**	County Revenue Fund
GDP	:	Gross Domestic Product
KIPPRA	**:**	Kenya Institute for Public Policy Research and Analysis
KPMG	:	Klynveld Peat Marwick and Goerdeler
NHIF	**:**	National Hospital Insurance Fund
SPSS	**:**	Statistical Package for Social Sciences
UK	**:**	United Kingdom
VIF	**:**	Variance Inflation Factors
WHO	**:**	World Health Organization

ABSTRACT

The general objective of the study was to determine the effect of devolved healthcare financing on delivery of health services among public health facilities in Western Counties. The study was guided by the following specific objectives; to establish the effect of source of funds on delivery of health services among public health facilities in Western Counties; to determine the effect of adequate fund allocation on delivery of health services among public health facilities in Western Counties and to ascertain the effect of equitability on delivery of health services among public health facilities in Western Counties. This study adopted a descriptive research design. The target population comprised of all the 72 public health facilities in Western Counties. The study unit of observation was the head in these public facilities. A questionnaire was used for collecting primary data from the respondents. Descriptive statistics and inferential statistics were conducted. The regression results revealed that source of funds had a significant positive influence on delivery of health services (β=0.188, p=0.000). The study also revealed that adequate fund allocation has a positive and significant influence on delivery of health services (β=0.566, p=0.000). Finally, the results of regression analysis revealed that equitability positively influences delivery of health services among public health facilities in Western Counties (β=1.117, p=0.000). The study concludes that source of funds positively and significantly affects delivery of health services; adequate funds allocation has a positive and significant relation with delivery of health services and equitability positively and significantly delivery of health services of public health facilities in Western Counties. The study further concludes that devolved healthcare financing has a significant positive influence on delivery of health services of public health facilities in Western Counties. The study recommends that the management of public health facilities in Western Counties should enhance their income generating activities so that it contributes significantly to their health service delivery. The study also recommends the need for policy makers among the public health facilities to come up with measures to ensure that the health care workers are well compensated and that the departments are well staffed. Finally, the study recommends the need for policy makers to ensure equitability in allocation of funds to the health facilities.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

The decentralization of diverse functions to devolved units of administration is referred to as devolution. Devolution, in essence, is related with both responsibility as well as accountability because it entails resource management, like the health staff (doctors and nurses) and funds (Okech, 2016). Though health-care devolution is widely regarded as a way of improving the health-care system's efficiency as well as responsiveness, every country adopts and executes the idea in its own way (Jongudomsuk & Srisasalux, 2012). Nevertheless, the devolution procedure is not as simple as it appears. Devolution is supported by Mohammed, North, and Ashton (2016) to increase the efficiency of health service delivery efficiency as well as responsiveness to society requirements. To reap these advantages, though, a localized decision space in relation to finance, service organization, workforce, access regulations, and governance norms must be built.

This study was anchored on various theories including Oates (1972) decentralization theorem which specifies that some goods as well as services are distinctively suited for some precise areas and not others. This is because of diversity in tastes, preferences as well as natural endowments leading to efficiency in allocation of resources (Hallwood & MacDonald, 2010). Musgrave (1959) decentralization theorem contested that sub-national government use fiscal decentralization to entice individuals into their locality by “choosing with their feet”. The theory argues that interjurisdictional competitions disciplines governments and pressurizes them to provide local public goods more efficiently. By allowing local public choice of goods

and services, flexibility is encouraged which improves performance as sub-national government are then able to respond to variations in tastes and preferences. The Robert Solow growth model developed in the 1950's also seeks to explain how financing of capital projects and higher performance are interrelated. It argues that future rates of growth of outputs depend on current investments in capital goods.

Kenya's 2010 Constitution additionally devolved health responsibility to the nation's 47 counties, particularly Western Counties (Republic of Kenya, 2014). Devolution dramatically altered the flow of resources via the health-care system, granting county governments far more authority and discretion over health-care spending. The financing of devolved healthcare has however not been adequate and this directly impacts of health services delivery (Okech, 2016). In the financial year 2018/19, 81% of all the counties in Kenya allocated at least 15% of their budget to health (Health Policy Project, 2019). In the same financial year the national government allocated 4% of the national budget to health (Netherlands Enterprise Agency, 2019). Money is insufficient due to the inadequate allocation, which has a direct influence on the health services delivery. There are also delays in provision of the funds leading to inefficiencies in operations of these health facilities (Okech, 2016).

1.1.1 Devolved Healthcare Financing

Devolved healthcare financing refers to the process of providing finances to health facilities at the county level (Makheti, 2017). Jiminez and Smith (2015) defined devolved healthcare financing as equipping and/or disbursing the requisite funds to public health facilities in a devolved system for effective operations of the stated facilities. Devolution healthcare financing may also be defined as the transfer of

health activities from the national government to the county government (Nyongesa, Munguti, Odok & Mokua, 2015).

According to WHO (2016), owing to the declining resources and economic variables most of the Sub-Saharan nations are incapable of providing sufficient quality and wide coverage health services. As a result, this has seen most countries promoting for devolution as a main factor to propagate health sector reforms with a perception of exploiting the utilization of the resources available in improving the accessibility as well as quality of the provided health care services (Hurley, Doumbia, Roter & Harvey, 2018).

In terms of operationalization, Jiminez and Smith (2015) measured devolved healthcare financing in terms of adequate finances, efficient financing, user fees, and financial sources. Olakunde (2012) operationalized devolved healthcare financing in terms of adequate fund allocation, timely disbursement, financial sources and equitability. The current study operationalized devolved healthcare financing in terms of source of funds, adequate fund allocation and equitability due to their wide applicability in previous literature.

1.1.2 Delivery of Health Services

Delivery of health services concept is a multidimensional idea which is both complex and subjective. According to Mosadeghrad (2013) delivery of healthcare services is continually appealing the patient through healthcare services that are efficient and effective as per the newest standards and guidelines, that are capable to satisfy the requirements of the patients and gratifies providers. Kimbati, Kiio and Towett (2013) defined delivery of health services as the provision of services for the betterment of health wellbeing of individuals seeking such services. Delivery of healthcare services

is characterized by attributes like timeliness, availability, affordability, confidentiality, accessibility and responsiveness just to mention a few (Manaf, 2015).

Healthcare systems are one of the most complex systems that serve humans (Irurita, 2019). In order to deliver quality healthcare services coordination of various number of providers and organizations is needed. Additionally, coordination of very complex diagnostic, therapeutic and logistic practices and processes. Healthcare systems complexity, bureaucracy and too many departments are the some of the hindrances to their quality improvement. In addition, the challenges in healthcare are complex and need solutions that are highly tailored (Shahidzadeh-Mahani, Omidvari, Baradaran & Azin, 2018). Each patient and every condition is different. A straightforward issues needs the correspondence and co-activity of different divisions and workers.

In terms of operationalization, researchers have measured delivery of health services in various ways. Donabedian (2016) did a pluralistic evaluation aimed at establishing healthcare service delivery characteristics. The evaluation identified 182 characteristics of healthcare service delivery and clustered them in to five categories; efficiency, efficacy, effectiveness, empathy and environment. The current study will consider accessibility of the stated services, affordability, availability, efficiency and effectiveness as indicators of delivery of health services.

1.1.3 Devolved Healthcare Financing and Delivery of Health Services

In Europe, healthcare devolution has resulted in a variety of results. Devolution in county councils has been credited with improving service delivery efficiency, patient-centered health care, the ability to invent, as well as a rise in cost awareness, among other benefits. Devolution also improves the local, regional, as well as higher-level authorities accountability (Jommi & Fattore, 2013). As per Arrowsmith and Sisson

(2012), devolution also led in changes to hospital operations like working hours and an increase in the application of needs-based healthcare methods (Jervis & Plowden, 2013). Nevertheless, some Euro nations have expressed worry with healthcare decentralization, notably in terms of inequality (ibid).

After the military dictatorship established a local government plan in 2000, Pakistan's government implemented devolution in 2001. The bill's purpose was to extend democracy to local levels, as well as increase accountability and improve service delivery to citizens, including healthcare. A vast healthcare services were devolved from the provincial to districts administration in parallel with devolution (Ansari et al., 2011). According to a 2007 assessment, devolution had not resulted in the desired alterations in health metrics. It also highlighted Pakistan's ongoing difficulties in implementing devolution (Social and Development Centre, 2011). Furthermore, important provincial government tasks were claimed to have been transferred to district governments. The transfer of duties, though, was not matched by the transfer of necessary financing (WHO, 2011).

Finance constraints are limiting Africa's ability to develop and expand healthcare services. As per the International Finance Corporation, Sub-Saharan Africa has 11 percent of the world's population but carries 24 percent of the global diseases burden. Even more concerning, the region accounts for less than 1% of global health spending. Healthcare funding from the public sector is still unevenly distributed across the continent. Although 53 African nations signed the Abuja Declaration vowing to contribute 15% of their national budgets to health, many are still far from meeting that goal, and seven nations, according to a few estimates, have actually reduced their health spending over the last decade (WHO, 2014).

1.1.4 Public Health Facilities in Western Counties

The focus of this study is on health facilities that are government owned in the seven Western counties. The promulgation of the CoK on August 27th of 2010 advocated for a devolved government system, creating 47 devolved county governments. The system hence relinquished power from central government to the local authority, for example, the power to incur expenses and collect revenues among others. Devolution is discussed in Articles 174 to 200 in Chapter 11 of CoK, 2010. The western region has seven counties namely; Nandi, Vihiga, Kakamega, Kisumu, Busia, Siaya and Bungoma.

Devolution dramatically altered the flow of resources through the health-care system, granting county governments far more authority and discretion over health-care spending. National health funding used to bypass county budgets before devolution. Under devolution, counties have more autonomy in managing their finances, as well as all national resources must pass via the County Revenue Fund (CRFs) according to the Public Financial Management Act of 2012. The prioritization of health requirements varies widely, but the overall trend in terms of the share given to health is increasing. The resources available are determined by national government allocations as well as locally generated money. Nonetheless, the opportunity for generating local revenues is restricted in several counties, and the bulk of resources originate from national government allocations (Dutta, Maina, Ginivan and Koseki, 2018).

In the financial year 2018/19, 81% of all the counties in Kenya allocated at least 15% of their budget to health (Health Policy Project, 2019). In the same financial year the national government allocated 4% of the national budget to health (Netherlands

Enterprise Agency, 2019). A large portion of this budget was spent on personnel compensation, the purchase as well as upgrading of hospital equipment and infrastructure, and the procurement of pharmaceuticals. Nevertheless, due to the low allocation, the funds are insufficient, resulting in a direct influence on the quality of service. There are also delays in provision of the funds leading to inefficiencies in operations of these health facilities (Okech, 2016).

1.2 Research Problem

The relationship between devolved healthcare financing and delivery of health services is an ongoing debate. Mohammed, North, and Ashton (2016) advocates for devolved heath care financing as it increases the efficiency of health service delivery efficiency as well as responsiveness to society requirements. Kiambati, Kiio and Towett (2013) opposes this school of thought by arguing that devolution of health services has resulted in increased dissatisfaction within the medical community, with employees preferring to quit the public service system for greener pastures somewhere else or abandoning their careers as health practitioners entirely. The preceding demonstrates a glaring contrast between the projected health care devolution advantages as well as the reality of health-care delivery.

Kenya is a signatory to the Abuja Declaration, which commits African nations to spending 14% of their national budget on health. Surprisingly, the Kenyan government has not adopted this. In fact, the government has decreased funding to the health sector on several occasions. Kenya spent Sh7.20 of each and every Sh100 spend on healthcare in 2010. In 2011, it was reduced to Sh6.10, and in 2013, it was further reduced to Sh5.9. In 2019, the government spent Sh5.70 per Sh100 on the sector, significantly less than the promised 14 percent. These extreme healthcare cuts

have resulted in subpar services, a scarcity of drugs, and frequent strikes, as well as higher death and morbidity rates. Government spending as a proportion of GDP has been stable at somewhat more than 4% during the last few years. Kenya ranks last in a regional comparison of overall health budget as a proportion of GDP, below Rwanda, Tanzania, as well as Uganda (KPMG Africa, 2019). The public health sector in Kenya therefore provides a good context to investigate the influence of devolved health care financing on delivery of health services.

From an empirical standpoint, Douzounet and Yogo (2015) investigated the direct and indirect effects of health budget decentralization on healthcare outcomes. The findings of the study showed that decentralizing the health budget improves health outcomes in general. This study presents a contextual gap as it was conducted in Chad. Sparrow et al. (2015) investigated the effects of decentralization of health-care financing on maternity care in Indonesia. The results of the research study suggested that the adoption of district plans resulted in an increase in prenatal care visits. This study presented a conceptual gap as the focus was not healthcare delivery. Milicevic, Vasic, and Edwards (2015) discovered that there were limiting factors in relation to financing as well as the distribution of human capital in Serbia, and that these bottlenecks had a negative impact on both healthcare services provision as well as the county government health care project implementation. This study presents a methodological gap as it was qualitative in nature.

Different local research on devolved healthcare (Kiambati et al., 2013; Waithaka, 2013; Gomoi, 2017; Makheti, 2017) have not sufficiently expressed in what manner devolved healthcare financing has influenced health service delivery in Kenya, specifically with regard to public health facilities in Western counties. According to

research on devolved administration in Kenya by Khaunya, Wawire, and Chepng'eno (2015), Nairobi County has experienced plenty of problems that have hindered its progress. The issues are inclusive of insufficient funding, delay in disbursement of funds and inability to absorb some devolved functions. There have also been instances where county governments have been hesitant to increase the amount of funds given to health, resulting in service delivery interruptions such as salary payments and the purchase of medical equipment (Mugambi, 2014). This study was motivated by this contextual, conceptual and methodological research gaps and intended to answer the research question; what is the effect of devolved healthcare financing on delivery of health services among western counties public health facilities?

1.3 Research Objectives

The objective of the study was to determine the effect of devolved healthcare financing on delivery of health services among public health facilities in Western Counties.

1.4 Value of the Study

The research is beneficial to scholars as well as research since it will contribute to the body of knowledge on devolved financing as well as delivery of health care. More so, the research is anticipated to contribute to scientific knowledge particularly in respect of health management. In this regard, the study will act as a suitable source of reference for scholars in the fields of devolution, health, and management.

The research will aid the government and other policy makers by enabling them to formulate devolved financing policies and strategies for guiding effective decentralization of government functions especially public healthcare to ensure the primary goal of advancing services closer to the citizenry is met.

The study findings will shed more light on the most effective ways that health practitioners who include senior medical staff such as medical superintendents, hospital administrators, and county government officials can employ to address the intermittent devolved financing challenges facing public healthcare at county levels and this will contribute to the improvement of delivery of health services within Western Counties.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

Key theories underpinning devolved healthcare financing and delivery of health services will be discussed here. The chapter goes on to examine the theoretical framework that underpins the study variables, as well as the drivers of delivery of health services, research gaps, an empirical evaluation, and the conceptual framework.

2.2 Review of Key Theories

This paper provides an overview of the important theories that explain the connection between devolved healthcare financing and delivery of health services. Traditional theory of fiscal decentralization, modern theory of fiscal decentralization and the Solow growth model are among the theoretical review addressed.

2.2.1 Traditional Theory of Fiscal Decentralization

The proponent of this theory is Musgrave (1959) in what famously came to be known as the "Musgravian branches" of governmental economic functions of allocation, distribution and stabilization. The traditional view of decentralization argues that the national government should control macroeconomic management responsibilities as well as redistribution of income for the benefit of the poor. Proponents of this view and development economists discouraged decentralization by advising central control over the economy. They employed development strategies mainly anchored on command planning, grandiose technological transfer, industrialization and regional centralization to take advantage of scale-economies and subsequent growth. Smoke (2001) viewed centralization as a tendency that existed where the

centrifugal forces are permanent and secular, encompassing all ages towards aggregation of the public sector.

Faguet (2004) and Smith (1985) contends that the authority to make fiscal decisions is best left to the central government since sub national governments lack resources whether human, technical, or financial such that they cannot appropriately offer the requisite services to the citizenry. One of the main deterrents pointed out is the attendant high administrative costs due to lack of economies of scale at the sub national level. In addition, a centralized system is regarded as superior as far as productive efficiency goes. Bahl and Linn (1992) wrote that centralization is good for productive efficiency where economies of scale are needed. Prud'homme (1995) favours a centralised system by arguing that national governments are able to invest in production capacity to a greater extent hence enhancing efficiency.

The theory can serve as a point of reference or comparison of the impact of centralized economies and decentralized governments on the delivery of health services among County governments in Kenya. The theory helps the author to delineate, examine and assess the dynamics and role of fiscal decentralization and also enables to design appropriate indicators that best reflect the fiscal and institutional systems, as well as political processes that assign authority to the various organs of raising taxes and undertaking public expenditures. This theory hypothesizes that devolved healthcare financing would have a positive effect on delivery of health services of devolved units in Kenya.

2.2.2 Modern Theory of Fiscal Decentralization

Oates (1972) decentralization theorem underpins the cardinal role and significance of the independent variable in this study, fiscal decentralization. The theory holds that there are some goods and services that are uniquely suited for specific regions and hence they could be best provided if revenue raising power and authority to plan and incur expenditure were transferred to regional levels. The theory argues that both policies and strategies that are designed to provide for public goods as well as human capital needs to be sensitive to regional and local conditions in order to be more effective in achieving desired objectives than those determined and implemented from the centre and tends to ignore geographical, cultural and religious differences.

Proponents of this theory make the assumption that subnational governments have the requisite capacity to achieve high levels of productive efficiencies to avoid wastage and create innovations relevant to the regions. A key criticism by Faguet and Smith (1985) however, states that decentralization can be costly due to diseconomies of scale. Smith (1985) further argues that subnational governments tend to lack adequate resources; whether human, technical or financial such that they are unable to appropriately offer the requisite goods and services to the citizenry.

This theory applies and relates well to this research which seeks to establish whether decentralized funds achieve significant impact in devolved public health facilities delivery of health services. The theory lays emphasis on citizens' engagement in preference setting as locals have superior knowledge of their needs and can be expected to be more accountable. The study reveals the advantages of devolving mandates to local levels and the clear relationships between County governments and

the residents/beneficiaries. The expectation is that devolved healthcare financing would have a positive effect on delivery of health services of devolved units in Kenya.

2.2.3 Solow Growth Model

The Solow Growth Model (1956) forms the basis for modern theory of economic growth. The model holds that every government's intention is to grow their economy and improve the welfare of its people as much as possible. It refers to the enhancement of its potential to produce goods and services over time and its measure is the wellbeing of citizens or the poverty index. Lower performance of key financial indicators causes a slowdown in the rate of improvement of living standards of citizens. The Solow Growth Model of the early 1950s focused almost exclusively on the effect of growth on labour force and capital as factors of production (Mankiw, Romer & Weil, 1992). This model sought to examine the relationship between a nation's long-term living standards, investments, population and economic growth. It has three basic sources for GDP: land, capital and knowledge, and postulates a continuous production methods that link outputs to the various inputs of capital, labour and technological progress.

Critiques, however, point out that the model is unable to explain why differences in incomes between international regions exist, which failure has stimulated work on what has been called endogenous growth theories. Scholars of these recent growth theories argue that long-term growth does not depend on exogenous factors alone. They hold that to obtain endogenous growth, the economy must have increasing returns to scale or constant returns to factors that can be accumulated, emphasizing the fact that long term growth depends on more factors – both exogenous and

endogenous. These endogenous-growth models are presented by their proponents as viable options to the Solow model due to its apparent inability to explain inter-jurisdictional differences in incomes (Barrow, 1989).

The importance of this theory is that as citizens and governments generate more and acquire more capital stock, it enhances the quality of labour and innovation and this will have a direct and positive impact on the dependent variable of our study. This is reflected in the improvement of residents' welfare and a decrease in poverty levels. It is therefore a challenge to measure the real changes in the socio-economic wellbeing of citizens accruing from the County governments' financing because much more spending in Kenya is done by the National government as well as the private sector. Hence this study sought to examine and delineate the specific indicators associated with health facilities financing in Western Counties.

2.3 Determinants of Delivery of Health Services

This section discusses the theoretically anticipated variables that affect delivery of health services. They include source of funds, adequate funds allocation and equitability.

2.3.1 Source of Funds

County governments receive much of their funding from the national government. These funds are used for recurrent and as well as development expenditure. If a county government does not receive enough funds, this may hamper implementation of projects and initiatives which it wants to execute. According to a study by Grundy, Healy, Gorgolon and Sandig (2003) on devolution of health services in the Philippines, one of the first countries to embrace devolution, it was revealed that between 1992 and 1997, breakdown in management systems between the levels of

government affected financing of operational costs of services. In Yukon Canada one of the territory where there is devolution system of government, a commitment to improving healthcare delivery was reflected in the 14% increase in the 2011-12 budget. In Northwest Territory, health sector was allocated 25% of the jurisdiction's $1.339b budget (Powers, 2011).

Out-of-pocket spending accounts for more than half of healthcare costs on the African continent, a figure that can reach 90% in some nations. Because many of the poorest individuals cannot afford treatment, expenses are artificially maintained low by people's ability to pay, worsening the situation (The Economist Intelligence Unit, 2011). In Nigeria, primary healthcare is in charge of local government. Overall financing of Nigeria healthcare is mainly through tax revenue, out of pocket payments, donor funding, and health insurance (Olakunde, 2012).

2.3.2 Adequate Funds Allocation

Finance constraints are limiting Africa's ability to develop and expand healthcare services. According to the International Finance Corporation, Sub-Saharan Africa has 11 percent of the global population but carries 24 percent of the global illness burden. Even more concerning, the section accounts for less than 1% of world health spending. Healthcare funding from the public sector is still unevenly distributed across the continent. Although 53 African nations signed the Abuja Declaration vowing to contribute their national budgets 15% to health, most are still far from meeting that goal, and seven countries, according to some estimates, have actually slashed health spending in the prior decade (WHO, 2011).

Since 2013, KIPPRA (2018) has done an assessment of the use of public healthcare services in devolved government and found that healthcare service delivery has

improved overall. Public health budget allocations in both county as well as national governments increased between 2013/14 and 2015/2016, according to the report. The study's measures, including as maternal mortality rates, pre- as well as post-natal visits, child immunization, child nutrition status, as well as life expectancy, do not, however, fulfill the usual criteria of a middle-income nation or the SDGs metrics of healthcare service accessibility

2.3.3 Equitability

Devolution takes healthcare infrastructure decisions closer to the people who use it, allowing them to engage based on their needs. Because access to healthcare facilities is the first step toward achieving comprehensive healthcare, health centers and hospitals are designed and operationalized to meet the needs of the public. However, this may be detrimental to the supply of public goods (Strumpf, et al., 2016). Brazil's devolved system got direct development subsidies from the national government, with incentives to invest more in hospitals, laboratories, as well as high-tech equipment in order to expand service coverage and public access (World Bank, 2017).

In Kenya, county-level management is expected to decrease some healthcare barriers to accessing by equally allocating resources to primary as well as secondary healthcare institutions in historically neglected areas (COK, 2010: Article 174). Counties obtain conditional funding to offer free maternal healthcare in order to do this. They are also compensated for any user fees that are eliminated, as well as money for medical equipment leasing. Each county gets a minimum of 15% of the consolidated income as well as a 0.5 percent equalization fund for marginalized communities. Level 5 hospitals are offered by national government both conditional as well as unconditional grants (Commission on Revenue Allocation, 2014).

2.4 Empirical Studies

This section presents empirical work done on the relation between devolved healthcare financing and delivery of health services. However, most studies concentrated on related factors and not necessarily the two variables of interest. Mosadeghrad (2014) conducted a literature review pertaining the association amongst organizational processes and structural features of hospitals and care quality. In organizing the literature, the study used level of analysis frameworks and Donabedian's structure–process–outcome. The findings of this results indicated that most of the studies are done on hospital level of analysis and mostly concentrates on the relationship of organizational structure and quality of outcome. The study recommended that health services researchers ought to enlarge their research so as to improve their knowledge on quality of care and organizational processes. This study presents a methodological gap as it was a review of literature.

Sparrow et al. (2015) investigated decentralization effects of health-care funding on Indonesian maternity care. The study looked at how sub-national health-care funding strategies differed in numerous Indonesian districts and evaluated the impact of the indicated local schemes on maternal-care provision ranging 2004 and 2010. Pseudo Data panel was used. The conclusions of the research suggested that the adoption of district plans resulted in an increase in antenatal care visits. Furthermore, programs like the Antenatal Care Package positively impact on the research area's local healthcare finance systems. This study was however conducted in a developed context and therefore findings cannot represent Western counties in Kenya.

Milicevic, Vasic, and Edwards (2015) performed research in Serbia that focused on mapping health human resources governance. With Sremski exception, Serbian

districts had exceeded the 59.4 presence criteria for accomplished nurses, midwives, as well as physicians per 10,000 people. However, the research demonstrates presence of obstacles in the country's financial and human resource distribution having a negative impact on both healthcare service provision. Furthermore, the research discovered that the district healthcare workers access differed significantly from the average nationally. This study presents a conceptual gap as it did not relate devolved financing with health care delivery.

In the context of Chad, health budget decentralization and health outcomes are assessed. This was found in a research Douzounet and Yogo (2015), their main goal was to look at both the direct as well as indirect impact of decentralizing health budgets on health results in the nation. From 23 Chadian areas, statistical panel data for the years 2007 to 2014 were used. The findings of the study showed that decentralizing the health budget improves health results in general. This study was conducted in a different context.

Shahidzadeh-Mahani, Omidvari, Baradaran and Azin (2018) focused on delivery of quality healthcare services and concluded that coordination between various organizations and providers is important. It's also important to manage very complex diagnosis, care and organizational processes as well as practices. Health system complexity as well as its extremely departmentalized and hierarchical structure present a major barrier to improving health quality. The collaboration and interaction of various departments and staff is a simple task. The study presents a conceptual gap as the nexus between devolved financing and healthcare delivery was not explored.

Locally, Kimanzi (2014) sought to establish the variables that influence quality service delivery within the Mwingi Sub County public sector. The research employed

detailed survey design. The medics at Mwingi Sub County Hospital was the research's target population. Stratified sampling was utilized to pick 6 medical physicians and 12 officers of public health based at the Sub County hospital, while simple random sample was used to choose 20 nurses. Interview schedules as well as questionnaires were used to collect data. The outcomes of this analysis found that the government's funding allocation was insufficient, putting the Mwingi Sub County Hospital's provision of excellent health services at risk. The study presents a conceptual gap as the operationalization of devolved healthcare financing did not take into account the equitability aspect.

Koikai (2015) investigated the impact of devolution on Nakuru County based healthcare. Its goal was to see in what way the numerous devolution aspects influenced Nakuru County health service delivery. A quasi-experimental study approach was used to evaluate healthcare performance. Of the important variables being investigated in respect to in what manner impacted healthcare delivery was health care financing. The study found that wide-based health finance guided other health-system strengthening components. Above 60% of participants said they didn't think health financing had increased. This study presents a methodological gap as it was experimental in nature while the current study will be descriptive.

Okech (2016) looked at Kenya's public health care services devolution and how it affects universal health coverage. The research looked at in what way devolution has affected universal health care in terms of treatment quality, equity concerns, as well as the distribution of health resources including medical supplies and vital drugs. Medical supplies stock outs and pharmaceuticals were identified as one of the most significant difficulties, according to the study's findings. According to the report,

other equity concerns included deteriorated or inadequate health facilities, as well as a disproportionate allocation of health resources. The study presents a conceptual gap as the nexus between devolved financing and delivery was not explored.

Muthui (2018) sought to establish the influencers of the quality service delivery in health care facilities at Kitui County Referral Hospital. It used an exploratory research design with a sample size of 41 individuals. Open and closed ended questions helped in data collection and interviews which allowed proper triangulation of data. Inferential and descriptive statistics were applied in analyzing data. The findings of the study concluded that the capacity of healthcare personnel, financial resource availability and utilization, management commitment and monitoring as well as evaluation had a negative influence on the quality of services provided at Kitui County Referral Hospital. The study presents a conceptual gap as the nexus between devolved financing and delivery was not explored

Mwancha (2018) goal was to research different factors that affect the provision of health care services, predominantly with regard to Nyamira County health centers. In the data collection method, the research employed a descriptive survey approach. The study population was projected to be 1680 county health officials and political leaders. A recommended 323 sample size has been utilized and is spread over the different layers. The researchers concluded that the healthcare system delivered by the county's government hospitals had also been improved; health facilities were networked to allow information to be exchanged. The study presents a conceptual gap as the nexus between devolved financing and delivery was not explored

2.5 Conceptual Framework

The following conceptual model demonstrates that devolved healthcare financing is

linked to the delivery of health services of public health facilities in Western Counties. The independent variable was devolved healthcare financing as measured by source of funds, adequate funds allocation and equitability. The dependent variable that the research sought to explain was delivery of health services as measured by affordability, accessibility, availability, efficiency and effectiveness.

Devolved healthcare financing

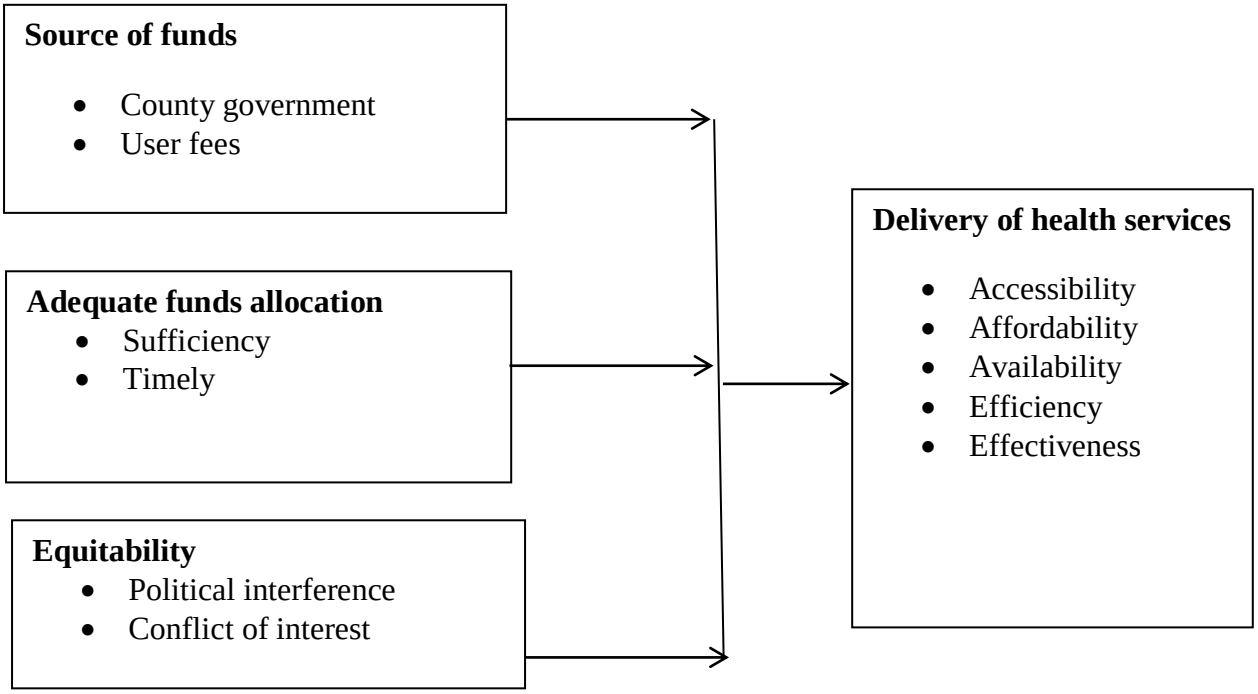

Figure 2.1: The Conceptual Model

Source: Researcher (2021)

2.6 Summary of the Literature Review

The emphasis of this chapter is on the ideas behind this research. The ideas addressed here are: traditional fiscal decentralization theory, modern fiscal decentralization theory, and the Solow growth model. The chapter also focuses on some variables that will affect delivery of health services. Previous research in either these and/or related

fields have been conducted and their results have been examined under empirical examination.

From the empirical examination, it was evident that there exists prior studies on the study variables but there exists conceptual, contextual and methodological gaps. Conceptually, the previous studies have arrived at contradictory findings and this can be explained by the difference in the operationalization method used. “Contextually, most of the previous studies were conducted in other contexts and due to differences in economic, social and other contextual differences; the findings cannot be generalized among Western Counties in Kenya. The studies were also carried out using different methodologies. In addition, it is apparent that no local research has been performed to investigate the effect of devolved healthcare financing on the delivery of health services among public health facilities in Western Counties. These were the gaps the current study leveraged on.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The chapter designates the approaches utilized in accomplishing the research objective which was to determine how devolved healthcare financing affects delivery of health services. In particular, the study highlighted the, the design, data collection, diagnostic tests as well as analysis.

3.2 Research Design

This study adopted a descriptive research design to investigate how devolved healthcare financing as well as health services delivery are related. This design was appropriate since it enables the researcher to prudently compare the findings of the research and help in answering the questions of what, where as well as how (Khan, 2008). It was also sufficient in defining the interrelationships of the phenomena. As per Cooper and Schindler (2008), this design also validly and accurately represented the variables thereby giving sufficient answers to the study questions.

3.3 Population

Population is an integrated set of event, items, services, and people being studied (Burns & Burns, 2008). The target population should well fit the population under review. In respect of this study, the population was the 72 public health facilities located in the 7 county governments in the western region (MoH, 2021). The western counties are namely; Bungoma, Busia, Kakamega, Kisumu, Nandi, Siaya and Vihiga. The unit of observation was the heads of these health facilities.

3.4 Data Collection

The research collected primary data via a structured questionnaire. The structured questionnaire is chosen because it is devoid of partiality and allows respondents sufficient time to provide a thorough response, apart from being appropriate and convenient for a large sample. The questionnaires consisted of closed ended questions. Closed questions were designed in a specified sequence with response options. The questionnaire was divided into five sections, namely demographic information, source of funds; adequate fund allocation and equitability and delivery of health services. The researcher administered the questionnaire to the heads of the selected health facilities and who were assumed to be well conversant with devolved financing and delivery of health services through Google forms. The use of Google forms was considered more appropriate during this period of Covid-19.

3.5 Data Analysis

In data analysis, version 24 of SPSS software was used. Tables presented the findings in a quantitative manner. Descriptive statistics were employed in the calculation of central tendency measures as well as dispersion such as mean as well as standard deviation for every variable. Inferential statistics relied on correlation as well as regression. Correlation determined the magnitude of the affiliation between the variables in the research and a regression determined cause and effect among variables. A multivariate regression linearly determined the relation between the dependent and independent variables.

3.5.1 Analytical Model

Using a multivariate regression model, it was possible to evaluate the relative importance of each of the explanatory factors with regard to delivery of health

services.

The study employed the following multivariate regression model;

$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$

Where;

Y = Delivery of health services

X_1= Source of funds

X_2= Adequate fund allocation

X_3= Equitability

α = Constant; y intercept that is, the value of y when x is equal to zero

β = Coefficients of the model

ε = Error term"

3.5.2 Operationalization of the Study Variables

Variable	Operationalization	Measurement	Data Collection Tool
Source of funds	County government User fees	Likert scale	Questionnaire
Adequate funds allocation	Sufficiency Timely	Likert scale	Questionnaire
Equitability	Political interference Conflict of interest	Likert scale	Questionnaire
Delivery of health services	Accessibility Affordability	Likert scale	Questionnaire

3.5.3 Tests of Significance

The researcher performed parametric tests to show the statistical importance of the regression equation and that of the individual aspects. In particular, the F-test and the T-test were utilized at the 95% confidence level. The F-test and the t-test were used to determine if the regression equation was statistically meaningful and the statistical importance of various parameters accordingly.

CHAPTER FOUR
DATA ANALYSIS RESULTS AND FINDINGS

4.1 Introduction

This chapter entails the study results and interpretation. It includes demographic data as well as general details such as response rate. The part also provides the results of the investigation in relation to the research goals.

4.2 Response Rate

In a study, the response rate is a percentage of the total number of answers received by the number of participants. “Depicted in Table 4.1 are the study outcomes.

Table 4.1: Response Rate

Response	Frequency	Percentage
Returned	66	91.7
Unreturned	6	8.3
Total	**72**	**100**

Source: Field Data (2021)

According to the results of Table 4.1, a total of 72 questionnaires were administered to the respondents through Google forms that were sent via email. 66 of them were completely filled and returned. The response rate was 91.7%. Khan (2008) affirmed that, a 50% response is sufficient, 60% is good and a 70% and above response rate is excellent.

4.3 Reliability Test Results

Reliability measures if the instrument measures that which it is required to measure every time it is used. It was determined through the use of Chronbach’s alpha which determines the internal consistency of the questionnaire. Data obtained through the questionnaire were imputed into SPPS and Chronbach’s alpha for the items in the questionnaire generated. Those items that had a Chronbach’s alpha of less than 0.7

which is the threshold would be eliminated from the questionnaire while collecting data for the main study.

Table 4.2: Reliability Test Results

Variables	Cronbach's Alpha	Critical Value	Conclusion
Source of funds	0.844	0.7	Reliable
Adequate fund allocation	0.823	0.7	Reliable
Equitability	0.876	0.7	Reliable
Delivery of health services	0.798	0.7	Reliable

Source: Field Data (2021)

All variables were higher than 0.7 Chronbach alphas, as Table 4.2 shows. This indicates that the questionnaire utilized in this study was very coherent internally. Therefore, the questionnaire was reliable in assessing the effect of devolved healthcare financing on delivery of health services.

4.4 Demographic Analysis

This section provides descriptive data about the respondents' demographic characteristics.

4.4.1 Highest Education Level

The target respondents were asked to indicate their highest educational level. Table 4.3 gives an illustration of the results.

Table 4.3: Distribution of Respondents by Highest Level of Education

Education	Frequency	Percentage
Tertiary college level	6	9.1
Undergraduate level	37	56.1
Post graduate level	23	34.8
Total	**66**	**100**

The majority of respondents (56.1 percent) had a bachelor's degree, while 34.8 percent had a postgraduate qualification. Only 9.1% had tertiary college level as the highest education level. These results imply that public health facilities seek to recruit

employees that are well educated. High education levels are important in an organization as it helps in understanding and solving issues facing an organization. This also implies that the respondents were in a position to address the questions raised in the questionnaire.

4.4.2 Years in the Current Position

Respondents were asked to indicate how long they had worked in their current position. The results are as shown in Table 4.4.

Table 4.4: Years of Service in the Current Position

Number of years	Frequency	Percentage
Less than 3 years	3	4.5
3-5 years	20	30.3
6-10 years	31	47.0
Over 10 years	12	18.2
Total	**66**	**100**

The results in Table 4.4 reveal that the respondents had spent varied number of years in their current position. The duration in a position can be used as an indicator of their level of knowledge of internal organizational processes, capabilities, and success. The results in Table 4.3 indicated that 47% had worked with the current employer for 6-10 years, 30.3% for 3-5 years, 4.5% for less than 3 years and 18.2% for over 10 years.

4.5 Analysis of Study Variables

This section presents descriptive results in means, as well as standard deviations for every variable under investigation.

4.5.1 Source of Funds

Table 4.5 shows the study findings. The findings revealed that most of the respondents disagreed that their health facility gets significant finances from user fees charged on patients (Mean=2.083, std. dev=0.954). The findings further revealed that

the respondents disagreed with the statement that their health facility receives significant funding from donors (Mean=1.952, std. dev=0.932). The findings also revealed that the respondents disagreed with the statement that their health facility receives minimal funds from private corporate bodies (Mean=2.262, std. dev= 1.264). Additionally, findings discovered that majority of the respondents agreed that their health facility has income generating activities that bring in significant revenue (Mean= 4.012, std. dev=1.204). The descriptive results also revealed that the respondents disagreed with the statement that their health facility receives significant funding from county government (Mean=1.702, std. dev=1.055). On average, the results revealed that public health facilities do not have adequate source of funds as shown by an average mean of 2.402.

Table 4.5: Descriptive Statistics on Source of Funds

Statements	N	Mean	Std. Dev
This health facility gets significant finances from user fees charged on patients	66	2.083	0.954
This health facility receives significant funding from donors.	66	1.952	0.932
This health facility receives minimal funds from private corporate bodies.	66	2.262	1.264
This health facility has income generating activities that bring in significant revenue.	66	4.012	1.204
This health facility receives significant funding from county government.	66	1.702	1.055
Overall mean Score	**66**	**2.402**	

Source: Field Data (2021)

4.5.2 Adequate Fund Allocation

Table 4.6 shows the descriptive statistics for adequate fund allocation. The findings showed that most respondents disagreed with the statement that funds disbursed to their health facility are sufficient to cater for the hospital budget (Mean=1.881, std. dev=1.040). The findings also discovered that the respondents disagreed with the statement that their facility is adequately staffed in all departments (Mean=1.893, std.

dev=0.802). The findings also show that most of the respondents disagreed that healthcare staffs are adequately remunerated as per their job group placements (Mean=2.345, std. dev=1.029). Additionally, findings revealed that most of the respondents disagreed that funds disbursement to their health facility is executed timely (Mean=1.595, std. dev=0.847). Further, findings shown that many respondents disagreed that the healthcare staff training and development is done regularly (Mean=2.155, std. dev=1.052). The overall mean was 1.974 suggesting that for most of the statements regarding adequate fund allocation, respondents disagreed.

Table 4.6: Descriptive Statistics for Adequate Fund Allocation

Statements	N	Mean	Std. Dev
The funds disbursed to this health facility are sufficient to cater for the hospital budget.	66	1.881	1.040
This facility is adequately staffed in all departments.	66	1.893	0.802
The healthcare staffs are adequately remunerated as per their job group placements.	66	2.345	1.029
Funds disbursement to this health facility is executed timely.	66	1.595	0.847
The healthcare staff training and development is done regularly	66	2.155	1.052
Overall Mean Score	**66**	**1.974**	

Source: Field Data (2021)

4.5.3 Equitability

Table 4.7 shows the findings. The findings showed that respondents disagreed with the statement that there is equitability in disbursement of funds to county health facilities (Mean=1.905, std. dev=0.934). Similarly, findings showed that respondents disagreed on the statement that cases of medicine and supplies stock-out in this facility are rare (Mean=3.262, std. dev=1.114). The findings also showed that respondents disagreed with the statement that there are no cases of political interference in decision making process in their facility (Mean=3.298, std. dev=1.008). The findings further showed that the respondents disagreed on the

statement that their facility rarely experiences cases of expired drugs and supplies (Mean=2.167, std. dev=0.974). Finally, findings showed that the respondents agreed that cases of conflict of interest in funds disbursement are rare (Mean=3.595, std. dev=0.914). The overall mean was 2.845 implying that an average, respondents disagreed with statements regarding equitability.

Table 4.7: Descriptive Statistics for Equitability

Statements	N	Mean	Std. Dev
There is equitability in disbursement of funds to county health facilities.	66	1.905	0.934
Cases of medicine and supplies stock-out in this facility are rare.	66	3.262	1.114
There are no cases of political interference in decision making process in this facility.	66	3.298	1.008
This facility rarely experiences cases of expired drugs and supplies.	66	2.167	0.974
Cases of conflict of interest in funds disbursement are rare.	66	3.595	0.914
Overall Mean Score	**66**	**2.845**	

Source: Field Data (2021)

4.5.4 Delivery of Health Services

The mean as well as standard deviation for precise attributes of delivery of health services are as indicated in Table 4.8. The mean score for health services provided being available was 3.583 and 1.126 standard deviation implying that those polled concurred that health services provided in this facility are often available. Meanwhile, a (Mean 4.238, SD= 0.701) accessible roads implied that most of surveyed members agreed that there are accessible roads to this health facility. A (mean 3.833, SD=0.801) for signage at this health facility is an indicator that the respondents agreed there is signage at this health facility. A (mean, 4.393, SD=0.618) for acceptability of health services provided indicated participating members agreed with the statement that health services provided in the facility are acceptable. A (mean, 4.369, SD= 0.870) for affordability of health services implies that majority of

surveyed members agreed with the fact that the health services provided in this facility are affordable.

Table 4.8: Descriptive Statistics for Delivery of Health Services

Statement	N	Mean	Std. Dev.
Health services provided in this facility are always available.	66	3.583	1.126
There are accessible roads to this health facility	66	4.238	0.701
There are signage at this health facility	66	3.833	0.801
Health services provided in this facility are acceptable.	66	4.393	0.618
Health services provided in this facility are affordable.	66	4.369	0.870
There are rarely complaints lodged by patients in this facility.	66	3.583	1.014
The healthcare workers are available to offer requisite health services.	66	4.226	0.605
The delivery of health care in this hospital is frequently supervised by the county government	66	4.060	0.679
In this institution, the Ministry of Health is associated with the quality of all health services	66	3.571	1.003
Payers (such as NHIF as well as other insurance companies) have little impact on health-care delivery	66	2.952	1.234
Since healthcare was decentralized, the amount of time it takes to serve a patient has decreased dramatically	66	3.226	1.155
Since healthcare was devolved, the number of patients seeking assistance at this hospital has risen dramatically	66	3.321	1.197
Overall mean		**3.780**	

Source: Field Data (2021)

Moreover, a (mean, 3.583, SD=1.014) for complaints lodged by patients implies that the surveyed members averagely agreed with statement that there are rare complaints lodged by patients in the facility. A (mean, 4.226, SD= 0.605) for availability of health workers to offer requisite health services implying that survey members agreed that the health workers are available to offer requisite health services. The (mean, 4.060, SD=0.679) for county government supervision of service delivery implying that surveyed members agreed the county government often supervise delivery of health care in this facility.

A (mean, 3.571, SD=1.003) for ministry of health involvement implying majority of participating members agreed the ministry of health is engaged in entire delivery of service in this facility. Moreover, a (mean, 2.952, SD=1.234) for payers effect and implying that participating members agreed the payers (such as NHIF as well as other insurance firms) hardly affect health service delivery. (Mean, 3.226, SD= 1.115) for service time required implying that surveyed members averagely acknowledged that since health care was devolved, the amount of time it takes to serve a patient has decreased dramatically. Finally, a (mean, 3.321, SD=1.197) for number of patients seeking services implies that the number of persons seeking assistance from this health center has increased dramatically since devolvement of health care.

4.6 Inferential Statistics

This section contains the inferential statistics for all of the variables. Pearson correlations and multiple regressions were used as inferential statistics. All of the variables were correlated using Pearson correlations, and the connection between devolved healthcare financing among western counties and delivery of health services was examined using regression.

4.6.1 Correlation Analysis

The Pearson correlation illustrates the connection between each of the indicated independent factors and the result/related variable. The coefficient r was determined and whether the connection was positive or negative. Table 4.9 displays the findings.

Table 4.9: Correlation Results

	Delivery of health services	
	Pearson 's correlation	P
Source of funds	0.240	0.042
Adequate fund allocation	0.534	0.000
Equitability	0.892	0.000

Source: Field Data (2021)

The correlations findings shown that the relationship between source of funds and delivery of health services was positive and significant ($r=0.240$, $p<0.042$). The implication of this is that source of funds are positively related with delivery of health services. Furthermore, the correlations findings shown that the relationship between adequate fund allocation and delivery of health services was positive and significant ($r=0.534$, $p<0.000$). The implication of this is that adequate fund allocation is positively related with delivery of health services. Finally, the correlations findings shown that the relationship between equitability and delivery of health services was positive and significant ($r=0.892$, $p<0.000$). The implication of this is that equitability is positively related with delivery of health services.

4.6.2 Regression Analysis

Multiple regression analysis was done in determining the effect of devolved healthcare financing (source of funds, adequate fund allocation and equitability) on delivery of health services public health facilities in Western Counties. The model fitness findings were as exhibited in Table 4.10. The findings reveal that the R square was 0.944 which suggested that devolved healthcare financing (source of funds, adequate fund allocation and equitability) explain 94.4% of the variation in delivery of health services.

Table 4.10: Model Fitness

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.972[a]	.944	.941	.152069

a. Predictors: (Constant), Equitability, Source of funds, Adequate fund allocation

Source: Field Data (2021)

The ANOVA results in Table 4.11 indicated that the overall model used to assess the relationship between devolved healthcare financing (source of funds, adequate fund allocation and equitability) and delivery of health services was significant. This was supported by a significance level of 0.000 which was less than 0.05 at 95% confidence level.

Table 4.11: ANOVA Results

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	24.242	3	8.081	349.443	.000[b]
	Residual	1.434	62	.023		
	Total	25.676	65			

a. Dependent Variable: Delivery of health services

b. Predictors: (Constant), Equitability, Source of funds, Adequate fund allocation

Source: Field Data (2021)

The regression coefficient results indicated that source of funds positively and significantly relate with delivery of health services (β=0.188, p=0.000). This implied that change a unit change in source of funds would result in 0.188 change in delivery of health services as shown in the model. The findings also revealed that adequate fund allocation was positively and substantially related with delivery of health services (β=0.566, p=0.000). This suggested that change in delivery of health services would result in 0.566 changes in delivery of health services as shown in the model. Furthermore, findings revealed that equitability and delivery of health services were positively and significantly related (β=1.117, p=0.000). This suggested that a change

in equitability would result in 1.117 changes in delivery of health services as shown in the model.

$Y= 1.797+0.188X_1+0.566X_2+1.117X_3$

Where Y is delivery of health services,

X_1 is source of funds,

X_2 is adequate fund allocation and

X_3 is equitability

Table 4.21: Regression Coefficients for the Overall Model

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.797	.134		13.388	.000
	Source of funds	.188	.029	.225	6.493	.000
	Adequate fund allocation	.566	.055	.538	10.353	.000
	Equitability	1.117	.041	1.440	27.060	.000

a. Dependent Variable: Delivery of health services

Source: Field Data (2021)

4.7 Discussion of Findings

The correlation findings revealed that the relationship between source of funds and delivery of health services was positive. The regression coefficient results also indicated that source of funds positively and significantly related to delivery of health services. The results support a study by Douzounet and Yogo (2015) whose primary objective was to analyze both the direct and indirect effects of health budget decentralization on health outcomes in the country. Statistical panel data of 23 regions in Chad for a period spanning from 2007 to 2014 were utilized. The study results indicated that in general, decentralization of the health budget improved health outcomes. In particular, it was established that increasing the regional health budget by 5% increased the deliveries by assisted births by 0.25% margin. In addition, the

study found that increasing the regional health budget by 10% was bound to reduce the number of malnourished kids by 1.35%."

The study is also in line with a study conducted in Kenya by Koikai (2015) who checked the effect of devolution in Nakuru County on healthcare in Nakuru County. Its aim was to examine how the various components of devolution affected delivery of health services in Nakuru County. A quasi-experimental research design was adopted in rating the performance of healthcare prior to and after devolution. Health care financing was one of the key aspects that were examined in relation to how they affect healthcare delivery. According to the study, that broad-based health financing steered the other aspects of health system strengthening. More than 60% of the respondents disputed that health financing for health had improved. Moreover, it was found that health financing had worsened under a devolved structure of governance.

The regression coefficient results also indicated that adequate fund allocation positively and significantly related to delivery of health services. This was in line with a research by Akacho (2014) who found out that about 51% of the responses shown that inadequate financing was a factor that affected the effective delivery of health services at county levels. Otieno and Macharia (2014) assert that there is a need to improve the budget allocation for the health sector by the government. Financial plans should be done to enhance support from donors to facilitate development. Okech (2016) argues that health budgets are majorly funded through tax generated income and donor funding. It is, therefore, critical to enhancing equitable distribution in geographical. Some payments especially those from pockets can be kept at minimal levels when there is increased tax funding and used appropriately. This is key to the reduction of the barriers to financial access.

The findings further showed that equitability had a positive relationship with delivery of health services. The regression coefficient results indicated that equitability positively and significantly relate with delivery of health services. This was in line with Muithya (2016) who sought to establish factors affecting implementation of free maternal health care in government health care facilities in Kisima Location, Samburu County, Kenya. A descriptive survey design was applied in this cross sectional study. The target population was Lorroki Division residents and accessible population was Kisima Location residents from which a sample of 202 residents were selected using stratified sampling; 80 adult women, 75 men and 47 youth . Purposive sampling was applied in selecting 10 health care providers. Data was collected through questionnaires, document reviews and interviews and descriptive statistics was applied in analyzing data with the help of SPSS version 20. Content analysis was applied for the qualitative data. The study established that 76.2% of the respondents were unemployed and 50% were uneducated. The quality of health care services was rated to be good but attendance on antenatal and post natal clinics was too low.

CHAPTER FIVE
SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

The research findings are provided for the study in this chapter. The section also covers conclusions of the study and recommendations. This part also includes the consequences and recommendations of the future study.

5.2 Summary of Results

The study's purpose was to establish the effect of devolved healthcare financing on delivery of health services of the public health facilities in Western Counties. "The specific objectives were; determining how source of funds impact delivery of health services among public health facilities in Western Counties; to determine the influence of adequate fund allocation on delivery of health services among public health facilities in Western Counties; and to ascertain the influence of equitability on delivery of health services among public health facilities in Western Counties, Kenya.

Descriptive research design was adopted and a questionnaire used in data collection. The population of the study was the 72 public health facilities in Western Counties. Data was collected from the heads of the public health facilities. Descriptive statistics, regression analysis as well as correlation analysis were used in analyzing the data. SPSS was utilized in data analysis. The descriptive statistics were applied in describing the mean and the standard deviations for the study findings. The inferential statistics on the other hand helped determine the relationship between source of funds, adequate fund allocation and equitability with delivery of health services.

In regards to source of funds and delivery of health services at the public health facilities in Western Counties, the findings revealed that the health facilities do not get

significant finances from user fees charged on patients and that they do not receive significant funding from donors. Further, the study revealed that the health facilities do not receive funds from private corporate bodies and that the health facilities have income generating activities that bring in significant revenue. Finally, the results revealed that the public health facilities do not receive significant funding from county government. The regression results revealed that source of funds had a significant positive influence on delivery of health services.

The findings of the study in regards to adequate fund allocation and delivery of health services established that the funds disbursed to the public health facilities in Western Counties are not sufficient to cater for the hospital budget and that the health facilities are not adequately staffed in all departments. Further, the study revealed that the healthcare staffs are not adequately remunerated as per their job group placements. In addition, funds disbursement to public health facilities is not executed timely. Finally, the results revealed that the healthcare staff training and development is not done regularly. The regression results revealed that adequate fund allocation has a positive and significant influence on delivery of health services.

Findings relating to equitability and delivery of health services established that there is no equitability in disbursement of funds to county health facilities and that cases of medicine and supplies stock-out in public health facilities are common. Further, the study revealed that there are cases of political interference in decision making process among public health facilities in Western Counties. In addition, the health facilities often experiences cases of expired drugs and supplies. Finally, the study revealed that cases of conflict of interest in funds disbursement are rare. The results of regression analysis revealed that equitability positively influences delivery of health services among public health facilities in Western Counties.

5.3 Conclusions

Based on the study findings and the discussion provided, it is concluded that source of funds positively and significantly affects delivery of health services. The study further concludes that the health facilities do not get significant finances from user fees charged on patients and that they do not receive significant funding from donors. Further, the study revealed that the health facilities do not receive funds from private corporate bodies and that the health facilities have income generating activities that bring in significant revenue. Finally, the results revealed that the public health facilities do not receive significant funding from county government.

Based on the study findings and the discussion on adequate fund allocation and delivery of health services, the study concluded that adequate fund allocation is positively and significantly related with delivery of health services. The study also concludes that the funds disbursed to the public health facilities in Western Counties are not sufficient to cater for the hospital budget and that the health facilities are not adequately staffed in all departments. Further, the study revealed that the healthcare staffs are not adequately remunerated as per their job group placements. In addition, funds disbursement to public health facilities are not executed timely. Finally, the results revealed that the healthcare staff training and development is not done regularly.

On equitability and delivery of health services, the study concluded that equitability positively and significantly affects delivery of health services. The study further concluded that there is no equitability in disbursement of funds to county health facilities and that cases of medicine and supplies stock-out in public health facilities are common. Further, the study revealed that there are cases of political interference in decision making process among public health facilities in Western Counties. In

addition, the health facilities often experiences cases of expired drugs and supplies. Finally, the study revealed that cases of conflict of interest in funds disbursement are rare."

5.4 Recommendations for Policy and Practice

Delivery of health services is enhanced when there is diversification in terms of funding sources. Based on the conclusions made and the study findings, the study recommends that the management of public health facilities in Western Counties should enhance their income generating activities so that it contributes significantly to their health service delivery. The public health facilities should also look for donors to enable them raise adequate funds towards delivering quality health services. The health facilities should also consider partnering with private firms in a bid to raise more funds. The policy makers should come up with policies that require county governments to allocate more towards health services.

Adequate fund allocation was found to enhance delivery of health services. Specifically, having adequate staffing in all departments and compensating them well leads to enhanced delivery of health care. The policy makers among public health facilities should come up with measures to ensure that the health care workers are well compensated and that the departments are well staffed. In addition, the allocated funds should be disbursed on a timely basis as this will enable delivery of quality healthcare among the health facilities.

This study found that equitability translates to improved delivery of health services. Following the study findings and conclusion, the study recommends that policy makers among public health facilities should ensure equitability in allocation of funds to the health facilities. In addition, mechanisms should be put in place to minimize or

eliminate cases of stock outs in the health facilities. In addition, the policy makers should come with policies that will protect public health facilities from political interference.

The findings of this study will aid the government and other policy makers by enabling them to formulate devolved financing policies and strategies for guiding effective decentralization of government functions especially public healthcare to ensure the primary goal of advancing services closer to the citizenry is met.

5.5 Limitations of the Study

Primary data was utilized in this study. To minimize the number of likely outliers, a structured questionnaire was used in the research. This may, however, pose the issue of biased data collecting because the respondents in question are restricted in how and how much they should provide. In this respect, the researcher made sure that the data collecting instrument enables complete data gathering which meets study aims as easily as feasible.

In addition, several of the respondents were skeptical about participating in the research. The researcher rectified this issue by obtaining required permission, authorization and permissions from the authorities concerned, including but not limited to the public health facilities and the University. In addition, ethical concerns were taken into account. Finally, the researcher stated willingness to share the study with interested participants.

5.6 Suggestions for Further Research

This study was conducted on the effect of devolved healthcare financing on delivery of health services of the public health facilities in Western Counties. Future studies can study the effect of devolved healthcare financing on delivery of health services

among other counties in Kenya. Future studies should also consider conducting comparative studies to confirm how different or how similar are the devolved healthcare financing from one county to another.

This study investigated how devolved healthcare financing influences delivery of health services of public health facilities in Western Counties. The study particularly focused on source of funds, adequate fund allocation and equitability. The study recommends that a study focusing on other aspects of devolved healthcare financing should be conducted to show whether they differ on how they influence delivery of health services.

Primary data was solely utilized in the study, alternative research can be employed using secondary sources of data or even qualitative primary conducted collected using interview guides as this will offer more insights. These can then approve or disapprove the current study findings.

REFERENCES

Ansari, U., Cockroft, A., Omer, K., Ansari, N., Khan, A., Chaudhry, U.U., & Andersson, N. (2011). Devolution and public perceptions and experience of health services in Pakistan: Linked cross-sectional surveys in 2002 and 2004. *BMC Health Services Research, 11*(2), 54, 1-10.

Arrowsmith, J., & Sisson, K. (2012). Decentralization in the public sector: The case of the UK National Health Service. *Relations Industrielles, 57*(2), 12-23

Bahl, R.W. & Linn, J.F. (1992). *Urban public finance in developing countries*. Oxford. Oxford University Press.

Burns, R. B. & Burns, R. A. (2008). *Business Research Methods and Statistics using SPSS*. London. Sage Publications Limited.

Commission for revenue allocation report (2014). Revenue Allocation and the Quest for Economic Development in Kenya.

Cooper, C., & Schindler, P. (2008). *Business research methods* (13th ed.). Boston: McGrawHill.

Donabedian A (2016). *The definition of quality and approaches to its assessment*. Ann Arbor: Michigan Health Administration Press.

Douzounet, Y. & Yogo,R. (2015). Does fiscal decentralization improve healthcare outcomes? empirical evidence from china. *Public Finance and Management, 11*(3), 234.

Dutta, A., T. Maina, M. Ginivan, & S. Koseki. (2018). *Kenya Health Financing System Assessment*: Time to Pick the Best Path. Washington, DC: Palladium, Health Policy Plus

Gimoi, T. (2017). *The impact of devolution on health care systems: A case study of Nairobi County health facilities*, Unpublished MBA Project, USIU

Grundy, J., Healy, V., Gorgolon, L. P., & Sandig, E. (2003). Overview of devolution of health services in the Philippines.

Faguet, J.P. (2004) *Does decentralization increase government responsiveness to local needs?* Evidence from Bolivia. London school of economics. London. Elsevier Press.

Hallwood, P., & MacDonald, R. (2010). Picking the right budget constraint for Scotland. *Working Papers 2010*, Business School - Economics, University of Glasgow.

Health policy project (2019). Health Policy Engagement Strategy for the Health Information Technology Policy Project of the Transdisciplinary Collaborative Center for Health Disparities Research. *Ethnicity & disease*, *29*(Suppl 2), 377.

Hurley, S., Doumbia, K., Roter, C., & Harbey A. (2018). Room for improvement: Patients report on the quality of their health care, *The Commonwealth Fund*. 45(1), 300-340.

Irurita, V.F. (2019). Factors affecting the quality of nursing care: The patient's perspective. *International Journal of Nursing Practice*, 5(2): 86–94.

Jervis, P., & Plowden, W. (2013). *The Impact of Political Devolution on the UK's Health Services: Final Report of a Project to Monitor the Impact of*

Devolution on the United Kingdom's Health Services 1999-2002. London: The Nuffield Trust.

Jiminez, D., & Smith, P.C. (2015). *Decentralization of Health Care and Its Impact on Health Outcomes*. Accessed on April 8, 2018 from https://www.york.ac.uk/media/economics/documents/discussionpapers/2005/0510a.pdf.

Jommi, C., & Fattore, G. (2013). Regionalization and drugs cost-sharing in the Italian NHS. *Euro Observer, 5*, 1-4.

Jongudomsuk, P., & Srisasalux, J. (2012). A decade of health-care decentralization in Thailand: what lessons can be drawn? *WHO South-East Asia Journal of Public Health, 1*(3), 47-50

Khan, J. A. (2008). *Research Methodology*. New Delhi. APH Publishing Corporation

Khaunya, M., Wawire, B., & Chepng'eno, V. (2015). Devolved Governance in Kenya; is it a False Start in Democratic Decentralization for Development. *International Journal of Economics, Finance and Management,4*(1), 23-43.

Kiambati, H., Kiio, C., & Towett, J. (2013). *Understanding the Labour Market of Human Resources for Health in Kenya*. Geneva: World Health Organization.

Kimanzi, C. (2014). *Factors influencing provision of quality services in the public sector in Mwingi Sub County*, Unpublished MA research project, University of Nairobi

KIPPRA (2018). Assessment regarding the uptake of public healthcare services under devolved government in Kenya

KPMG Africa (2014), *Devolution of Healthcare Services in Kenya*, https://www.kpmg. com/Africa/en/IssuesAndInsights/Articles-Publications/Documents/Devolution%20of%20HC%20Services%20in%20Kenya.pdf, accessed 02 November 2020.

Koikai, J.S. (2015). *An Evaluation of the Effects of Devolution on Healthcare Delivery in Nakuru County*. Unpublished MBA projects, Kabarak University, Nakuru, Kenya.

Makheti AJ (2017) Technical Efficiency in Public Health Facilities in Meru County: Dea Analysis. *Health Economic Outcome*, 3(1), 143-150.

Manaf, N.H. (2015). Quality management in Malaysian public health care. *International Journal of Health Care Quality Assurance*, 18(3): 204–216.

Mankiw, N. G., Romer, D., & Weil, D. N. (1992). A contribution to the empirics of economic growth. *The quarterly journal of economics*, *107*(2), 407-437.

Milicevic, S.M., Vasic, M., & Edwards, M. (2015). Mapping the governance of human resources for health in Serbia. *Health Policy, 119*(12). Accessed on April 11, 2018 from https://www.ncbi.nlm.nih.gov/pubmed/26358245

Mohammed, J., North, N., & Ashton, T. (2016). Decentralization of health services in Fiji: a decision space analysis. *International journal of health policy and management*, *5*(3), 173.

Mosadeghrad AM (2013). Healthcare service quality: Towards a broad definition. *International Journal of Health Care Quality Assurance*, 26(3): 203– 219.

Mosadeghrad, A.M. (2014). Factors influencing healthcare service quality. *International Journal of Health Policy Management*, 3(1): 77–89.

Mugambi, J. (2014). *Service Quality Dimension In Health Care Service Delivery: The Case For Healthstrat* (Doctoral dissertation, University of Nairobi).

Musgrave, R.A. (1959) *The Theory of Public Finance*. McGraw Hill, New York.

Muthui, R. (2018). *Factors influencing the provison of quality services in health care facilities: A case of Kitui county referral hospital,* Unpublished MA project, University of Nairobi

Mwancha, J. (2018). *Determinants of healthcare service delivery in kenya: A case study of health centers in Nyamira county*, Unpublished MA research project, University of Nairobi

Nyongesa, H., Munguti, C., Odok, C., & Mokua, W. (2015). Perception of medical students towards healthcare devolution: An online cross-sectional study. *Pan African Medical Journal, 20*, 355-357.

Oates, W. E. (1972). *Fiscal Federalism*. New York: Harcourt Brace Jovanovich

Okech, T.C. (2016). Devolution of public health care services in Kenya and its implication on universal health coverage. *IOSR Journal of Pharmacy, 7*(5/1), 9-23.

Oketch, T.C. (2017). Devolution of public health care services in Kenya and its implication on universal health coverage. *IOSR Journal of Pharmacy, 7*(5/1), 9-23.

Olakunde, B. O. (2012). Public health care financing in Nigeria: Which way forward? *Annals of Nigerian Medicine, 6*(1), 4-18

Prud'homme, R. (1995) The dangers of decentralization. *World Bank Research, Observer 10*(9); 201-220

Republic of Kenya (2014). *Health Sector: Human Resources Strategy: 2014-2018.* Accessed on April 3, 2018 from http://www.health.go.ke/wp-content/uploads/2016/04/Kenya-HRH-Strategy-2014-2018.pdf

Shahidzadeh-Mahani, A., Omidvari, S., Baradaran, H., & Azin, S. (2018). Factors affecting quality of care in family planning clinics: A study from Iran. *International Journal for Quality in Health Care*, 20 (4): 284–290

Smith, K (1985) Decentralization and democracy in developing countries. *Development in Practice, 14*(6); 768-779

Smoke, P. (2001). Decentralization in Africa: dimensions myths and challenges. *Administration Development, 2*(3); 7-16

Solow, R.M. (1956) A contribution to the theory of Economic Growth. *Quarterly Journal of Economics, 70*(1); 65-94

Sparrow, R., Budiyati, S., Yumna, A., Warda, N., Suryahadi, A., & Bedi, A. S. (2015). Effects of decentralized health care financing on maternal care in Indonesia. *ISS Working Paper Series/General Series*, *607*(607), 1-42.

Strumpf, D., To, C., Pasko, E., Kim, K. S., Park, C. J., ... & Tsao, M. S. (2016). Integrin α11β1 regulates cancer stromal stiffness and promotes tumorigenicity and metastasis in non-small cell lung cancer. *Oncogene*, *35*(15), 1899-1908.

Waithaka, W. (2013). *Health devolution in Kenya*. Nairobi: Kenya Medical Dentistry and Practitioners Board

Williamson, T., & Mulaki, A. (2015). *Devolution of Kenya's Health System: The Role of HPP*. Accessed on November 1st 2020 from https://www.healthpolicyproject.com/pubs/719_KenyaDevolutionBrief.pdf

World Health Organization (2011). *Healthcare workforce 2030: Towards a Global Strategy on Human Resources for* Health. Geneva: World Health Organization.

World Health Organization (2014). *Regional Office for Africa. The Health of the People: The African Regional Health Report*. Brazzaville: World Health Organization.

World Health Organization (2016). *Healthcare workforce 2030: Towards a Global Strategy on Human Resources for* Health. Geneva: World Health Organization.

World Bank (2017). Laying the foundation for a robust healthcare system in Kenya. *Kenya Public Expenditure Review*, *3*, 2

APPENDICES

Appendix I: Introduction Letter

Dear Sir/Madam,

My name is Julius Savala Indiazi. I am a student at the University of Nairobi of admission number **D61/28710/2010** and currently undertaking an academic research project on*; "**EFFECT OF DEVOLVED HEALTHCARE FINANCING ON DELIVERY OF HEALTH SERVICES AMONG PUBLIC HEALTH FACILITIES IN WESTERN COUNTIES***".** This research is a requirement for the award of Master of Business Administration of University of Nairobi, School of Business.

A questionnaire has been developed to assist gathering relevant information for this study. I will ask you a few questions to assist in completion of this study. Any details you give will be kept completely private and used only for academic reasons. It is entirely up to you whether or not you choose to take part in the research.

Many thanks for your acceptance with regards to participation in this study.

Yours Faithfully,

Julius Savala

Appendix II: Questionnaire

Instructions:

This questionnaire will be used to collect data for a research study on "*the effect of devolved healthcare financing on delivery of health services among public health facilities in Western Counties*". To contribute to knowledge on this subject, we have invited you to be a participant in our research by completing this closed ended questionnaire. Mark a response with a tick (√) on your choice. While responding to the questionnaire you are advised not write your name, facility or institution, or information that somebody can use to identify you on the questionnaire. The data that we collect from you will be handled with confidentiality and shared only for informational purses and for the attainment of an academic degree.

Part I: Background Information

1. Kindly indicate highest level of education that you have attained

   Tertiary college level [ ]

   Undergraduate level [ ]

   Postgraduate level [ ]

2. How long have you been in your current position?

   Less than 3 years [ ]

   3 to 5 years [ ]

   6 to 10 years [ ]

   Above 10 years [ ]

Part II: Source of Funds

Using the Likert scale that we have provided you below, please specify if you concur or disagree with the illustrated statements and to what level.

5=Strongly Agree (SA)

4=Agree (A)

3= Not Sure (NS)

2=Disagree (D)

1=Strongly Disagree (SD)

	SA	**A**	**NS**	**D**	**SD**
1. This health facility gets significant finances from user fees charged on patients					
2. This health facility receives significant funding from donors.					
3. This health facility receives minimal funds from private corporate bodies.					
4. This health facility has income generating activities that bring in significant revenue.					
5. This health facility receives significant funding from county government.					

Part III: Adequate Fund Allocation

Using the Likert scale that we have provided you below, please indicate whether you agree or disagree with the illustrated statements and to what level.

5=Strongly Agree (SA)

4=Agree (A)

3= Not Sure (NS)

2=Disagree (D)

1=Strongly Disagree (SD)

	SA	A	NS	D	SD
6. The funds disbursed to this health facility are sufficient to cater for the hospital budget.					
7. This facility is adequately staffed in all departments.					
8. The healthcare staffs are adequately remunerated as per their job group placements.					
9. Funds disbursement to this health facility is executed timely.					
10. The healthcare staff training and development is done regularly					

Part IV: Equitability

Using the Likert scale that we have provided you below, please specify if you concur or disagree with the illustrated statements and to what level.

5) = Strongly Agree (SA)

4) = Agree (A)

3) = Not Sure (NS)

2) = Disagree (D)

1) = Strongly Disagree (SD)

	SA	A	NS	D	SD
11. Funds disbursed to county health facilities are					

distributed fairly.					
12. Cases of medicine and supplies stock-out in this facility are rare.					
13. There are no cases of political interference in decision making process in this facility.					
14. This facility rarely experiences cases of expired drugs and supplies.					
15. Cases of conflict of interest in funds disbursement are rare.					

Part V: Delivery of Health Services

Using the Likert scale that we have provided you below, please indicate whether you agree or disagree with the illustrated statements and to what level.

5) = Strongly Agree (SA)

4) = Agree (A)

3) = Not Sure (NS)

2) = Disagree (D)

1) = Strongly Disagree (SD)

	SA	**A**	**NS**	**D**	**SD**
16. Health services provided in this facility are always available.					
17. There are accessible roads to this health facility					
18. There are signage at this health facility					
19. Health services provided in this facility are					

acceptable.					
20. Health services provided in this facility are affordable.					
21. There are rarely complaints lodged by patients in this facility.					
22. The healthcare workers are available to offer requisite health services.					
23. The County Government often supervises delivery of health services in this facility.					
24. In this institution, the Ministry of Health is engaged in all health services delivery.					
25. The Payers (like NHIF as well as other insurance firms) hardly affect health service delivery.					
26. Since healthcare was decentralized, the amount of time it takes to service a patient has decreased dramatically.					
27. Since healthcare was devolved, the number of patients seeking assistance at this health center has risen dramatically					

Thank you for your time and cooperation.