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**ASSESSING THE EFFECT OF DEVOLUTION ON THE NUMBER OF
HEALTHCARE WORKERS IN HARDSHIP AREAS: A CASE STUDY OF
DOCTORS, CLINICAL OFFICERS, NURSES AND SPECIALISTS IN WAJIR
COUNTY**

ADANKHALIF ADAN KALA

MBA-HCM/093848/16

A dissertation submitted to Strathmore Business School in partial fulfillment of the requirements for the award of the degree of Master of Business Administration in Healthcare Management

May 2018

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Adankhalif Adan Kala
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ABSTRACT

Kenya has had shortage of healthcare workers since independence, but this picture is worse in the hardship areas as majority of these workers tend to concentrate in urban areas. The Constitution of Kenya 2010 devolved management of health workers to the 47 counties. The aim of this study was to find out the effect of devolution on number of healthcare workers in a typical hardship area, with major focus on doctors, nurses, clinical officers and specialists in Wajir County. The specific objectives were to find out the effect of devolution on the number of healthcare workers, and their distribution in the sub counties and how devolution influenced budgetary allocation to health. Secondary data analysis of the payroll and budget of health department for 5 years was done to find out the number of healthcare workers in terms of absolute numbers, specialization, and amount paid in salaries, number on study leave, and health budget allocation as at 2012 (before devolution and from 2014 to 2017 under county government). Descriptive statistics of graphs was used to present the data. The study established that Wajir County has had tremendous improvement in the number of health care workers in the past 5 years. The study further established that under the devolved governance, the number of healthcare workers who have improved their skills by undergoing further training and specializing in different fields of nursing, medicine and clinical medicine has significantly increased. The study found out that Wajir County allocated significant amount of funds in the annual budget for health, which has availed enough funds to recruit enough health workers. Wajir County recruited its first medical specialist, a surgeon in 2017. The County has also given a substantial number of staff paid study leave to improve number of specialists among doctors, nurses and clinical officers. The study concluded that there was a positive relationship between devolution and improvement in the number of healthcare workers.

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DEFINITION OF KEY TERMS

Devolution	Transfer or delegation of power to a lower level, especially by central government to a local or regional administration.
Wajir County	A county in the former North-Eastern Province of Kenya. Its capital is Wajir town.
Medical doctor	A person with a medical degree whose job is to treat people who are ill or hurt.
Clinical Officer	A person with a diploma or degree and is qualified and authorized to practice medicine and performs general and specialized medical duties. They mainly work at health centers.
Nurse	A profession within the healthcare sector focused on care of individuals, families and communities so that they may maintain or recover optimal health and quality of life.
Medical specialist	These are doctors who have completed advanced education and clinical training in a specific area of medicine (their specialty area). Examples include surgeon, pediatrician, gynecologist, etc.
Healthcare worker	These are people whose job is to protect and improve the health of their communities.
Payroll	A list of employees working in an organization and the amount of money they are to be paid
Budget	An estimate of income and expenditure for a set period of time

LIST OF ABBREVIATIONS

COK-	Constitution of Kenya
CA –	County Assembly
CIDP-	County Integrated Development Plan
CGW-	County Government of Wajir
CO –	Clinical officer
COC -	Clinical Officers Council
CPD -	Continuing Professional Development
CPSB –	County Public Service Board
CRA –	Commission of revenue allocation
DMO -	District Medical Officer
ECN -	Enrolled Community Nurse
GOK -	Government of Kenya
HCW -	Health Care Workers
HMIS -	Health Management Information Systems
HR -	Human Resources
HRD -	Human Resources Development
HRH -	Human Resource for Health
HRIS -	Human Resources Information System
HRM -	Human Resources Management
ICT -	Information & Communication Technology
IMF-	International Monetary Fund
IPPD-	Integrated Personnel Payroll Database
KANU –	Kenya Africa National Union
KMTC -	Kenya Medical Training College
KNBS -	Kenya National Bureau of Statistics
KNEC -	Kenya National Examination Council
KNHRHSP -	Kenya National Human Resources for Health Strategic Plan
KNH-	Kenyatta National Hospital
KRCHN -	Kenya Registered Community Health Nurse
KRN -	Kenya Registered Nurse

KRA –	Kenya Revenue Authority
LATF –	Local Authority Transfer Fund
LMICs -	Low & Middle Income Countries
MD-	Medical Doctor
MMR -	Maternal Mortality Rate
MOE -	Ministry of Education
MDG -	Millennium Development Goal
MOH -	Ministry of Health
MTRH-	Moi Teaching and Referral Hospital
NA –	National Assembly
NHIF –	National Hospital Insurance Fund
NSSF –	National Social Security Fund
PSC –	Public Service Commission
SDG –	Sustainable Development Goals
SU-IERC-	Strathmore university ethical review committee
UHC-	Universal health coverage
WB –	World Bank

CHAPTER ONE

INTRODUCTION

1.1. Background of the Study

Majority of the healthcare personnel tend to concentrate mainly in the urban areas, thus denying services to those in the remote hardship areas. Higher worker density generates better health outcomes, lower burnout, better morale, and greater job satisfaction. Given that the public sector is a major provider of health services in many developing countries and one of the major employers of health workers, their availability and adequacy becomes particularly important in the public health service.

Further, the availability of well-trained and appropriately skilled health workers has the potential to influence the attainment of health goals including health-related SDGs. (WHO, 2016) Health workers are the backbone of strong, resilient health systems. Universal health coverage and guaranteed global health security are only possible with adequate investment in the health workforce. The government of Kenya has set out to achieve 4 main agendas in the next 5 years (2018 – 2022) popularly known as The Big Four, which includes universal health coverage. This requires all the health systems building blocks working at optimum level. The six building blocks include health workforce, healthcare financing, service delivery, information and research, medical products, technologies and leadership/governance. To achieve UHC this government plans to enroll all Kenyans into National hospital insurance fund (NHIF) to improve coverage. The government is also importing 100 medical specialists from Cuba to be posted to each of the 47 counties (at least 2 specialists per county with some counties receiving 3). This will reduce the shortage of specialists facing counties in hardship areas.

Health workforce shortages are increasing the inequities in access to health services, causing preventable illness, disability and death, and threatening public health, economic growth and development, as starkly demonstrated by the Ebola outbreak in West Africa. For instance, Maternal Mortality Rate (MMR) was one such indicator cited as being directly linked to availability of trained service providers with specialized training in maternal health.

Before the promulgation of the new constitution, the Public Service Commission (PSC) was the general employer of all government employees in Kenya, including health practitioners.

Its overall role was to provide general oversight and guidelines for strategic human resource management and development in the public sector. Routine operational human resource development and management functions including appraisal, recruitment, and discipline, payment of salaries, in-service training and promotions were delegated to the various government ministries such as the Ministry of Health, for health workers. In the devolved system of government, the PSC is only mandated to support in employment of national government employees as well as providing oversight of the whole public service sector, both at the county and national level.

Constitutional pressures led to Kenya enacting a new constitution which was promulgated in August 2010. The new constitution created 47 county governments and health care services were devolved to these new entities. While the county executive member, chief officer and director of health runs the county government health docket, the county public service board recruits, disciplines and even dismisses health care workers. The National government through Ministry of Health retained the management of the 4 national referral hospitals; Kenyatta National Hospital(KNH), Moi Teaching and Referral Hospital(MTRH), Mathari Mental Hospital and National Spinal Injury Hospital. The Ministry also retained function of developing of health related policies and training functions. Counties did not have a tailored health policy because there was no standard framework regarding deployment, employment, transfer and remuneration of healthcare personnel for all the 47 counties. The Government and external stakeholders are aware that in order to improve recruitment and increase retention of healthcare personnel in Northern Kenya, and other hardship areas, there is need to invest in incentives specifically targeting healthcare workers posted to work in remote, poorer, hard-to-reach rural areas, enabling them to serve communities that need them most.

1.2. Statement of Problem

Healthcare personnel recruitment, their working conditions as well as their wages have been pertinent issues in the Northern Kenyan Counties. Wajir County historically has experienced the challenge of recruiting and retaining healthcare workers. For a very long period of time, employment of highly skilled healthcare workers to Wajir County and other marginalized areas has proved very difficult (Ministry of health, 2015). One of the major reasons for this is the hardship nature of these counties; there are no basic social amenities like good housing, good food and transport. Additionally, harsh environmental conditions and unsafe working

environments have pushed away qualified personnel from these counties. Most health care workers posted to Wajir resign either before going or desert once they work for few months.

Wajir County has suffered from serious inequities in health worker distribution since independence. The nurse to patient ratio in Wajir county was 1: 4163 while the doctor to patient ratio was 1:132,000, far from the internationally recommended standards of 1:5000 and with a bed capacity of 358 (Wajir First County Integrated Development Plan 2013-2017, 2003). This has been attributed to low numbers of trained healthcare workers and those in training (“pipeline”) whose homes are within the county.

This region has also been politically and historically marginalized resulting in a lack of economic, social, professional opportunities thus exacerbating the healthcare workforce challenges in this part of the country. Moreover, insecurity (mostly perennial inter-tribal/clan conflicts) in this region is a major deterrent that also influences perceptions of the region. As a result, there is a steady exodus of healthcare personnel from Wajir County to other regions. Also, since Kenya’s Defense Forces incursion in Somalia in 2011 which was occasioned by frequent Al-Shabaab militant attacks and abduction of tourists along the Kenyan coast, as well as frequent attacks or abductions to Kenyan healthcare and aid workers, many healthcare workers (especially those from outside Northern Kenya) might have fled the county.

Another significant problem in hardship areas has been institutional weaknesses due to corruption which have resulted in the recruitment of unqualified staff owing to nepotistic tendencies and political interests

1.3. Justification

The effect of devolution on the number of the healthcare workers in hardship areas has not been extensively explored by prior researchers hence the gap in information on this area. Previous studies have explored the effects of devolution on the healthcare service delivery as well as the plight of workers, but failed to analyze the effect on the number of workers. The present study will provide key insights on this subject area focusing on Wajir County.

This kind of study has not been conducted in the management area of study and so the findings and outcome would be used as the basis for solving the issues concerning healthcare workers recruitment and retention in Wajir County. The findings from this study will also form a backbone upon which other studies will be based on. The study will identify

inadequacies that exist in the distribution of healthcare workers and their retention. This study is essential for the partial fulfillment for the award of a Master's degree in Business Administration (Healthcare Management) at Strathmore University.

1.4 Objectives of the study

1.4.1. General objective

To determine the effect of devolution on the number of healthcare workers in Wajir County and influence of devolution on budgetary allocation for health.

1.4.2. Specific Objectives

- i. To determine how devolution has impacted number of healthcare workers in Wajir County
- ii. To evaluate the influence of devolution on distribution of human resource for health in the six sub - counties within Wajir County.
- iii. To find out the difference in amount allocated in the budget to health services by national and county government in Wajir County.

1.5. Research Questions

- i. What is the effect of devolution on the number of the County healthcare workers in Wajir?
- ii. How does devolution influence the distribution of human resource for health in the different sub – counties within Wajir County
- iii. What is the effect of devolution on budgetary allocation for health in the counties?

1.6. Scope of the study

The research will be limited to a study of Wajir County’s department of health and County Public Service Boards. The study seeks to analyze how devolution has affected the county health services in terms of human resource for health and financing of health; two key pillars of health systems.

The study looked at the number of healthcare workers inherited from the national ministry of health (seconded staff), the number of healthcare workers hired by Wajir county government since devolution and the distribution of health care workers in the six sub counties of Wajir.

The number of healthcare workers from Wajir County currently undergoing further training was also analyzed against their field of study. This includes doctors, nurses and clinical officers specializing in different fields. The number currently has been sponsored by Wajir County will be compared with the number sponsored by national government before devolution.

Wajir county healthcare workers skills mix was also analyzed. The different cadres of nurses, clinical officers, doctors and specialists before and after devolution will be compared.

The budget allocation to human resource for health by Wajir county government since devolution was checked against national ministry of health allocation to Wajir for a full year before devolution.

1.7. Significance of the study

The study will help the Wajir County to take full advantage of devolution to optimize number of healthcare workers to WHO recommended numbers.

The National Government will ensure devolution is fully supported so that all counties in the country are at par in regards to provision of health. It will also ensure Equalization fund is released to counties so that marginalized counties such as Wajir County catches up. The generated information will also help with policy development.

The study will also help the international Community embrace devolution so as to achieve the Sustainable Development Goals.

CHAPTER TWO

LITERATURE REVIEW

2.1. Introduction

Devolution is a form of decentralization, or the transfer of authority and responsibility from central to lower levels of government for a range of public functions (Ndii, 2010). The purposes and forms of decentralization vary widely; there is no “one-size-fits-all” approach. Decentralization is usually defined using three categories that represent progressively larger transfers of autonomy and responsibility to subnational governments (Ndii, 2010). Each category presents particular challenges and opportunities for health services. Depending upon the functions and authorities transferred, decentralization processes can involve one or more categories. In Kenya, the constitution identifies the decentralization process as devolution because of the existence of locally elected governors and county assembly members, although minor elements of deconcentration (e.g., seconded staff) and delegation (e.g., the National Hospital Insurance Fund) also exist.

The three types of decentralization are:

- a) Devolution-power, responsibility, and budgetary authority are shifted to locally elected or appointed officials.
- b) Deconcentration-National institutions place staff at the local level but retain decision-making power.
- c) Delegation-Management of public functions is transferred to semiautonomous or parastatal organizations.

2.2. Decentralization before the 2010 Devolution

Decentralization has a long history in Kenya. Following independence in 1963, the British colonial government proposed a system of regional governments based on ethnic and tribal considerations (Institute of Economic Affairs, 2011). This plan was quickly dropped by the Kenya National African Union, the dominant political party at the time. Instead, the party created a unitary state with eight provinces and 175 local authorities (Republic of Kenya, 1977). This structure effectively centralized power with the government in Nairobi, minimizing the control of resources exercised at lower levels (Norad, 2009). Under this act, the Ministry of Local Government provided strong central oversight of local governments,

and government policy was enacted throughout the provinces. Although local authorities were responsible for service provision, they had little decision-making authority under this system (Kunnat, 2009).

Kenya attempted to decentralize decision making numerous times under this original framework. In the 1970s and 1980s, the government created six Regional Development Authorities to plan and coordinate activities (KHRC, 2010). In 1983, the District Focus for Rural Development Strategy put the district at the center of priority setting (Barkan & Chege, 1989). These strategies deconcentrated central ministry administrative staff, while also disempowering local authorities, creating few clear responsibilities or mandates between the two alternatives. By the 1990s, World Bank and International Monetary Fund (IMF) structural adjustment programs were promoting deregulation and decentralization. In Kenya, the World Bank began directly funding local governments under its Local Government Reform Program (Esidene, 2011).

These reforms continued to promote deconcentration, as provinces and districts took on more responsibility for service provision, but created no new decision-making powers. During this time, finances were decentralized vertically because the rural development and structural adjustment programs had created overlapping mechanisms, such as the Rural Development Fund and the Local Authority Transfer Fund (KHRC, 2010). By 2010, there were 13 distinct vertical funding mechanisms available to the decentralized levels. However, these mechanisms confused, rather than clarified, lines of authority, increasing administrative inefficiency (Barkan & Chege, 1989).

By most accounts, these efforts at decentralization were not successful, and Kenya remained highly centralized (Ndii, 2010; Ndavi et al., 2009). Various studies have found that previous decentralization frameworks were weakened by: limited decision space for local governments (Muriu, 2013), poor legal basis for decentralization (Chitere, 2004), weak citizen participation (Muriu, 2013; Chitere, 2004; Oyaya, 2004), capacity gaps within local governments (Chitere, 2004; Oyaya, 2004) and continued civil servant dominance (Chitere, 2004; Oyaya, 2004).

2.3 Devolution after 2010

According to constitution of Kenya 2010, chapter 15 article 176 and 177:

- i) There shall be a county government for each county consisting of a county assembly and a county executive.
- ii) County governments shall have reliable source of revenue to enable them govern and provide service effectively

According to schedule 4 of the constitution of Kenya 2010, 14 functions have been devolved to county governments including health services. The county assembly provides oversight while county executive provides services. According to chapter twelve of Constitution of Kenya 2010:

(1) Revenue raised nationally shall be shared equitably among the national and county governments.

(2) County governments may be given additional allocations from the national government's share of the revenue, either conditionally or unconditionally.

An independent constitutional commission, Commission of Revenue allocation (CRA), was set up to independently come up with how national revenue will be shared between national and county governments pursuant to article 217 1 (a)

2.3.1 Human resource for health under devolution

At the county government level, the promulgated constitution of 2010 provided for the creation of County Public Service Boards (CPSB) in every county which would serve as the general employer of all public service employees in specific counties. Public service employees performing devolved functions after the general elections of 2013 were seconded to county governments, and deployed after the human resource management structures in each county were established. In the health sector, the ministry of health in conjunction with the transitional authority undertook the human resource management assessment for each county and further work on building capacity for all CPSBs (Tsofa, 2017).

According to County Government Act number 17 of 2012 article 59 the functions of the County Public Service Board shall be, on behalf of the county government, to:

- (a) Establish and abolish offices in the county public service;
- (b) Appoint persons to hold or act in offices of the county public service including in the Boards of cities and urban areas within the county and to confirm appointments;
- (c) Exercise disciplinary control over, and remove, persons holding or acting in those offices as provided for under this Part;
- (d) Prepare regular reports for submission to the county assembly on the execution of the functions of the Board;
- (e) Promote in the county public service the values and principles referred to in Articles 10 and 232;
- (f) Evaluate and report to the county assembly on the extent to which the values and principles referred to in Articles 10 and 232 are complied with in the county public service;
- (g) Facilitate the development of coherent, integrated human resource planning and budgeting for personnel emoluments in counties;
- (h) Advise the county government on human resource management and development;
- (i) Advise county government on implementation and monitoring of the national performance management system in counties;
- (j) Make recommendations to the Salaries and Remuneration Commission, on behalf of the county government, on the remuneration, pensions and gratuities for county public service employees.

2.3.2 Effects of devolution on the number of healthcare workers across the globe

Typically, devolution changes the governance relations in the health system. Devolution functions to improve performance of the health system through transferring of authority and responsibilities to locally elected governments (Collins, Araujo & Barbosa, 2000). In Mali, devolution has aided in improving the capacity of the human resources for health. Lodenstein and Dao (2011) establishes that devolution can promote the increased recruitment and retention of health workers. When resources are decentralized it means that it is possible to improve the wages of the healthcare workers as well as the work conditions of the various health facilities. More health care personnel are therefore attracted to these regions to improve the healthcare service delivery.

In rural Mali for example there are several constraints to health service provision such as resource management- especially regarding key issues such as allocation and performance of

available human resources. The ratio of qualified population/staff is eight times higher in the urban areas as compared to the rural health centers; and this is especially true for midwives. Another issue is the geographical disparities which limit the increased movement of healthcare personnel to these rural areas. As such, there is limited availability and quality of staff. When the government decentralizes these responsibilities for the management of local health centers to local institutions then these inadequacies can be effectively addressed. Mali has a devolution policy which supports the transfer of human resources at the primary healthcare level from civil service to local governments' service-in such cases, local governments contract local health staff and even pay their salaries and incentives. The District Health Management also trains and monitors the performance of the workers. With devolution, it is expected that there will be increased establishment of new health centers hence increased employment of local health staff by 30%. Further, with devolution there is increased hiring and recruitment of staff from within the locality.

In Mali, decentralization has led to increased hiring of locals thus they are less able to leave their posts. They are offered incentives such as transportation and housing among, other incentives given in kind. Even so, this has only attracted the healthcare personnel at the lower cadres and not highly-skilled staff such as nurses and doctors. Decentralization policies would only be successful if they can resolve issues of attracting and retaining doctors and nurses as Lodenstein and Dao (2011) argued. The central governments tend to provide very fierce competition to the local governments as they provide civil servant contracts with career perspectives and better security. Thus, the posts in the remote areas are just used by people as a bridge to government employment precisely in the urban areas.

China and Tanzania are such nations that have observed this trend among the healthcare workers (Liu et al., 2006). They have reported uneven quality of service provision because the poorer and remote districts could not compete for qualified staff with central government (Munga et al., 2009). Inequity in staffing has also been a serious issue in Kenya where the Northern Counties have very low number of healthcare workers because trained and skilled workers prefer the jobs at the urban centers. Kenya should therefore adopt Mali's policy of decentralized recruiting through harmonizing the employee rights and status of different contracts and regulating competition (Lodenstein & Dao, 2011).

To reinforce this ideology Kolehmainen-Aitken (2004) states that unless equalization techniques are established then there would be competition between richer and poorer local governments and this could lead to inequity in staffing. Lutwama, Roos and Dolamo (2012) on the other hand have argued that decentralization affects the number and performance of healthcare workers. The main reasons as to the limited numbers is because of poor remunerations, lack of motivations or very low incentives more so to move to the remote or poorer regions.

Sihanya (2013) opined that devolution has the ability to make local officials' actions additionally transparent as well as present a check on corruption, appointment according to ties of the family or some other poor practices or connections. However, she also asserts that there exists a local political system that is active, outlets of news that are not part of these webs of influence and that individuals will be ready to blow the whistle where they view problems and that they are likely to be listened to. The foregoing author also established that devolving responsibilities not only impacted the regions or organizations where these responsibilities were devolved to, but also had an impact on the organization which is the ministry of health that is responsible for the devolution of authority. Also, the author highlights that proper governance should outline the policies that the health ministry will be made responsible for in the health care system that is devolved. Some of the examples include regulation of quality as well as training and education of doctors (Sihanya, 2013).

By devolution causing transparency and shunning corruption, it makes the activities of the devolved health sector to be done according to laid down policies and procedures. When these healthcare sectors operate according to regulations, the expectation is that healthcare practitioners will be drawn to the devolved healthcare sector leading to an increase in the number of health care practitioners in the county level and a reduction in healthcare practitioners in the national healthcare sector. Also, devolution creates opportunities in the county level where practitioners who are stuck with minimum growth opportunities at the national level, are likely to pursue. Finally, limited corruption is associated with sufficient resources at the country level and when resources are sufficient, practitioners are bound to acquire job satisfaction which will play a significant role in ensuring the existing health care practitioners are retained with minimum turnover.

Marchal (2009) asserts that on the negative side, devolution poses the danger of unwelcomed and unwanted results. Citing the case of Ghana.. In the context of training for example, the author argues that some training has to be done at the national level. As a result, getting them to be done at the devolved level can be challenging. Also, the author propounds that career structure is likely to suffer since areas of small administration have limited layers and even though the same is advantageous when it comes to efficiency it limits opportunities for individuals who are talented to rise in ranking via promotion.

The image that this situation portrays is that the devolved health care sector presents a limited opportunity for one to grow career-wise as the number of administration layers are limited. Therefore, not many health practitioners (especially those looking for a career growth) are likely to take up roles at the devolved level. As such, the level of growth in the number of employees at the devolved level is likely to be limited due to unattractiveness of the employment posts. Additionally, some programs such as health promotion, TB and HIV are organized in a vertical manner and on some occasions funded by external donors (Marchal, 2009). Being that the devolved system is a new programme, these donors are likely to be uncomfortable about using the devolved structure as they have a lot of confidence in the vertical programme. This situation raises potential conflict between the structure that is devolved and the vertical programme.

The donors lacking confidence in the devolved system, the likelihood of them funding the health activities at the devolved health sector is minimal. As such, due to financing issues, health care practitioners are less likely to go for job opportunities at the devolved level. This situation in the long run is bound to translate into multiple job vacancies at the country health sector and health sector nurses and clinical officer's shortage.

2.3.2. Outcomes of devolution on health work force in Kenya

Beyond the general responsibility of managing county employees, it was not clear what the specific roles the CPSB would undertake, especially in operational human resource management for health workers. It was also unclear on who was responsible for specific welfare elements of health workers including career progression and in-service training including how transfers for health workers across counties was to be managed. One study in Kilifi looked to analyze the early implementation outcomes of this governance reform at the county level.

When county governments took the role of paying salaries for all health practitioners from the national government, the process was characterized by numerous challenges including payroll discrepancies, delayed salary payments, staff missing from the pay role and missing allowances. There are perceptions by the general public that both the county and national governments are often compromised by their particular executive arms of government, via inducements and allowances to rubberstamp executive choices and decisions concerning health workers.

Discrimination and political interference in human resource management for health workers have been witnessed, with some counties reported to have rejected their staff as a result of them being from different tribes to the ones they were sent to (Tsofa et al., 2017). The fear for victimization and political interference, coupled with the ambiguity in inter-county transfers resulted in many health workers seeking transfers back to their counties of origin. As a result of these issues, reports of mass resignations became common (Gitonga, 2015). In late 2013, the 3 major health workers unions called for a nationwide strike pressing for the re-centralization of the health function back to the national government.

2.4. Number of health workers and health infrastructure in Wajir County

In Wajir County, there are 27 private facilities, 80 public health facilities in the 6 constituencies and 2 facilities managed by missions/NGOs. The county government has 10 level 4 hospitals, 26 level 3 health centers, 46 level 2 health centers, 24 clinics and 46 dispensaries. According to the Kenya Integrated Health Budget Survey (KIBHS) of 2006, over 95 percent of Wajir's population covers approximately 5 kilometers in order to access primary health care, while around 4 percent could access a health facility within a kilometer. The county was being served by 5 doctors, 625 community health workers and 118 nurses. The nurse to patient ratio in Wajir county was 1: 4163 while the doctor to patient ratio was 1:132,000, far from the internationally recommended standards of 1:5000 and with a bed capacity of 358 (Wajir First County Integrated Development Plan 2013-2017, 2013).

Despite the glaring shortages in doctors, the County built 34 new dispensaries and 42 maternity centers as well as increasing the number of health workers resulting in delivery of health by skilled personnel rising from 18 percent to 50 percent, according to the County's

director of health (Barasa & Muchui, 2016). Thus, while there is an acute shortage of health personnel in Wajir County, care needs to be taken when redeploying health workers so that regions with pronounced shortages are given priority over others with better health workers' figures. Also issues of gender distribution need to be considered.

The increase in allocations to the health sector is attributed to the development plans within the sector such as construction of new health facilities as well increased recruitment of medical staff. Although the county has increased the number of advertisements for specialist health professionals, most of them don't get responses. This has made the County to change tact and is now interested in recruiting consultants who will look into the issues the County has. The County has also been sponsoring local students to pursue medical related courses in tertiary and higher-level learning institutions who will in turn work in the county upon completion of their studies. In addition, the County government has constructed a Kenya Medical Training College (KMTC) campus close to Wajir Town at an estimated cost of Kshs 200 million. The County's administration hopes to increase the number of people training as nurses, nutritionists and public health officers in order to ensure availability of health workers in the county (Barasa, & Muchui, 2016).

2.5 Global strategy on human resource for health: workforce 2030

The vision that by 2030 all communities have universal access to health workers, without stigma and discrimination, requires combining the adoption of effective policies at national, regional and global levels with adequate investment to address unmet needs. Realistically, the scale-up required in the coming decades to meet increasing demand, address existing gaps and counter expected turnover is greater than all previous estimates. Projections developed by WHO and the World Bank point to the creation of approximately 40 million new health and social care jobs globally to 2030 and to the need for 18 million additional health workers, primarily in low-resource settings, to attain high and effective coverage of the broad range of health services necessary to ensure healthy lives for all (WHO, 2016).

Investments that increase the overall productivity of the health sector and produce better health outcomes are a cornerstone for building strong health systems and stronger economies. This chapter elaborates on three points. First, good health contributes to economic growth. Second, there are important additional pathways by which investments in the health system have spill-over effects that enhance inclusive economic growth, including job creation. Third,

new evidence suggests that expenditures on health are not dead-weight drags on the economy, but rather can be associated with productivity gains in other sectors (WHO, 2016).

2.6. Conceptual Framework

Conceptual framework is a diagrammatic embodiment of associations or linkages between study variables (Robson, 2011). The following framework illustrates the association between the independent variable and four dependent variables as depicted diagrammatically in Figure 2.1. In this study, the dependent variable will be the new constitution and the institutions it has created.

The independent variables will be the key influences or drivers of the dependent variable and for this study they include; number of healthcare workers in terms of absolute numbers, number who have specialized and number on study leave; distribution of health care workers in the sub-counties and budgetary allocation to health.


INDEPENDENT VARIABLE		DEPENDENT VARIABLE	
OLD CONSTITUTION 1963 – 2010		NEW CONSTITUTION 2010 to date	OUTCOME OF DEVOLUTION
Central government <ul style="list-style-type: none"> Ministry of health – manages country’s health services. 		Devolved government <ul style="list-style-type: none"> County department of health – manages county’s health services 	<ul style="list-style-type: none"> Total health workers
<ul style="list-style-type: none"> Public service commission – hires health workers for the whole country. 		<ul style="list-style-type: none"> County public service board-hires county health workers 	<ul style="list-style-type: none"> Number of health workers on paid study leave
<ul style="list-style-type: none"> National treasury – allocates funds to health 		<ul style="list-style-type: none"> County treasury- allocates funds to health 	<ul style="list-style-type: none"> Specialized health workers
<ul style="list-style-type: none"> National assembly- Oversight and representation 		<ul style="list-style-type: none"> County assembly-Oversight and representation 	<ul style="list-style-type: none"> Distribution of health workers in the sub counties
			<ul style="list-style-type: none"> Budgetary allocation to health

Figure 2.1: Conceptual framework

Source: Researcher (2018)

CHAPTER THREE

RESEARCH METHODOLOGY

3.1. Introduction

This chapter describes the research methodology of the study. Research methodology is the procedural plan that will be adopted by the researcher to validly, objectively, economically and accurately answer the research questions. It is a detailed explanation of the procedures and techniques that will be applied for collecting, processing and analyzing data. This section of the study therefore describes the research design, target population and area, sampling frame, sample and sampling technique, data collection instruments, procedures, analysis management and the ethical considerations that the study will adhere to.

3.2. Research Design

This is a descriptive case report study design that employed secondary data analysis techniques to review Wajir County health budget allocation and health department payroll data for 5 years with aim of analyzing how devolution has increased human resource for health in Wajir County.

The data from national ministry of health 2012 2014, 2015, 2016 and 2017 payroll data for health from Wajir County will be analyzed. Data from 2013 wasn't included because it was the transition year, elections were held in March and the payroll was maintained partly at the national level. Budget allocation to Wajir County health services by national ministry of health for financial year 2011/2012 and 2012/2013 will be compared to the four years post-devolution.

3.3. Target Population

The study targeted financial and employee recruitment and retention records of health workers of Wajir County; doctors, nurses, clinical officers and specialists.

3.4. Inclusion Criteria

The inclusion criteria focused on records of all healthcare workers seconded from national government to Wajir County at the start of devolution, as well as those of all healthcare workers who were employed in Wajir in the last 4 years were eligible for the study.

3.5. Exclusion Criteria

The records of private healthcare workers in the last 5 years were not included in the study. Also, the records of healthcare workers from other counties were not included in the study.

3.6.1. Sample size determination and sampling method

Wajir County is made up of 6 sub-counties; Wajir West, Wajir East, Wajir South, Wajir North, Tarbaj and Eldas. The study reviewed the healthcare financial records and healthcare employee recruitment and retention records for these sub-counties.

3.6.2. Validity

The secondary data abstraction tool was pretested two weeks before the actual data collection activity to ensure that any errors, omissions and grammar were corrected before the study began. This ensured that the data collection tool collected the right and correct information that it was intended to measure.

3.6.3. Reliability

This was ensured by abstracting the secondary data from the right documents through the authorized personnel and confirming from other government agencies like controller of budget and council of governors.

3.7. Data Management and analysis

The secondary data was coded and analyzed using a computer based software. The SPSS version 20 was used for analysis where the coded data was entered and analyzed based on the objectives of the study. The data was then analyzed by descriptive statistics, cross tabulations will be done to determine associations and trends, graphs and figures will be utilized to present the results.

The study looked at the number of healthcare workers inherited from the national ministry of health (seconded staff), the number of healthcare workers hired by Wajir county government since devolution, the number of healthcare workers retained by the county from the time of employment for at least two years compared with the number that left the county.

The number of healthcare workers from Wajir County currently undergoing further training was also analyzed against their field of study. This includes doctors, nurses and clinical officers specializing in different fields. The number currently sponsored by Wajir County was compared with the number sponsored by national government before devolution. Wajir county healthcare workers skills mix was also analyzed. The different cadres of nurses, clinical officers, doctors and specialists before and after devolution compared.

The budget allocation to human resource for health by Wajir county government since devolution was checked against national ministry of health allocation to Wajir for a full year before devolution

3.8. Ethical Considerations

Both scientific and ethical approvals were obtained from national commission for science, technology and innovation (NACOSTI) and Strathmore University Ethics Review Committee (SU- IERC). Permission to access the healthcare workers Payroll data from IPPD (integrated payroll and personnel database) and health care workers recruitment records was obtained from the Director of health, chairperson of County Public Service Boards and County Executive Member for Health. These department heads gave consent prior to data retrieval. All the data collected was de-identified and aggregated for privacy reasons.

CHAPTER FOUR

DATA ANALYSIS AND PRESENTATION

4.1 Introduction

This chapter presents the findings of the study and their interpretation. This is done in line with the study objectives.

4.2 Objective 1. Number of health care workers in Wajir before and after devolution

4.2.1: Comparison of the number of healthcare workers as at 2012 under ministry of health and over 5 years under devolution

The study sought to determine the number of health care workers in Wajir County over the last five years. The study wanted to establish the trend on the increase on the numbers over the years. The first year in consideration was 2012 when health was under national government. Then the number from 2014 to 2017 was determined to find out the increase.

Total number of health care workers working in Wajir county from 2012 to 2017

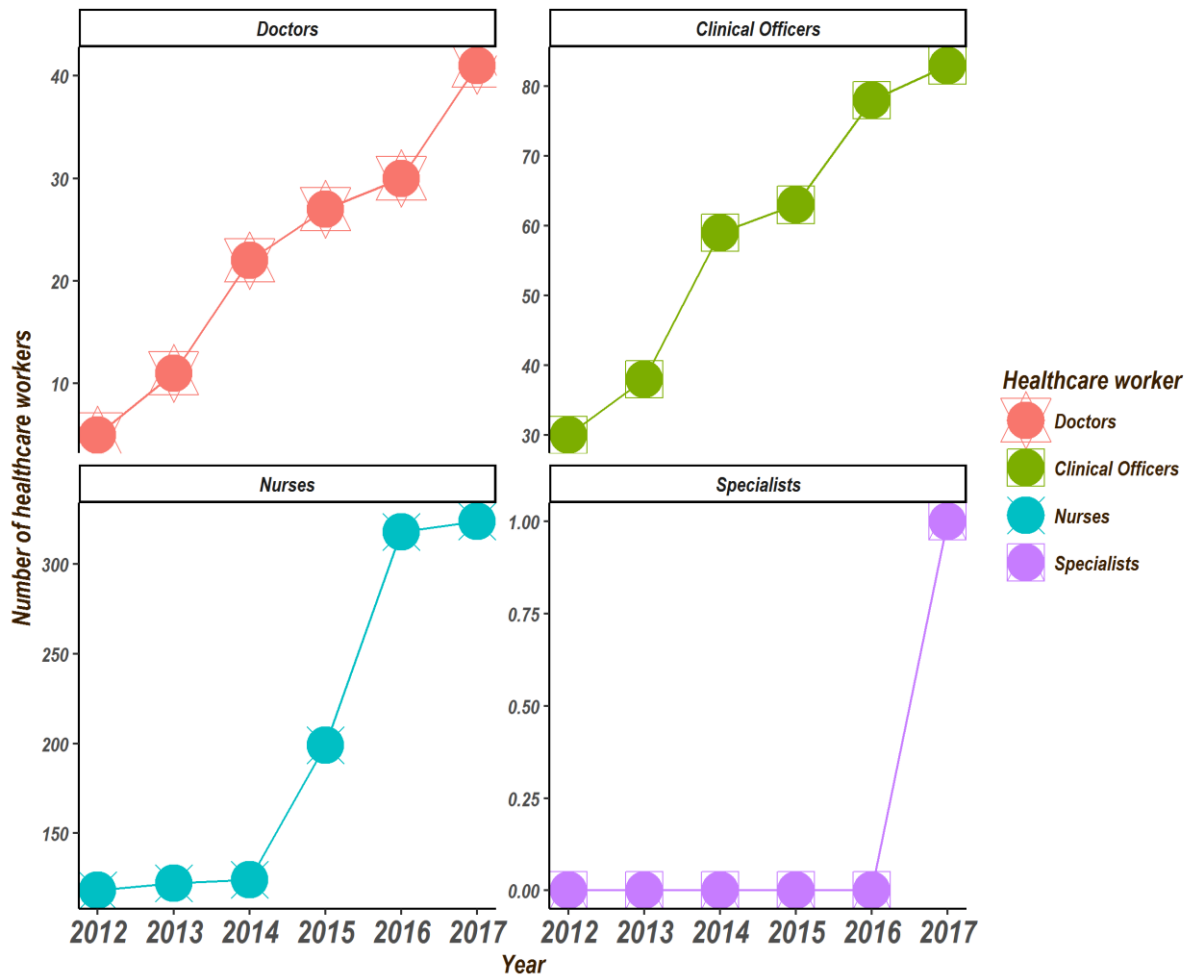


Figure 4.1: Number of health care workers in Wajir from 2012 to 2017.

Result of the study show that Wajir County has substantially increased its health care since inception of devolution. In the year 2012 under the national government, the county had 5 doctors. This number increased over the next 4 years with the number rising to 22 in 2014, 27 in 2015, 30 in 2016 and 41 in 2016. This means 17 doctors were recruited between 2013 and 2014, 5 in 2015, 3 in 2016 and 11 in 2017. The number of clinical officers also increased substantially with only 30 clinical officers in the entire county in 2012. The county did massive recruitment over 4 years under devolution with the number rising to 59 by 2014, 63 by 2015, 78 in 2016 and 83 by 2017.

The study shows that 29 new clinical officers were recruited between 2013 and 2014, 4 in 2015, 15 in 2016 and 5 in 2017. The same was noted for nurses as their number increased.

The county had 118 nurses in 2012, 124 in 2014, 199 in 2015, 318 in 2016 and 324 by end of 2017. This shows massive recruitment as 6 were recruited between 2013 and 2014, 75 nurses recruited in 2015, 119 in 2016 and 6 in 2017. The county did not have any medical specialists in 2012; none was recruited in 2013, 2014, 2015 and 2016 despite several adverts. One medical specialist, a surgeon, was however recruited in 2017.

4.2.2: specialized healthcare workers

The study sought to determine number of specialized health care workers before devolution under national government and after devolution, under county government. The number of specialized doctors, nurses and clinical officers in 2012 was compared to the numbers from 2014 to 2017.

4.2.2.1 Analysis of the different nursing specialization in 2012 under national government and from 2013 to 2017 under county government

The study sought to find out the number of nurses in Wajir County that have undergone further training and specialized in the various specialization recognized by nursing council of Kenya. The number specialized as at 2012 under national government and from 2014 to 2017 under county government was analyzed.

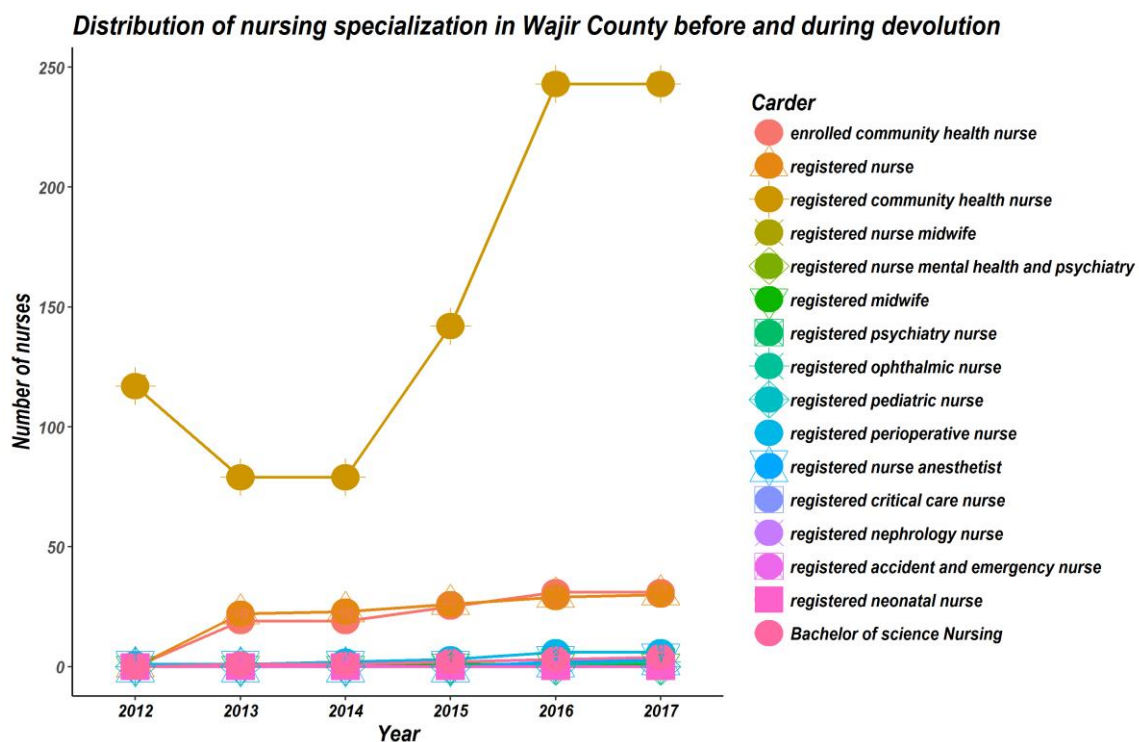


Figure 4.2: Number of specialized nurses in Wajir from 2012 to 2017.

The results of the study show that out of 118 nurses in 2012, 117 were Kenya registered community health nurse. There was only one nurse who has specialized as Kenya registered peri-operative nurse and one nurse with Bachelor of Science nursing. The entire County did not have other specialized nurses. In 2014 out of 124 nurses in 2012, 121 were Kenya registered community health nurse and other non-specialized nurses. There were only two nurses who have specialized as Kenya registered peri-operative nurse and one nurse with Bachelor of Science nursing. In 2015 out of 199 nurses, 193 were Kenya registered community health nurses and other non-specialized nurses.

There were three nurses who have specialized as Kenya registered peri-operative nurse, two with Bachelor of Science nursing and Kenya registered midwife. In 2016 out of 318 nurses, 303 were Kenya registered community health nurse and other non-specialized nurses and number of specialized nurses increased to 15. There were six nurses who had specialized as Kenya registered peri operative nurse, one in midwifery, two in psychiatry, one in ophthalmology, three with Bachelor of Science nursing and two in anesthesia. In 2016 out of 324 nurses, 304 were Kenya registered community health nurse and other non-specialized nurses and number of specialized nurses increased to 20. There were six nurses who have specialized as Kenya registered peri-operative nurse, three in midwifery, two in psychiatry, and two in ophthalmology, four with Bachelor of Science nursing and three in anesthesia.

4.2.2.2: Analysis of the different clinical officer specialization in 2012 under national government and from 2013 to 2017 under county government

The study sought to find out the number of clinical officers in Wajir County that have undergone further training and specialized in the various specialization recognized by clinical officers' council of Kenya. The number specialized as at 2012 under national government and from 2014 to 2017 under county government was analyzed.

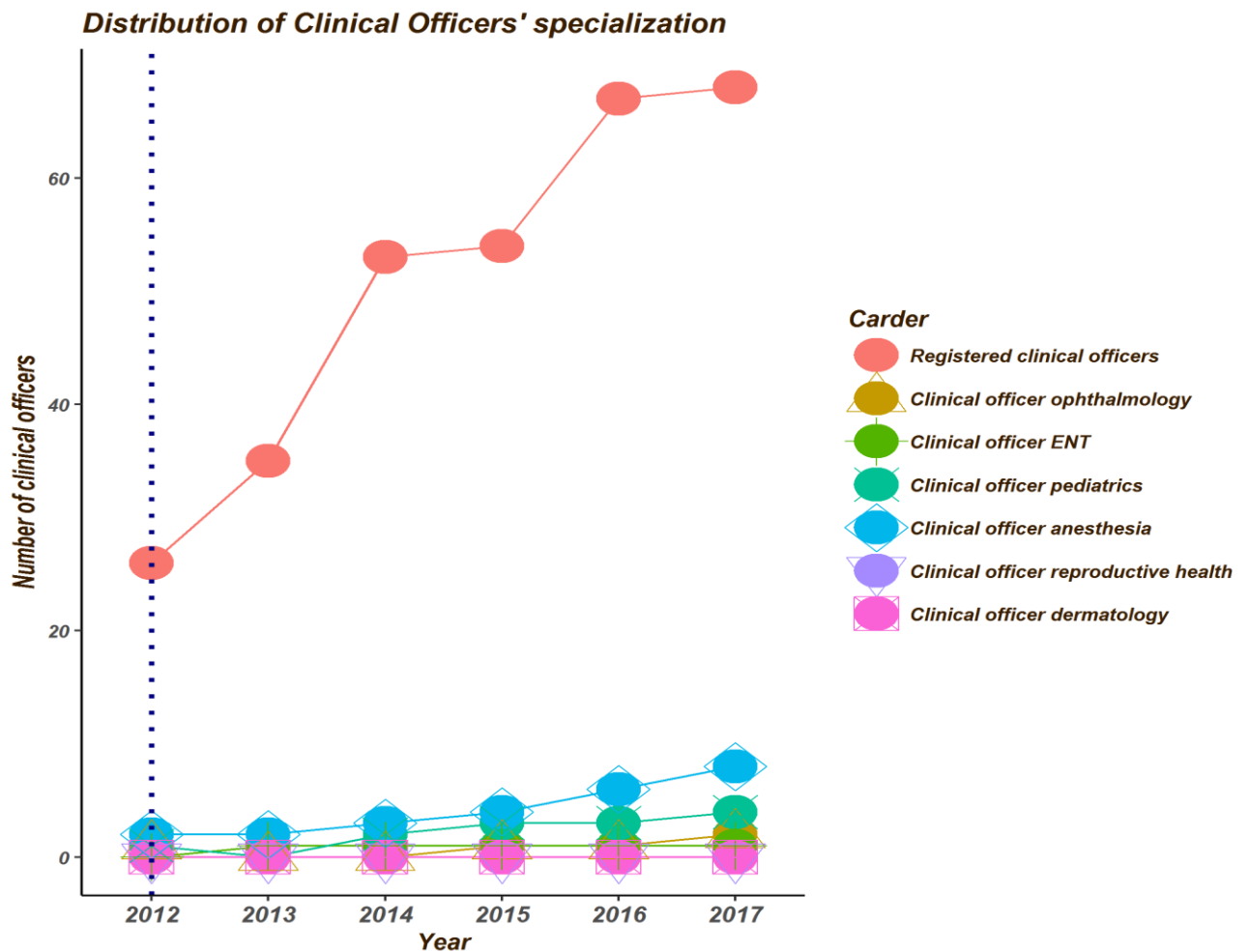


Figure 4.3: Number of specialized clinical officers in Wajir from 2012 to 2017

The results of the study show that out of 30 clinical officers in 2012, 26 were Kenya registered clinical officers without any specialization, there were only four clinical officers who have specialized with one as CO in ophthalmology, one as CO pediatrics and 2 as CO Anaesthesia. Out of 59 clinical officers 2014, 53 were Kenya registered clinical officers without any specialization. The number of clinical officers who have specialized increased to 6 with one as CO ophthalmology, 2 as CO pediatrics and 3 as CO Anaesthesia. Out of 63 clinical officers 2015, 54 were Kenya registered clinical officers without any specialization.

The number of clinical officers who have specialized increased to 9 with 1 as CO ophthalmology, 3 as CO pediatrics, 1 as ENT and 4 as CO Anaesthesia. Out of 78 clinical officers 2016, 67 were Kenya registered clinical officers without any specialization. The number of clinical officers who have specialized increased to 11 with 1 as CO ophthalmology, 3 as CO pediatrics, 1 as ENT and 6 as CO Anaesthesia. Out of 83 clinical officers 2017, 68 were Kenya registered clinical officers without any specialization. The

number of clinical officers who have specialized increased to 15 with 2 as CO ophthalmology, 4 as CO pediatrics, 1 as ENT and 8 as CO Anaesthesia.

4.2.2.3: Analysis of the different medical officers specialization in 2012 under national government and from 2013 to 2017 under county government

The study sought to find out the number of medical officers in Wajir County that have undergone further training and specialized in the various specialization recognized by medical practitioners and Dentist Board of Kenya. The number specialized as at 2012 under national government and from 2014 to 2017 under county government was analyzed.

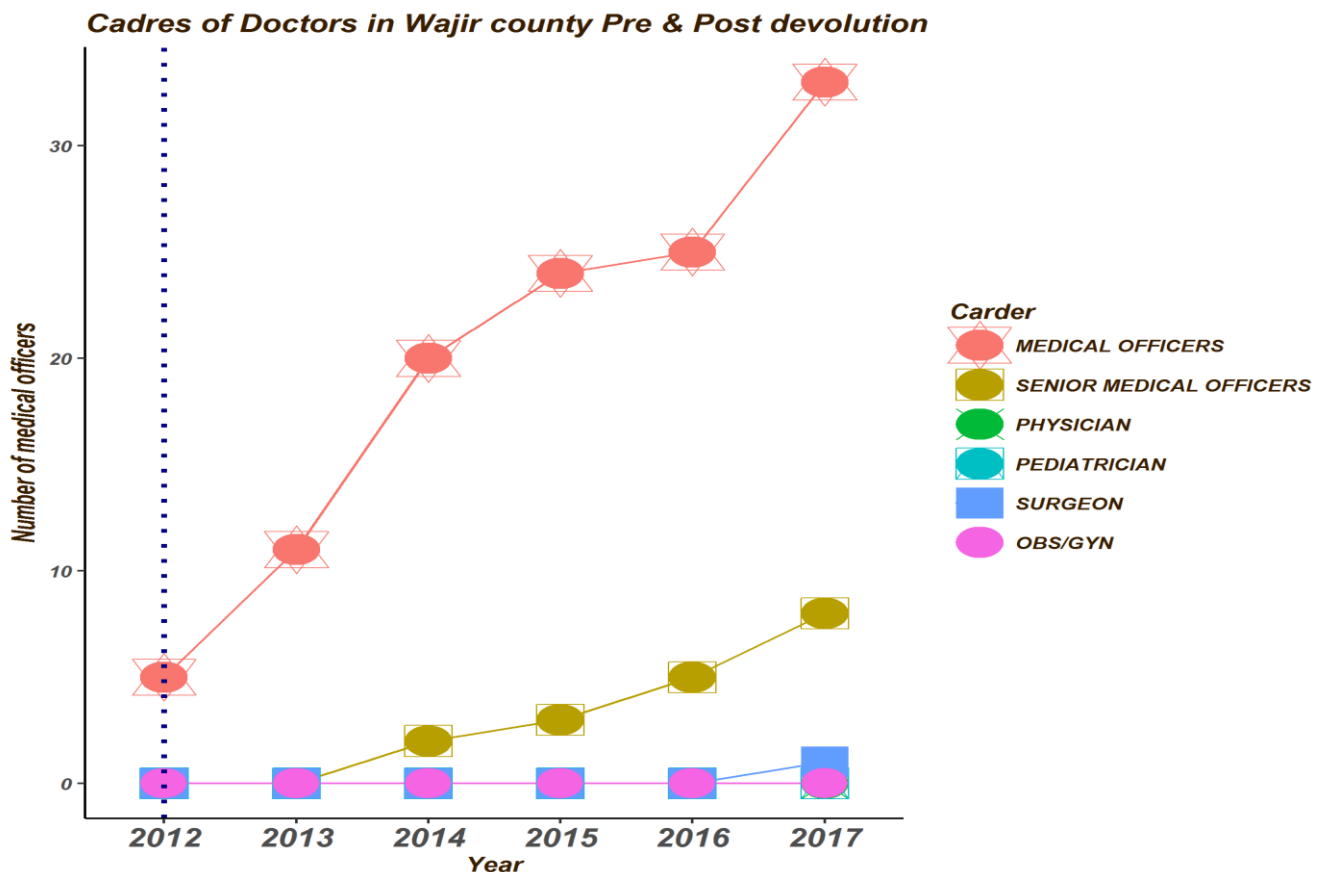


Figure 4.4: Number of specialized doctors in Wajir from 2012 to 2017

The result of the study shows that Wajir County did not have any doctor who has specialized from 2012, until 2017 when they managed to recruit the first surgeon.

4.2.3: Analysis of healthcare workers undergoing training both under national government in 2012 and county government in 2013 to 2017

The study sought to determine the number of health care workers who are undergoing training while in the payroll of either national government in 2012 or county government from 2014 to 2017. The officers are given paid study leave to further their training and specialize to improve health outcomes.

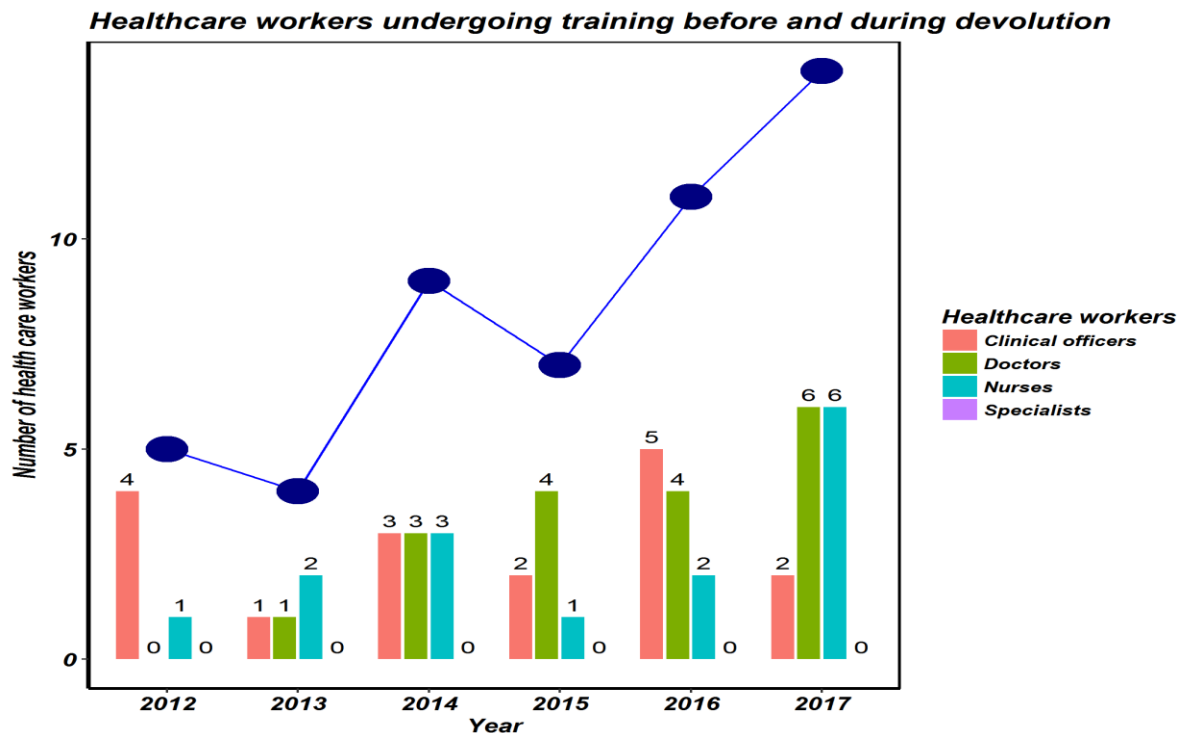


Figure 4.5: Healthcare workers undergoing training before and after devolution

The result of the study show that in 2012 under national government 5 health workers were on study leave to further improve their skills, the 5 were 4 clinical officers and 1 nurse. In 2014 the county government of Wajir released 9 health workers for studies on paid leave. These are 3 medical doctors, 3 nurses and 3 clinical officers. In 2015, 7 health workers were granted study leave; 2 clinical officers, 4 doctors and 1 nurse. In 2016 11 officers were released to study; 5 clinical officers, 4 doctors and 2 nurses. In 2017 14 health workers were released for further studies on paid study leave by Wajir County Government; 6 doctors, 6 nurses and 2 clinical officers

4.3 Objective 2: Salaries and budget allocation to health before and after devolution.

4.3.1: Salaries paid to healthcare workers in Wajir County under devolution as compared to 2012 under national government

Secondary data on the salary paid to healthcare workers mainly doctors, nurses, clinical officers and medical specialists was analyzed. Data on the amount of money spent by national government on these cadres in 2012 was compared with the monies spent by County government in the year 2014 to 2017.

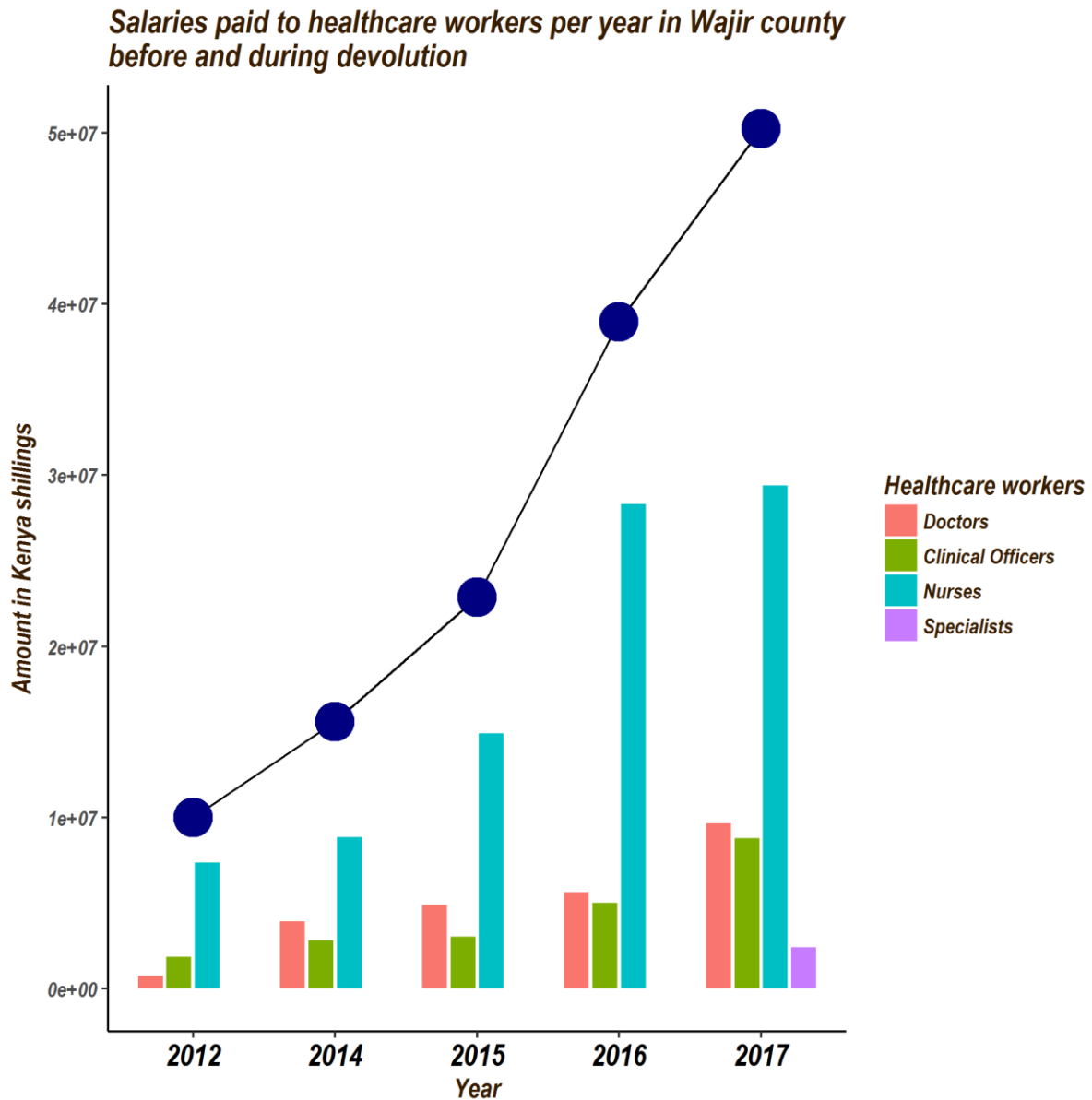


Figure 4.6: salaries paid to healthcare workers in Wajir before and after devolution

The study findings show that amount spent on salaries increased significantly from 2012 all the way to 2017. In the year 2012, the National government spent Kshs 742, 400 on doctors salaries, Kshs 7, 369, 100 to pay nurses and Kshs 1, 873, 500 to pay clinical officers. No money was spent on specialists as there was none in Wajir in 2012. Total amount spent on these cadres in 2012 was Kshs 9, 942, 600. In 2014 the County government spent Kshs 15,

580, 770 (Kshs3, 926, 560 on doctors, Kshs 8, 846, 284 on nurses, Kshs 2, 807, 926 on clinical officers and Kshs 0 on specialists), this was an increase of almost Kshs 6 million.

In 2015, Kshs 22, 858, 660 was spent on salaries, a further of another Kshs 7 million (Kshs 4, 901, 040 on doctors, Kshs 14, 917, 040 on nurses, Kshs 3, 040, 884 on clinical officers, Kshs 0 on specialists). In 2016, Kshs 38, 966, 064 was spent increasing salary spending by almost Kshs 16 million (Kshs 5, 629, 200 on doctors, Kshs 28, 316, 628 on nurses, Kshs 5, 020, 236 on clinical officers, Kshs 0 on specialists). In 2017, spending further increased by almost Kshs 10 million to Kshs 48, 261, 250 (Kshs 9, 669, 030 on doctors, Kshs 29, 380, 950 on nurses, Kshs 8, 791, 360 on clinical officers and Kshs 2, 420, 110 on medical specialists. Wajir County managed to recruit its first specialist, a surgeon, in 2017.

4.3.2 Budgetary allocation to health from national ministry of health to Wajir in 2012 as compared to county government health allocation from 2013 to 2017

The study obtained and analyzed secondary data on budget allocation to health by national government in the year 2012 and allocation by county government to health sector from 2013 to 2017.

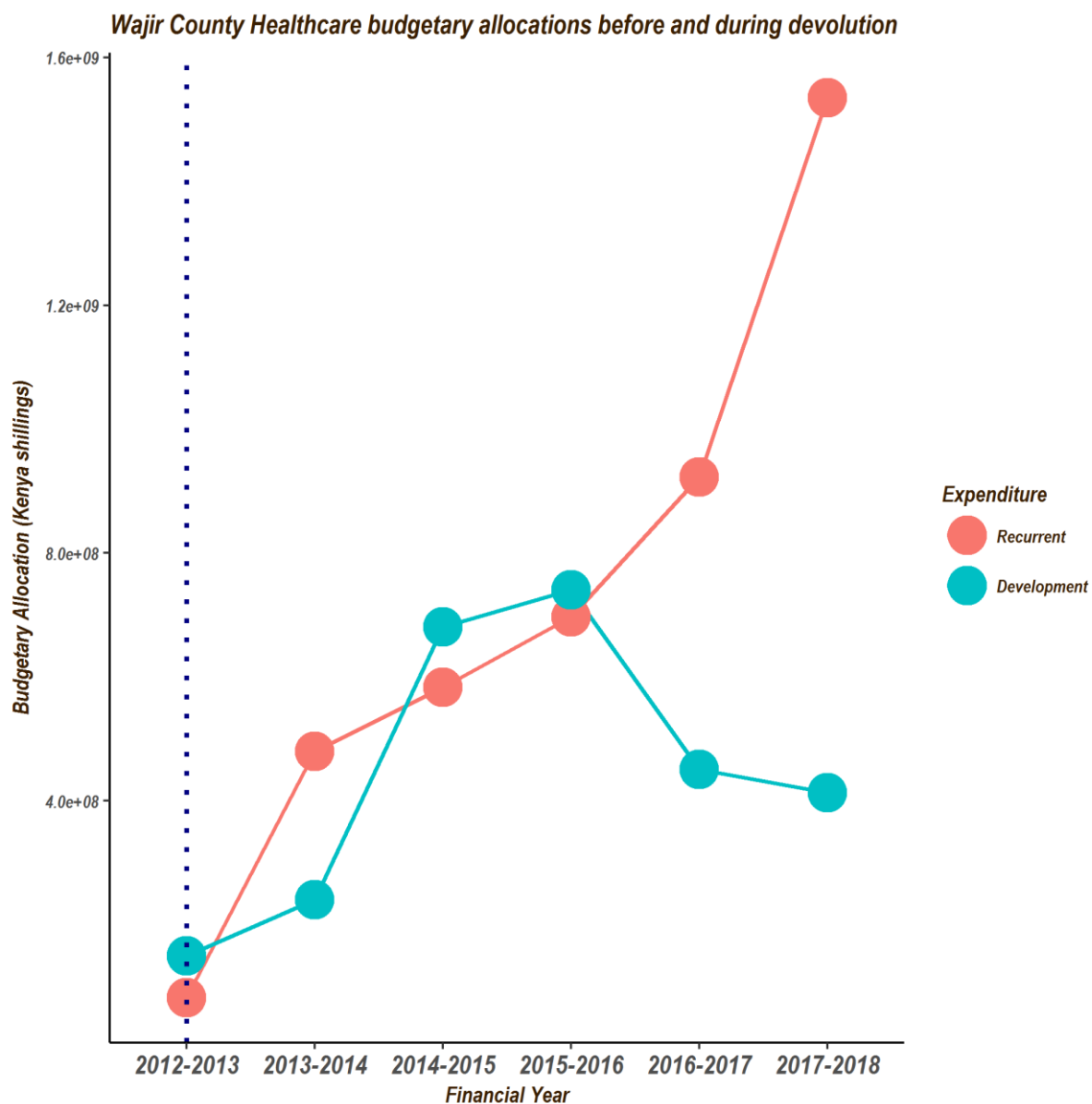


Figure 4.7: Wajir health budget from 2012 to 2017

The results of the study show that Wajir received a total of Kshs 232 million (82 million recurrent and 150 million in development expenditure including projects funded by donors like World Bank) from national government. Once Wajir County took over health docket in 2013 healthcare was allocated Kshs 780 million (Kshs 480 million recurrent and Kshs 240 million development expenditure), almost 4-fold what national government allocated in 2012. In 2014/15 budget health care was allocated Kshs 1.26 billion (Kshs 583.47 million recurrent and 680.42 million development budget). This was an increase of almost Kshs 500 million.

In 2015/16 budget health was allocated almost 1.436 Billion (Kshs 696.57 million recurrent and Kshs 740.86 million development expenditure). This was an increase of about 200 million. In 2016/17 budget health was allocated Kshs 1.372 billion (Kshs 922.32 million recurrent and 450.5 million development budget). Massive amount of resources was invested in human resource with recurrent budget of 922 million. In 2017/18 budget health was allocated Kshs 1.948 billion (Kshs 1.535 billion recurrent and 413 million development budget). This was almost 700 million more than the previous allocation.

4.4: Objective 3: Distribution of healthcare workers in the six different sub counties of Wajir County

The study sought to determine the distribution of doctors, nurses, clinical officers and specialists among the 6 six sub counties of Wajir. Data on distribution of the said health workers was obtained from 2012 (before devolution) and 2013 to 2017 (after devolution).

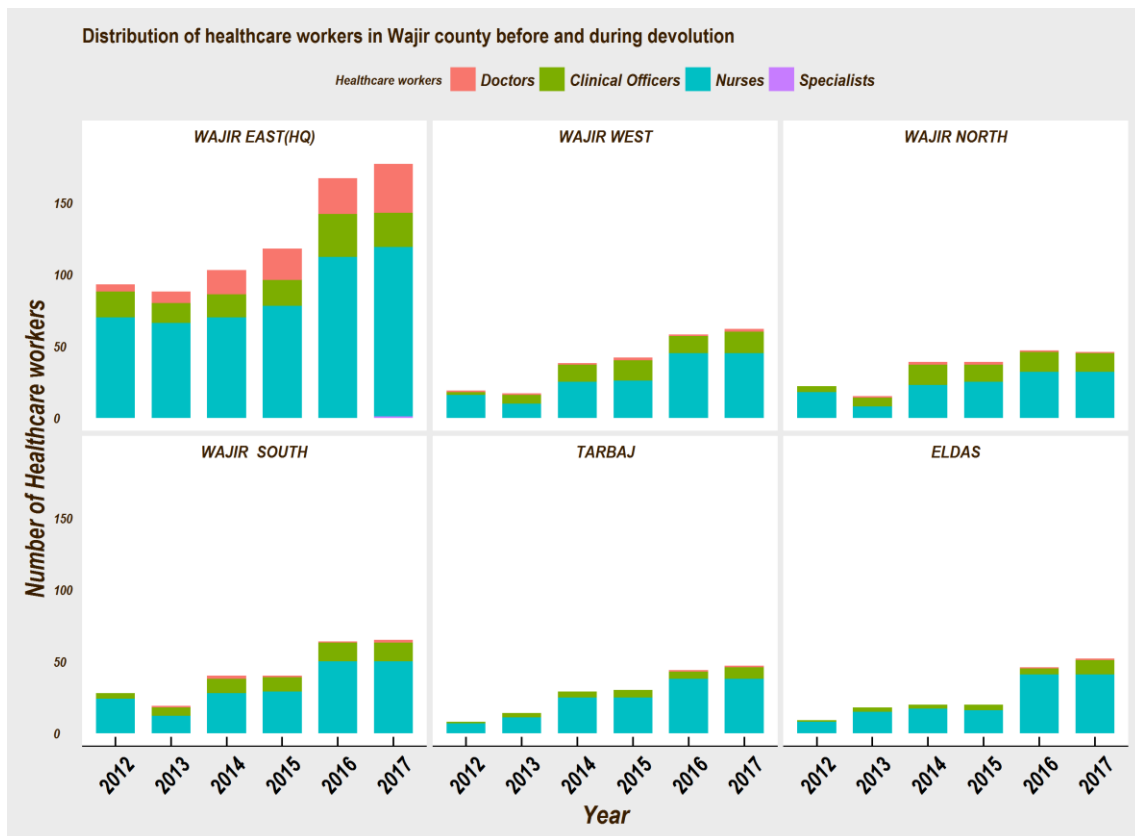


Figure 4.8: Distribution of health workers in Wajir before and after devolution

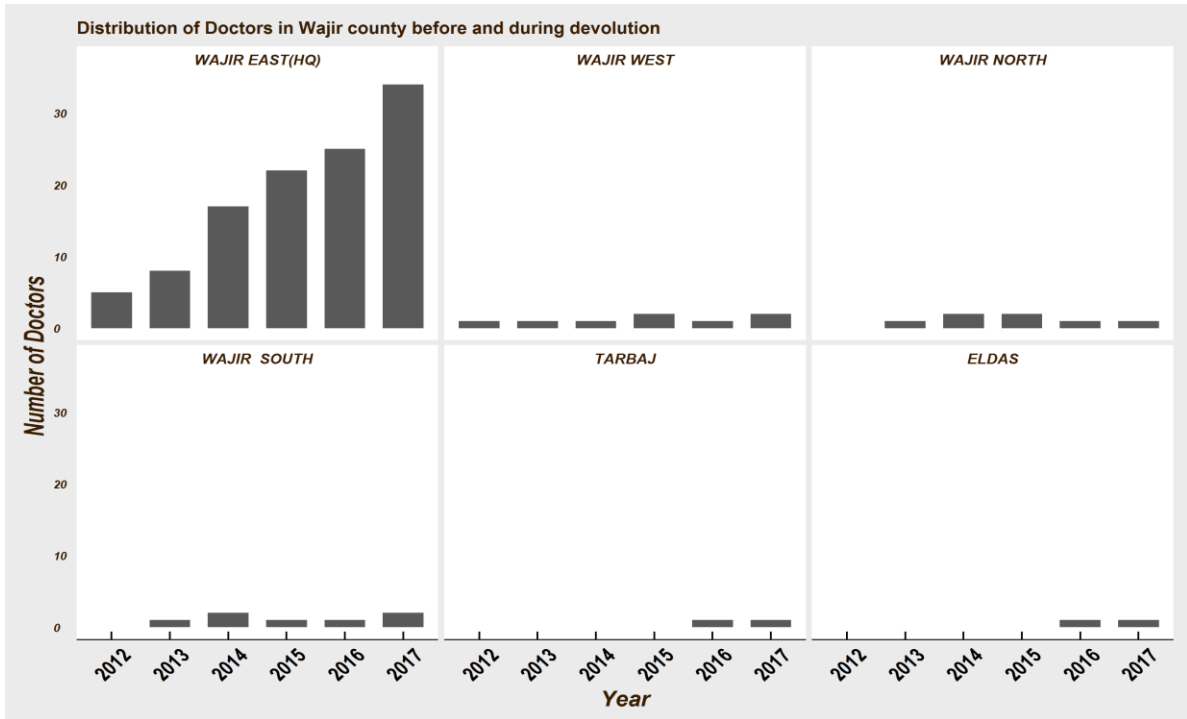


Figure 4.9: Distribution of doctors in Wajir County before and after devolution

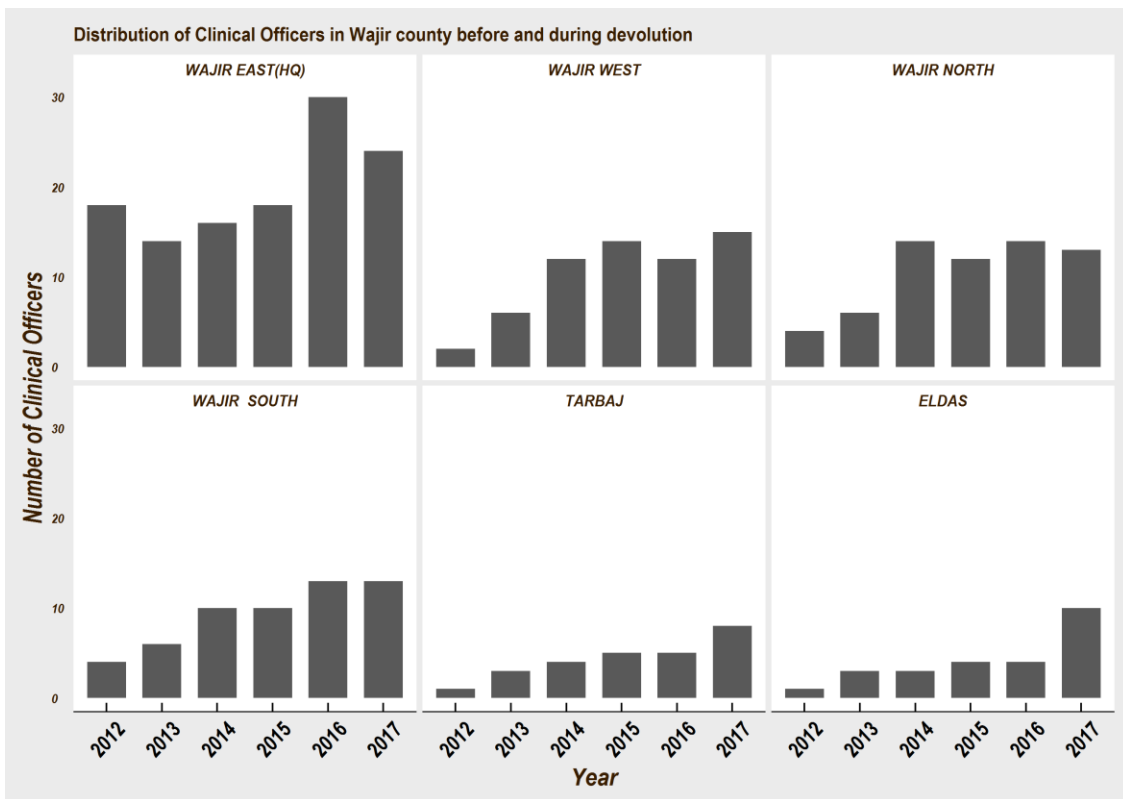


Figure 4.10: Distribution of clinical officers in Wajir County before and after devolution

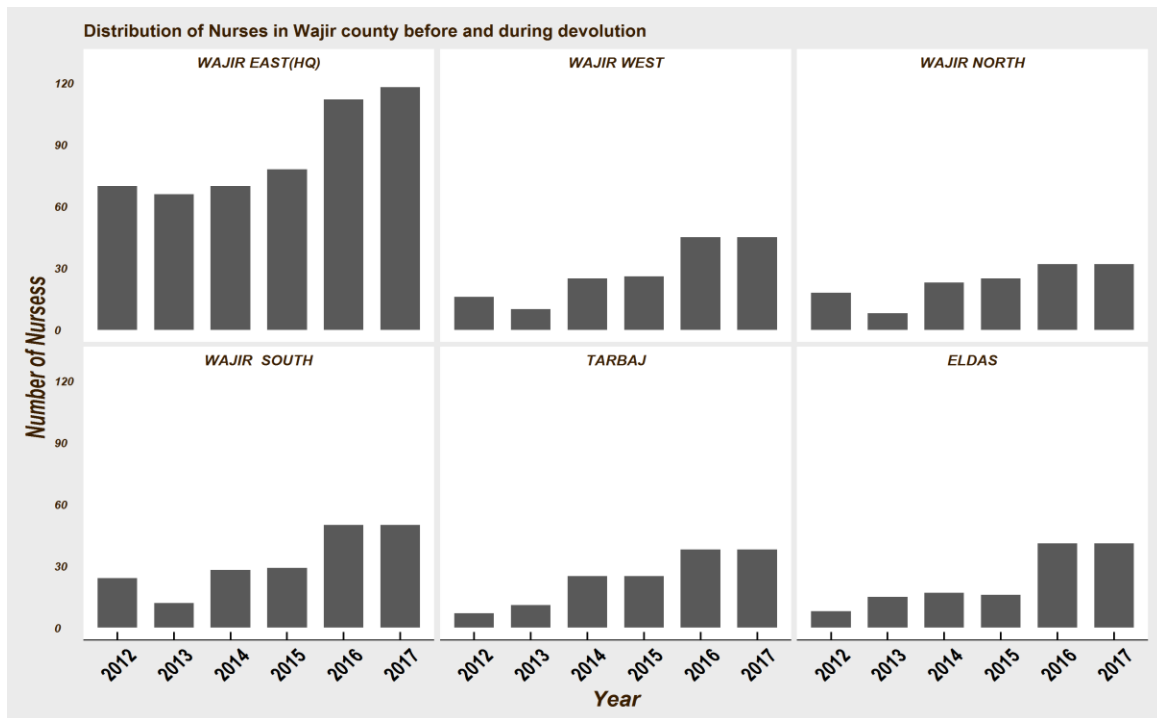


Figure 4.11: Distribution of Nurses in Wajir County before and after devolution

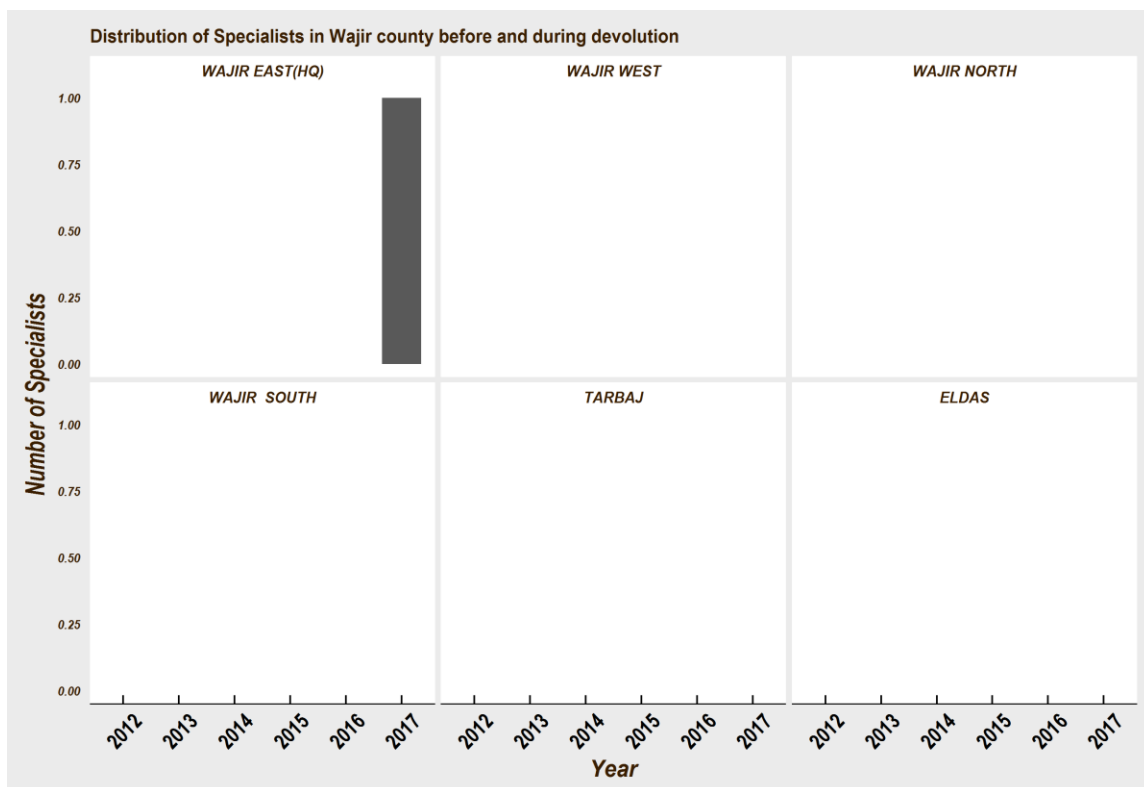


Figure 4.12: Distribution of specialists in Wajir County before and after devolution

4.4.1 Wajir East Sub County

The results of the study show that majority of the healthcare workers work in Wajir East Sub County, the county headquarters, both before and after devolution. The county referral hospital (only level 5 hospital in the county) is located in this sub county. In 2012, out of 152 doctors, nurses and clinical officers 92 (3 doctors, 18 Cos and 70 nurses) were based in Wajir east sub county. In 2014 out of 205 healthcare workers 103 (17 doctors, 70 nurses and 16COs) were based in Wajir based in Wajir east. In 2015 out of 289 health workers 118 (22 doctors, 78 nurses and 18COs) were in Wajir east. In 2016 out of 426 health workers 167 (25 doctors, 112 nurses and 30 COs) were based at the county headquarter. In 2017, out of 448 health workers 177 (34 doctors, 118 nurses, 1 specialist and 24 COs) were based in Wajir East.

Total number of healthcare workers in Wajir east increased from 92 in 2012 to 177 in 2017. The number of doctors increased from 3 in 2012 to 34 by 2017, nurses from 70 to 118, clinical officers from 16 to 24 and one surgeon was recruited from none.

4.4.2 Wajir West Sub County

The results of the study show that the number of the healthcare workers in Wajir west Sub County increased after devolution. In 2012, out of 152 doctors, nurses and clinical officers 19 (1 doctors, 2 Cos and 16 nurses) were based in Wajir west sub county. In 2014 out of 205 healthcare workers 38(1 doctors, 25 nurses and 12 COs) were based in Wajir west. In 2015 out of 289 health workers 42(2doctors, 26 nurses and 14COs) were in Wajir west. In 2016 out of 426 health workers 58 (1 doctors, 45 nurses and 12 COs) were based in Wajir west. In 2017 out of 448 health workers 62 (2 doctors, 45 nurses, and 15 COs) were based in Wajir west. Total number of healthcare workers in Wajir west increased from 19 in 2012 to 62 in 2017. Number of doctors increased from 1 in 2012 to 2 by 2017, nurses from 25 to 45, clinical officers from 2 to 15.

4.4.3 Wajir South Sub-County

The result of the study shows that the number of the healthcare workers in Wajir South Sub County increased after devolution. In 2012 out of 152 doctors, nurses and clinical officers 28 (0 doctors, 4 Cos and 24 nurses) were based in Wajir South Sub County. In 2014, out of 205 healthcare workers 40 (2 doctors, 28 nurses and 10 COs) were based in Wajir south. In 2015 out of 289 health workers 40(1 doctor, 29 nurses and 10 COs) were in Wajir south. In 2016,

out of 426 health workers 58 (1 doctors, 45 nurses and 12 COs) were based in Wajir south. In 2017 out of 448 health workers 64 (1 doctors, 50 nurses, and 13 COs) were based in Wajir south.

Total number of healthcare workers in Wajir south increased from 28 in 2012 to 64 in 2017. The number of doctors increased from 0 in 2012 to 2 in 2014 and 1 by 2017, nurses from 24 to 50, clinical officers from 4 to 13.

4.4.4 Wajir North Sub County

The results of the study show that the number of the healthcare workers in Wajir North Sub County increased after devolution. In 2012, out of 152 doctors, nurses and clinical officers 22 (0 doctors, 4 Cos and 18 nurses) were based in Wajir north sub county. In 2014 out of 205 healthcare workers 39(2 doctors, 23 nurses and 14 COs) were based in Wajir north. In 2015, out of 289 health workers 42(2 doctor, 26 nurses and 14 COs) were in Wajir north. In 2016 out of 426 health workers 47 (1 doctors, 32 nurses and 14 COs) were based in Wajir north. In 2017 out of 448 health workers 46 (1 doctors, 32 nurses, and 13 COs) were based in Wajir north.

Total number of healthcare workers in Wajir north increased from 22 in 2012 to 46 in 2017. Number of doctors increased from 0 in 2012 to 2 in 2014 and 1 by 2017, nurses from 18 to 32, clinical officers from 4 to 13.

4.4.5 Tarbaj Sub County

The results of the study show that the number of the healthcare workers in Tarbaj Sub County increased after devolution. In 2012, out of 152 doctors, nurses and clinical officers 7 (0 doctors, 0 Cos and 7 nurses) were based in Tarbaj sub county. In 2014 out of 205 healthcare workers 14(0 doctors, 11 nurses and 3 COs) were based in Tarbaj. In 2015 out of 289 health workers 30(0 doctor, 25 nurses and 5 COs) were in this sub county. In 2016 out of 426 health workers 44 (1 doctors, 38 nurses and 5 COs) were based in this sub county. In 2017 out of 448 health workers 47 (1 doctors, 38 nurses, and 8 COs) were based in this sub county.

Total number of healthcare workers in Tarbaj increased from 7 in 2012 to 47 in 2017. Number of doctors increased from 0 in 2012 to 1 by 2017, nurses from 7 to 38, clinical officers from 0 to 8.

4.4.6 Eldas Sub County

The results of the study show that the number of the healthcare workers in Eldas Sub County increased after devolution. In 2012, out of 152 doctors, nurses and clinical officers 8 (0 doctors, 0 Cos and 8 nurses) were based in this sub county. In 2014, out of 205 healthcare workers 20(0 doctors, 17 nurses and 3 COs) were based in Eldas. In 2015 out of 289 health workers 20(0 doctor, 16 nurses and 4 COs) were in this sub county. In 2016, out of 426 health workers 46 (1 doctors, 41 nurses and 4 COs) were based in this sub county. In 2017 out of 448 health workers 52(1 doctors, 41 nurses, and 10 COs) were based in this sub county. Total number of healthcare workers in Eldas increased from 8 in 2012 to 52 in 2017. Number of doctors increased from 0 in 2012 to 1 by 2017, nurses from 8 to 41, clinical officers from 0 to 10.

CHAPTER 5

DISCUSSION, CONCLUSION AND RECOMMENDATION

5.1 Introduction

This chapter presents the discussions of the study findings, conclusions, recommendations, and suggestions for further research.

5.2 Discussion of the findings

The result of this study revealed that Wajir County under devolution focused on increasing the number of healthcare workers. From 152 in 2012 to 418 in 2017 (almost 300% increase). The number of doctors increased significantly from only 5 in 2012 to 41 at the end of 2017. The number of nurses increased from 118 in 2012 to 324 while the number of clinical officers increased from 30 to 83. Devolution of health has greatly influenced the increase in health care workers. This is mainly because resources are available for the government at local level and priority area of investment is decided.

The study established that expenditure on health workers salaries increased significantly over the 5 years under review. While the national government spent slightly below Kshs 10 million in the year 2012 on salaries, the county government increased this amount to Kshs 15.5 million in 2014, about Kshs 23 million in 2015, Kshs 38 million in 2016 and Kshs 48 million in 2017. This show that the national government was not in touch with problem in Wajir which is almost 800km from the capital Nairobi. Devolution of health function to the counties through Constitution of Kenya 2010 accelerated catch up of counties which were previously marginalized by successive regimes for close to 50 years.

According to the study findings, budgetary allocation to health service increased with the onset of devolution. The national government through the Ministry of Health allocated 232 million to Wajir in the financial year 2012/2013. The County government in its 2014/2015 budget allocated Kshs 1.263 Billion out of Kshs 7.273 (17% of the budget) to health sector. In 2015/2016 budget health allocation increased to Kshs 1.436 Billion out of total budget of Kshs 8.272 Billion which is 17%. In 2016/2017 the county allocation to health Kshs 1.372 out of Kshs 8.681 Billion which is 15.8% and finally in 2017/2018 budget health was

allocated Kshs 1.948 billion out of total budget of Kshs 9.362 billion which translates to 20.4%.

The increase in allocation was almost 10 fold over the 5 years of devolution. With this massive investment Wajir County managed to strengthen all the six building blocks of health: service delivery, health workforce, health information system, access to essential medicine, financing and leadership/governance. The increased allocation made it possible for the county to operationalize most facilities that were closed due to shortage of staff and construction and of new facilities that has improved access. The County at the beginning of devolution had only one facility that provided caesarian section, the main county referral hospital which was a level 4 facility. The number of functional level 4 facilities providing comprehensive obstetric care now stands at 4 with two more opening soon.

The study established that with devolution, the number of specialized health care workers increased. According to nursing council of Kenya, there are 12 recognized nursing specialties; Kenya Enrolled Community Health Nurse [KECHN], Kenya Enrolled Community Health Nurse [Post Basic] [KECHN PB], Kenya Registered Nurse [KRN], Kenya Registered Community Health Nurse [KRCHN], Kenya Registered Nurse Midwife [KRNM], Kenya Registered Nurse/Mental Health & Psychiatric Nurse [KRN/MHP], Kenya Registered Midwife [KRM], Kenya Registered Community Health Nurse [Post Basic] [KRCHN PB], Kenya Registered Psychiatric Nurse [KRPN], Kenya Registered Ophthalmic Nurse [KROphN], Kenya Registered Paediatric Nurse [KRPaedN] and Kenya Registered Peri – Operative Nurse [KRPON].

The number of specialist nurses gradually increased from 1 to 20 over the 5 years under devolution. There were six nurses who have specialized as Kenya registered peri operative nurse, three in midwifery, two in psychiatry, and two in ophthalmology, four with Bachelor of Science nursing and three in anaesthesia. These very skilled nurses led to improved quality of services to the people of Wajir. The KRPON are well distributed across four sub counties with functional theatres. They have led to reduced post-operative sepsis. There was also a significant increase in number of clinical officers who have specialized. From 4 in 2012 to 15 in 2017, these specialists include ENT, Paediatrics, ophthalmology and anaesthesia clinical officers. They deal in specific area and therefore make accurate and timely diagnosis therefore improving outcome.

According to the findings, the County faces a major challenge of attracting medical specialists. Out of 29 major specialties in Medical Practice recognized by medical board (including Anaesthesia, Anatomic Pathology, Cardiothoracic surgery, Clinical Medical Genetics, Clinical Pathology, Clinical Oncology, Dermatology, Ear, Nose and Throat, Emergency Medicine, Family Medicine, General Surgery, Geriatrics. General Pathology, Immunology Infectious Diseases, Internal Medicine, Orthopaedic Surgery, Oncology, Oncology/Radiotherapy, Paediatrics and Child Health, Palliative medicine, Plastic and reconstructive Surgery, Psychiatry, Public Health, Radiology, Urology, Microbiology, Neurosurgery, Obstetrics and Gynecology, Occupational, Medicine and Ophthalmology), the county has only one Surgeon who was recruited in 2017.

The study also established that the county government has facilitated further studies by releasing staff that get admission to various universities and colleges. These staff sign a legal bonding of three years with the county government so that they don't leave immediately after completing specialization. Once such a staff returns, the county will have a good pool of specialists who will serve the population. Major specialists expected in the county soon include 2 gynecologists, a general surgeon, a radiologist, an ENT surgeon, a cardiothoracic surgeon and ophthalmologist. Several nurses and clinical officers are also undergoing further training to specialize while on county payroll.

5.3 conclusions

Based on the findings of the study, the study concludes that under devolution, Wajir County has increased number of healthcare workers; doctors, clinical officers and nurses. The study further established that the county employed its first specialist, a consultant general surgeon in 2017. Significant number of specialized nurses and clinical officers has also been recruited in the county since inception of devolution. The study found out that the county put more funds for health in the annual budget. The county also took seriously employee satisfaction and emphasized employee training. This was achieved by giving health workers study leave to further their studies.

The study found that there was a positive relationship between devolution and increased number of health workers. The study further concludes that there was a positive relationship between devolution and increased health spending. The results also found a positive

relationship between devolution and increased training of specialists. Overall, there was a positive relationship between devolution and improved health services.

The study also established that the major challenge which the county faced in the implementation of the devolution was attraction of specialists. Despite several attempts to recruit through advertisements, no one applied to work in Wajir County.

5.4 Recommendations of the Study

The study makes two recommendations. One of these is that devolution of health to counties, more so those in hardship areas, should be supported including devolution of human resource for health. Challenges facing the counties should be resolved rather than discussing return of health function to the national government. Health sector will do better under county governments.

Secondly, Wajir County should come up with a deliberate policy on how to attract specialists. Health indicators like maternal mortality will not improve without availability of specialist like Obstetrics and gynecology.

5.5 Suggestions for further research

This study was done on the effect of devolution on number on number of healthcare workers in Wajir. The study recommends that similar studies should be replicated in other counties in hardship areas.

This study concentrated on health workers, which is one of the 6 building blocks of health systems. There are other 5 health systems building blocks including service delivery, health information system, access to essential medicine, financing and governance therefore further studies should focus on effect of devolution on other aspects of the health system.

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APPENDICES

APPENDIX 1: WORK PLAN

Progress Stage	Stage Description	Proposed Dates
1	Choice of Research Topic	August 2017
2	Research Problem Clarification, Research Objectives, Purpose and Significance	September 2017
3	Literature Review	October 2017
4	Proposed Research Method	November 2017
5	Proposal Presentation	Jan 2018
6	Data Collection	Feb 2018
7	Data Analysis and Interpretation	March 2018
8	Dissertation Report Writing – draft	March 2018
9	Final Draft of Research Report	March 2018
10	Submission of dissertation for examination	March 2018
11	Oral Defense of dissertation	March 2018
12	Correction of dissertation	April 2018

APPENDIX 2: BUDGET

Major Activities	Requirements/Participants	Cost Kshs
Literature review, desktop search	Printing, photocopying, fare, lunch, internet bundles	30 000
2 day training of the research assistants (4 research assistants and principle investigator)	Ksh 500 per day per person Venue fee	4000 3500
Actual field work	Professional fee for 4 assistants	20 000
Thesis writing	Three research assistants	15 000
ATOTAL		72500

APPENDIX 3: LETTER TO HR DIRECTOR

Information sheet for human resource director, Wajir County, for pay roll data from 2014 to 2017.

DR ADANKHALIF ADAN KALA
P o Box 68900 – 00622
Nairobi
Cell 0722307456

TO: HUMAN RESOURCE DIRECTOR,
WAJIR COUNTY.

RE: REQUEST FOR PAYROLL DATA FOR HEALTHCARE WORKERS IN WAJIR COUNTY FROM 2014 TO 2017

I am a senior medical officer working in Wajir County currently pursuing master's degree in MBA healthcare management in Strathmore University.

I am doing my dissertation on “effects of devolution on number of healthcare workers in Wajir county-doctors, nurses, clinical officers and specialists”

I am therefore requesting access to payroll data for the above workers working in Wajir County from 2014 to 2017. This will be compared with payroll data from Wajir County for the year 2012.

The data will be handled with utmost confidentiality and no one else will access it. It will be purely used to assess effect of devolution on the number of healthcare workers in Wajir County.

Yours Sincerely
Dr Adankhalif Adan

APPENDIX 4: INFORMATION SHEET FOR CHIEF OFFICER-HEALTH

Information sheet for chief officer of health, Wajir County, for Budget information from 2014 to 2017.

DR ADANKHALIF ADAN KALA
P o Box 68900 – 00622
Nairobi
Cell 0722307456

TO: CHIEF OFFICER OF HEALTH,
WAJIR COUNTY.

RE: REQUEST FOR BUDGET INFORMATION FOR HEALTHCARE SERVICES IN WAJIR COUNTY FROM 2014 TO 2017

I am a senior medical officer working in Wajir County currently pursuing master's degree in MBA healthcare management in Strathmore University.

I am doing my dissertation on “effects of devolution on number of healthcare workers in Wajir county-doctors, nurses, clinical officers and specialists”

I am therefore requesting access to budget information for healthcare services in Wajir County from 2014 to 2017. This will be compared with budget information from National Ministry of health for Wajir County for the year 2012.

The data will be handled with utmost confidentiality and no one else will access it. It will be purely used to assess effect of devolution on the number of healthcare workers in Wajir County.

Yours Sincerely
Dr Adankhalif Adan

APPENDIX 5: INFORMATION FOR HR MANAGER

Information sheet for Human Resource Manager, Ministry of Health-Afya house for Wajir County 2012 payroll data

DR ADANKHALIF ADAN KALA
P o Box 68900 – 00622
Nairobi
Cell 0722307456

TO: HUMAN RESOURCE MANAGER,
MINISTRY OF HEALTH – AFYA HOUSE.

RE: REQUEST FOR PAYROLL DATA FOR HEALTHCARE WORKERS IN WAJIR COUNTY FOR THE YEAR 2012

I am a senior medical officer working in Wajir County currently pursuing master's degree in MBA healthcare management in Strathmore University.

I am doing my dissertation on “effects of devolution on number of healthcare workers in Wajir county-doctors, nurses, clinical officers and specialists”

I am therefore requesting access to payroll data for the above workers working in Wajir County for the year 2012. This will be compared with payroll data from Wajir County from 2014 to 2017.

The data will be handled with utmost confidentiality and no one else will access it. It will be purely used to assess effect of devolution on the number of healthcare workers in Wajir County.

Yours Sincerely
Dr Adankhalif Adan

APPENDIX 6: INFORMATION FOR PRINCIPAL SECRETARY

Information sheet for principal secretary of health requesting for budget information on health services in Wajir County for 2012

DR ADANKHALIF ADAN KALA
P o Box 68900 – 00622
Nairobi
Cell 0722307456

TO: PRINCIPAL SECRETARY,
MINISTRY OF HEALTH –AFYA HOUSE.

RE: REQUEST FOR BUDGET INFORMATION FOR HEALTHCARE SERVICES IN WAJIR COUNTY FOR THE YEAR 2012

I am a senior medical officer working in Wajir County currently pursuing master's degree in MBA healthcare management in Strathmore University.

I am doing my dissertation on “effects of devolution on number of healthcare workers in Wajir county-doctors, nurses, clinical officers and specialists”

I am therefore requesting access to budget information for healthcare services in Wajir County for the year 2012. This will be compared with budge information from Wajir County from 2014 to 2017.

The data will be handled with utmost confidentiality and no one else will access it. It will be purely used to assess effect of devolution on the number of healthcare workers in Wajir County.

Yours Sincerely
Dr Adankhalif Adan

APPENDIX 7: DATA COLLECTION TOOLS

A) PAYROLL DATA

1. MONTHLY PAYROLL DATA FOR WAJIR COUNTY FROM 2014 TO 2017 (UNDER DEVOLUTION)

HEALTHCARE WORKERS	2014	2015	2016	2017
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Number of doctors

Number of nurses

Number of clinical officers

Number of medical specialists

Total number of healthcare workers

2. SALARIES PAID TO WAJIR COUNTY HEALTHCARE WORKERS FROM 2014 TO 2017 (UNDER DEVOLUTION)

SALARIES	2014	2015	2016	2017
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Amount in salaries paid to doctors

Amount in salaries paid to Nurses

Amount in salaries paid to Clinical Officers

Amount of salaries paid to Medical Specialist

Total amount paid to health workers

3. MINISTRY OF HEALTH PAYROLL DATA FOR WAJIR COUNTY BEFORE DEVOLUTION (YEAR 2012)

Health care workers

2012 – PRE DEVOLUTION

Number of doctors

Number of nurses

Number of clinical officers

Number of medical specialists

Total number of healthcare workers in 2012

4. SALARIES PAID TO HEALTHCARE WORKERS IN WAJIR COUNTY IN THE YEAR 2012 (PRE DEVOLUTION)

Salaries

2012- PRE DEVOLUTION

Amount paid to doctors

Amount paid to nurses

Amount paid to clinical officers

Amount paid to medical specialists

Total

A) BUDGET INFORMATION DATA

1. WAJIR COUNTY HEALTHCARE BUDGET FOR THE 5 YEARS POST DEVOLUTION

YEAR	RECURRENT EXPENDITURE	DEVELOPMENT EXPENDITURE	TOTAL
2013 – 2014			
2014 – 2015			
2015 – 2016			
2016 – 2017			
2017 – 2018			
TOTAL OVER 5 YEARS			

2. MINISTRY OF HEALTH BUDGET ALLOCATED TO WAJIR IN THE YEAR 2012 (PRE DEVOLUTION)

YEAR	RECURRENT	DEVELOPMENT	TOTAL
2012/2013			

B) DATA ON DISTRIBUTION OF HEALTHCARE WORKERS PER SUBCOUNTY

1. PRE DEVOLUTION (2012)

SUBCOUNTY	NUMBER IN THE YEAR 2012 UNDER NATIONAL GOVERNMENT			
	DOCTORS	CLINICAL OFFICERS	NURSES	MEDICAL SPECIALISTS
WAJIR EAST				
WAJIR WEST				
WAJIR NORTH				
WAJIR SOUTH				
TARBAJ				
ELDAS				
TOTAL				

1. POST DEVOLUTION DISTRIBUTION OF HEALTHCARE WORKERS
(2013 TO 2017)

SUB-COUNTY	2013				2014				2015				2016		2017					
	D	C	N	S	D	C	N	S	D	C	N	S	D	C	N	M	D	C	N	M
WAJIR EAST																				
WAJIR WEST																				
WAJIR NORTH																				
WAJIR SOUTH																				
TARBAJ																				
ELDAS																				
TOTAL																				

KEY;

D- Doctors

C- Clinical officers

N -Nurses

S- Medical specialists

D. DATA ON HEALTHCARE WORKERS SKILLS MIX

1. NURSES

NUMBER OF DIFFERENT NURSING CADRES BEFORE DEVOLUTION

<u>CARDER</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>
Kenya enrolled community health nurse					
Kenya registered nurse					
Kenya registered community health nurse					

Kenya registered nurse midwife
 Kenya registered nurse mental health and psychiatry
 Kenya registered midwife
 Kenya registered psychiatry nurse
 Kenya registered ophthalmic nurse
 Kenya registered pediatric nurse
 Kenya registered perioperative nurse
 Kenya registered nurse anesthetist
 Kenya registered critical care nurse
 Kenya registered nephrology nurse
 Kenya registered accident and emergency nurse
 Kenya registered neonatal nurse
 Bachelor of science nursing

NUMBER OF DIFFERENT NURSING CADRES AFTER DEVOLUTION

<u>CARDER</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>
Kenya enrolled community health nurse					
Kenya registered nurse					
Kenya registered community health nurse					
Kenya registered nurse midwife					
Kenya registered nurse mental health and psychiatry					
Kenya registered midwife					
Kenya registered psychiatry nurse					
Kenya registered ophthalmic nurse					
Kenya registered pediatric nurse					
Kenya registered perioperative nurse					
Kenya registered nurse anesthetist					
Kenya registered critical care nurse					
Kenya registered nephrology nurse					
Kenya registered accident and emergency nurse					

Kenya registered neonatal nurse

Bachelor of science nursing

2. CLINICAL OFFICERS

PRE DEVOLUTION – 2012

CADRE

NUMBER IN THE YEAR 2012

Registered clinical officers

Clinical officer ophthalmology

Clinical officer ENT

Clinical officer pediatrics

Clinical officer anesthesia

Clinical officer reproductive health

Clinical officer dermatology

POST DEVOLUTION – 2013 TO2017

CARDE	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>
Registered clinical officer					
Clinical officer ENT					
Clinical officer ophthalmology					
Clinical officer pediatrics					
Clinical officer anesthesia					
Clinical officer Reproductive health					
Clinical officer dermatology					

3. MEDICAL OFFICERS

NUMBER OF DIFFERENT CADRES OF DOCTORS IN WAJIR BEFORE DEVOLUTION – YEAR 2012

NUMBER IN 2012

MEDICAL OFFICERS
SENIOR MEDICAL OFFICERS
PHYSICIAN
OBS/GYN
SURGEON
PEDIATRICIAN
TOTAL

NUMBER OF DIFFERENT CADRES OF DOCTORS IN WAJIR POST DEVOLUTION- 2013 TO 2017

	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>
MEDICAL OFFICERS					
SENIOR MEDICAL OFFICERS					
PHYSICIAN					
PEDIATRICIAN					
SURGEON					
PEDIATRICIAN					
TOTAL					

E. DATA ON IN – SERVICE TRAINING

This are healthcare workers undergoing further training while on study leave and (or) fully sponsored by either county government after devolution or national government before devolution.

Pre devolution in service training

Cadre	Number in 2012
Nurses	
Clinical officers	
Doctors	
Specialists	
Total	

Post devolution in service training

Cadre	2013	2014	2015	2016	2017
Nurses					
Clinical officers					
Doctors					
Specialists					
Total					

C) NUMBER OF HEALTH FACILITIES OPERATIONAL

2012 – predevolution

<u>Level</u>	<u>Number in 12</u>
<u>1</u>	
<u>2</u>	
<u>3</u>	
<u>4</u>	
<u>5</u>	
<u>6</u>	

Number of operational facilities post devolution 2013 to 2017

<u>Level</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>
<u>1</u>					
<u>2</u>					
<u>3</u>					
<u>4</u>					
<u>5</u>					
<u>6</u>					

APPENDIX 8: PARTICIPANT INFORMATION CONSENT FORM

ASSESSING THE EFFECT OF DEVOLUTION ON THE NUMBER OF HEALTHCARE WORKERS IN HARDSHIP AREAS: A STUDY ON THE NUMBER OF DOCTORS, CLINICAL OFFICERS, NURSES AND SPECIALISTS IN WAJIR COUNTY.

Section 1

Investigator – Dr Adankhalif Adan kala

Institutional affiliation – Strathmore business school

Section 2 - THE STUDY

This study is been carried out to assess the effect of devolution on number of healthcare workers in hardship areas. The study will carried out in Wajir County to represent the other hardship areas. The study involves secondary data analysis on payroll and data for the past 5 years. Analysis will be done to compare the numbers before and after devolution.

2.1: Do I have to take part?

No. Taking part in this study is entirely optional and the decision rests only with you. If you decide to take part, you will be asked to provide data on health workers payroll and county health budget. If you are not able to answer all the questions successfully the first time, you may be asked to sit through another informational session after which you may be asked to answer the questions a second time. You are free to decline to take part in the study from this study at any time without giving any reasons.

2.2: Who is eligible to take part in this study?

- a) County director of health
- b) County chief officer health
- c) Principal Secretary – ministry of health
- d) Director of medical service – ministry of health

2.3: What will taking part in this study involve for me?

You will be approached and requested to take part in the study. If you are satisfied that you fully understand the goals behind this study, you will be asked to sign the informed consent form (this form) and then taken through a questionnaire to complete.

2.4: Are there any risks or dangers in taking part in this study?

There are no risks in taking part in this study. All the information you provide will be treated as confidential and will not be used in any way without your express permission.

2.5: Are there any benefits of taking part in this study?

The information will be used to improve health services in hardship areas around the world.

2.6: What will happen to me if I refuse to take part in this study?

Participation in this study is entirely voluntary. Even if you decide to take part at first but later change your mind, you are free to withdraw at any time without explanation.

2.7: Who will have access to my information during this research?

All research records will be stored in securely locked cabinets. That information may be transcribed into our database but this will be sufficiently encrypted and password protected. Only the people who are closely concerned with this study will have access to your information. All your information will be kept confidential.

2.8: Who can I contact in case I have further questions?

You can contact me, ADANKHALIF ADAN KALA, at SBS, or by e-mail adankhalif@yahoo.com, or by phone 0722307456. You can also contact my supervisor, Dr. PRATAP KUMAR, at the Strathmore Business School, Nairobi, or by e-mail pkumar@strathmore.edu or by phone 0731848163.

If you want to ask someone independent anything about this research please contact:

The Secretary–Strathmore University Institutional Ethics Review Board, P. O. BOX 59857, 00200, Nairobi, email ethicsreview@strathmore.edu Tel number: +254 703 034 375

I, _____, have had the study explained to me. I have understood all that I have read and have had explained to me and had my questions answered satisfactorily. I understand that I can change my mind at any stage.

Please tick the boxes that apply to you;

Participation in the research study

I AGREE to take part in this research

I DO NOT AGREE to take part in this research

Storage of information on the completed questionnaire

I AGREE to have my completed questionnaire stored for future data analysis

I DO NOT AGREE to have my completed questionnaire stored for future data analysis

Participant's Signature: _____

Date: _____/_____/_____

DD / MM / YEAR

Participant's Name: _____

Time: _____/_____

HR / MN

I, _____ (Name of person taking consent) certify that I have followed the SOP for this study and have explained the study information to the study participant named above, and that s/he has understood the nature and the purpose of the study and consents to the participation in the study. S/he has been given opportunity to ask questions which have been answered satisfactorily.

Investigator's Signature: _____

Date: _____/_____/_____

DD / MM / YEAR

Investigator's Name: _____

Time: _____/_____

HR / MN

APPENDIX 9: ETHICAL APPROVAL FROM STRATHMORE UNIVERSITY



Strathmore
UNIVERSITY

21st March 2018

SU-IRB 0189/18

DR ADANKHALIF ADAN KALA
P.O Box 68900 - 00622
WAJIR

Email: adankhalif@yahoo.com

Dear Dr Kala,

REF Student Number: MBA-HCM/093848/16 **Protocol ID:** SU-IRB 0189/18
Title: *Assessing The Effect Of Devolution On The Number Of Healthcare Workers In Hardship Areas: A Study On The Number Of Doctors, Clinical Officers, Nurses And Specialists In Wajir County.*

We acknowledge receipt of your application documents to the Strathmore University Institutional Ethics Review Committee (SU-IERC) which includes:

1. Study Proposal dated February 2018
2. Participant Information sheet and consent Form dated 15th March 2018
3. Data Collection tools
4. Study Budget
5. CV

The committee has reviewed your application, and your study "*Assessing the Effect of Devolution on the Number of Healthcare Workers in Hardship Areas: A Study on the Number of Doctors, Clinical Officers, Nurses and Specialists in Wajir County.*" has been granted **approval**.

This approval is valid for one year beginning **21st March 2018** until **20th March 2019**.

In case the study extends beyond one year, you are required to seek an extension of the Ethics approval prior to its expiry. You are required to submit any proposed changes to this proposal to SU-IERC for review and approval prior to implementation of any change.

SU-IERC should be notified when your study is complete.

Thank you

Sincerely,

Amina Salim
Regulatory Affairs Fellow



APPENDIX 10: APPROVAL FROM NACOSTI



NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

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NACOSTI, Upper Kabete
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P.O. Box 30623-00100
NAIROBI-KENYA

Ref. No. **NACOSTI/P/18/70904/22011**

Date: **24th April, 2018**

Dr. Adankhalif Adan Kala
Strathmore University
P.O. Box 59857-00200
NAIROBI.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on "*Assessing the effect of devolution on the number of healthcare workers in hardship areas: a study on the number of doctors, clinical officers, nurses and specialists in Wajir County*" I am pleased to inform you that you have been authorized to undertake research in **Wajir County** for the period ending **24th April, 2019.**

You are advised to report to **the County Commissioner, the County Director of Education and the County Director of Health Services, Wajir County** before embarking on the research project.

Kindly note that, as an applicant who has been licensed under the Science, Technology and Innovation Act, 2013 to conduct research in Kenya, you shall deposit **a copy** of the final research report to the Commission within **one year** of completion. The soft copy of the same should be submitted through the Online Research Information System.

DR. STEPHEN K. KIBIRU, PhD.
FOR: DIRECTOR-GENERAL/CEO

Copy to:

The County Commissioner
Wajir County.

The County Director of Education
Wajir County.

**ASSESSING THE EFFECT OF DEVOLUTION ON THE NUMBER OF
HEALTHCARE WORKERS IN HARDSHIP AREAS: A CASE STUDY OF
DOCTORS, CLINICAL OFFICERS, NURSES AND SPECIALISTS IN WAJIR
COUNTY**

ADANKHALIF ADAN KALA

MBA-HCM/093848/16

A dissertation submitted to Strathmore Business School in partial fulfillment of the requirements for the award of the degree of Master of Business Administration in Healthcare Management

May 2018

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DECLARATION

I declare that this work has not been previously submitted and approved for the award of a degree by this or any other university. To the best of my knowledge and belief, the thesis contains no materials previously published or written by another person except where due reference is made in the thesis itself.

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Adankhalif Adan Kala
May 2018

Approval

The dissertation of Adankhalif Adan Kala was reviewed and approved by

Dr Pratap Kumar (Supervisor)
Senior Lecturer
Strathmore Business School

Dr. George Njenga
Dean, Strathmore Business School

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Dean, School of Graduate Studies
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ABSTRACT

Kenya has had shortage of healthcare workers since independence, but this picture is worse in the hardship areas as majority of these workers tend to concentrate in urban areas. The Constitution of Kenya 2010 devolved management of health workers to the 47 counties. The aim of this study was to find out the effect of devolution on number of healthcare workers in a typical hardship area, with major focus on doctors, nurses, clinical officers and specialists in Wajir County. The specific objectives were to find out the effect of devolution on the number of healthcare workers, and their distribution in the sub counties and how devolution influenced budgetary allocation to health. Secondary data analysis of the payroll and budget of health department for 5 years was done to find out the number of healthcare workers in terms of absolute numbers, specialization, and amount paid in salaries, number on study leave, and health budget allocation as at 2012 (before devolution and from 2014 to 2017 under county government). Descriptive statistics of graphs was used to present the data. The study established that Wajir County has had tremendous improvement in the number of health care workers in the past 5 years. The study further established that under the devolved governance, the number of healthcare workers who have improved their skills by undergoing further training and specializing in different fields of nursing, medicine and clinical medicine has significantly increased. The study found out that Wajir County allocated significant amount of funds in the annual budget for health, which has availed enough funds to recruit enough health workers. Wajir County recruited its first medical specialist, a surgeon in 2017. The County has also given a substantial number of staff paid study leave to improve number of specialists among doctors, nurses and clinical officers. The study concluded that there was a positive relationship between devolution and improvement in the number of healthcare workers.

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Thank you all and may God bless you.

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DEFINITION OF KEY TERMS

Devolution	Transfer or delegation of power to a lower level, especially by central government to a local or regional administration.
Wajir County	A county in the former North-Eastern Province of Kenya. Its capital is Wajir town.
Medical doctor	A person with a medical degree whose job is to treat people who are ill or hurt.
Clinical Officer	A person with a diploma or degree and is qualified and authorized to practice medicine and performs general and specialized medical duties. They mainly work at health centers.
Nurse	A profession within the healthcare sector focused on care of individuals, families and communities so that they may maintain or recover optimal health and quality of life.
Medical specialist	These are doctors who have completed advanced education and clinical training in a specific area of medicine (their specialty area). Examples include surgeon, pediatrician, gynecologist, etc.
Healthcare worker	These are people whose job is to protect and improve the health of their communities.
Payroll	A list of employees working in an organization and the amount of money they are to be paid
Budget	An estimate of income and expenditure for a set period of time

LIST OF ABBREVIATIONS

COK-	Constitution of Kenya
CA –	County Assembly
CIDP-	County Integrated Development Plan
CGW-	County Government of Wajir
CO –	Clinical officer
COC -	Clinical Officers Council
CPD -	Continuing Professional Development
CPSB –	County Public Service Board
CRA –	Commission of revenue allocation
DMO -	District Medical Officer
ECN -	Enrolled Community Nurse
GOK -	Government of Kenya
HCW -	Health Care Workers
HMIS -	Health Management Information Systems
HR -	Human Resources
HRD -	Human Resources Development
HRH -	Human Resource for Health
HRIS -	Human Resources Information System
HRM -	Human Resources Management
ICT -	Information & Communication Technology
IMF-	International Monetary Fund
IPPD-	Integrated Personnel Payroll Database
KANU –	Kenya Africa National Union
KMTC -	Kenya Medical Training College
KNBS -	Kenya National Bureau of Statistics
KNEC -	Kenya National Examination Council
KNHRHSP -	Kenya National Human Resources for Health Strategic Plan
KNH-	Kenyatta National Hospital
KRCHN -	Kenya Registered Community Health Nurse
KRN -	Kenya Registered Nurse

KRA –	Kenya Revenue Authority
LATF –	Local Authority Transfer Fund
LMICs -	Low & Middle Income Countries
MD-	Medical Doctor
MMR -	Maternal Mortality Rate
MOE -	Ministry of Education
MDG -	Millennium Development Goal
MOH -	Ministry of Health
MTRH-	Moi Teaching and Referral Hospital
NA –	National Assembly
NHIF –	National Hospital Insurance Fund
NSSF –	National Social Security Fund
PSC –	Public Service Commission
SDG –	Sustainable Development Goals
SU-IERC-	Strathmore university ethical review committee
UHC-	Universal health coverage
WB –	World Bank

CHAPTER ONE

INTRODUCTION

1.1. Background of the Study

Majority of the healthcare personnel tend to concentrate mainly in the urban areas, thus denying services to those in the remote hardship areas. Higher worker density generates better health outcomes, lower burnout, better morale, and greater job satisfaction. Given that the public sector is a major provider of health services in many developing countries and one of the major employers of health workers, their availability and adequacy becomes particularly important in the public health service.

Further, the availability of well-trained and appropriately skilled health workers has the potential to influence the attainment of health goals including health-related SDGs. (WHO, 2016) Health workers are the backbone of strong, resilient health systems. Universal health coverage and guaranteed global health security are only possible with adequate investment in the health workforce. The government of Kenya has set out to achieve 4 main agendas in the next 5 years (2018 – 2022) popularly known as The Big Four, which includes universal health coverage. This requires all the health systems building blocks working at optimum level. The six building blocks include health workforce, healthcare financing, service delivery, information and research, medical products, technologies and leadership/governance. To achieve UHC this government plans to enroll all Kenyans into National hospital insurance fund (NHIF) to improve coverage. The government is also importing 100 medical specialists from Cuba to be posted to each of the 47 counties (at least 2 specialists per county with some counties receiving 3). This will reduce the shortage of specialists facing counties in hardship areas.

Health workforce shortages are increasing the inequities in access to health services, causing preventable illness, disability and death, and threatening public health, economic growth and development, as starkly demonstrated by the Ebola outbreak in West Africa. For instance, Maternal Mortality Rate (MMR) was one such indicator cited as being directly linked to availability of trained service providers with specialized training in maternal health.

Before the promulgation of the new constitution, the Public Service Commission (PSC) was the general employer of all government employees in Kenya, including health practitioners.

Its overall role was to provide general oversight and guidelines for strategic human resource management and development in the public sector. Routine operational human resource development and management functions including appraisal, recruitment, and discipline, payment of salaries, in-service training and promotions were delegated to the various government ministries such as the Ministry of Health, for health workers. In the devolved system of government, the PSC is only mandated to support in employment of national government employees as well as providing oversight of the whole public service sector, both at the county and national level.

Constitutional pressures led to Kenya enacting a new constitution which was promulgated in August 2010. The new constitution created 47 county governments and health care services were devolved to these new entities. While the county executive member, chief officer and director of health runs the county government health docket, the county public service board recruits, disciplines and even dismisses health care workers. The National government through Ministry of Health retained the management of the 4 national referral hospitals; Kenyatta National Hospital(KNH), Moi Teaching and Referral Hospital(MTRH), Mathari Mental Hospital and National Spinal Injury Hospital. The Ministry also retained function of developing of health related policies and training functions. Counties did not have a tailored health policy because there was no standard framework regarding deployment, employment, transfer and remuneration of healthcare personnel for all the 47 counties. The Government and external stakeholders are aware that in order to improve recruitment and increase retention of healthcare personnel in Northern Kenya, and other hardship areas, there is need to invest in incentives specifically targeting healthcare workers posted to work in remote, poorer, hard-to-reach rural areas, enabling them to serve communities that need them most.

1.2. Statement of Problem

Healthcare personnel recruitment, their working conditions as well as their wages have been pertinent issues in the Northern Kenyan Counties. Wajir County historically has experienced the challenge of recruiting and retaining healthcare workers. For a very long period of time, employment of highly skilled healthcare workers to Wajir County and other marginalized areas has proved very difficult (Ministry of health, 2015). One of the major reasons for this is the hardship nature of these counties; there are no basic social amenities like good housing, good food and transport. Additionally, harsh environmental conditions and unsafe working

environments have pushed away qualified personnel from these counties. Most health care workers posted to Wajir resign either before going or desert once they work for few months.

Wajir County has suffered from serious inequities in health worker distribution since independence. The nurse to patient ratio in Wajir county was 1: 4163 while the doctor to patient ratio was 1:132,000, far from the internationally recommended standards of 1:5000 and with a bed capacity of 358 (Wajir First County Integrated Development Plan 2013-2017, 2003). This has been attributed to low numbers of trained healthcare workers and those in training (“pipeline”) whose homes are within the county.

This region has also been politically and historically marginalized resulting in a lack of economic, social, professional opportunities thus exacerbating the healthcare workforce challenges in this part of the country. Moreover, insecurity (mostly perennial inter-tribal/clan conflicts) in this region is a major deterrent that also influences perceptions of the region. As a result, there is a steady exodus of healthcare personnel from Wajir County to other regions. Also, since Kenya’s Defense Forces incursion in Somalia in 2011 which was occasioned by frequent Al-Shabaab militant attacks and abduction of tourists along the Kenyan coast, as well as frequent attacks or abductions to Kenyan healthcare and aid workers, many healthcare workers (especially those from outside Northern Kenya) might have fled the county.

Another significant problem in hardship areas has been institutional weaknesses due to corruption which have resulted in the recruitment of unqualified staff owing to nepotistic tendencies and political interests

1.3. Justification

The effect of devolution on the number of the healthcare workers in hardship areas has not been extensively explored by prior researchers hence the gap in information on this area. Previous studies have explored the effects of devolution on the healthcare service delivery as well as the plight of workers, but failed to analyze the effect on the number of workers. The present study will provide key insights on this subject area focusing on Wajir County.

This kind of study has not been conducted in the management area of study and so the findings and outcome would be used as the basis for solving the issues concerning healthcare workers recruitment and retention in Wajir County. The findings from this study will also form a backbone upon which other studies will be based on. The study will identify

inadequacies that exist in the distribution of healthcare workers and their retention. This study is essential for the partial fulfillment for the award of a Master's degree in Business Administration (Healthcare Management) at Strathmore University.

1.4 Objectives of the study

1.4.1. General objective

To determine the effect of devolution on the number of healthcare workers in Wajir County and influence of devolution on budgetary allocation for health.

1.4.2. Specific Objectives

- i. To determine how devolution has impacted number of healthcare workers in Wajir County
- ii. To evaluate the influence of devolution on distribution of human resource for health in the six sub - counties within Wajir County.
- iii. To find out the difference in amount allocated in the budget to health services by national and county government in Wajir County.

1.5. Research Questions

- i. What is the effect of devolution on the number of the County healthcare workers in Wajir?
- ii. How does devolution influence the distribution of human resource for health in the different sub – counties within Wajir County
- iii. What is the effect of devolution on budgetary allocation for health in the counties?

1.6. Scope of the study

The research will be limited to a study of Wajir County’s department of health and County Public Service Boards. The study seeks to analyze how devolution has affected the county health services in terms of human resource for health and financing of health; two key pillars of health systems.

The study looked at the number of healthcare workers inherited from the national ministry of health (seconded staff), the number of healthcare workers hired by Wajir county government since devolution and the distribution of health care workers in the six sub counties of Wajir.

The number of healthcare workers from Wajir County currently undergoing further training was also analyzed against their field of study. This includes doctors, nurses and clinical officers specializing in different fields. The number currently has been sponsored by Wajir County will be compared with the number sponsored by national government before devolution.

Wajir county healthcare workers skills mix was also analyzed. The different cadres of nurses, clinical officers, doctors and specialists before and after devolution will be compared.

The budget allocation to human resource for health by Wajir county government since devolution was checked against national ministry of health allocation to Wajir for a full year before devolution.

1.7. Significance of the study

The study will help the Wajir County to take full advantage of devolution to optimize number of healthcare workers to WHO recommended numbers.

The National Government will ensure devolution is fully supported so that all counties in the country are at par in regards to provision of health. It will also ensure Equalization fund is released to counties so that marginalized counties such as Wajir County catches up. The generated information will also help with policy development.

The study will also help the international Community embrace devolution so as to achieve the Sustainable Development Goals.

CHAPTER TWO

LITERATURE REVIEW

2.1. Introduction

Devolution is a form of decentralization, or the transfer of authority and responsibility from central to lower levels of government for a range of public functions (Ndii, 2010). The purposes and forms of decentralization vary widely; there is no “one-size-fits-all” approach. Decentralization is usually defined using three categories that represent progressively larger transfers of autonomy and responsibility to subnational governments (Ndii, 2010). Each category presents particular challenges and opportunities for health services. Depending upon the functions and authorities transferred, decentralization processes can involve one or more categories. In Kenya, the constitution identifies the decentralization process as devolution because of the existence of locally elected governors and county assembly members, although minor elements of deconcentration (e.g., seconded staff) and delegation (e.g., the National Hospital Insurance Fund) also exist.

The three types of decentralization are:

- a) Devolution-power, responsibility, and budgetary authority are shifted to locally elected or appointed officials.
- b) Deconcentration-National institutions place staff at the local level but retain decision-making power.
- c) Delegation-Management of public functions is transferred to semiautonomous or parastatal organizations.

2.2. Decentralization before the 2010 Devolution

Decentralization has a long history in Kenya. Following independence in 1963, the British colonial government proposed a system of regional governments based on ethnic and tribal considerations (Institute of Economic Affairs, 2011). This plan was quickly dropped by the Kenya National African Union, the dominant political party at the time. Instead, the party created a unitary state with eight provinces and 175 local authorities (Republic of Kenya, 1977). This structure effectively centralized power with the government in Nairobi, minimizing the control of resources exercised at lower levels (Norad, 2009). Under this act, the Ministry of Local Government provided strong central oversight of local governments,

and government policy was enacted throughout the provinces. Although local authorities were responsible for service provision, they had little decision-making authority under this system (Kunnat, 2009).

Kenya attempted to decentralize decision making numerous times under this original framework. In the 1970s and 1980s, the government created six Regional Development Authorities to plan and coordinate activities (KHRC, 2010). In 1983, the District Focus for Rural Development Strategy put the district at the center of priority setting (Barkan & Chege, 1989). These strategies deconcentrated central ministry administrative staff, while also disempowering local authorities, creating few clear responsibilities or mandates between the two alternatives. By the 1990s, World Bank and International Monetary Fund (IMF) structural adjustment programs were promoting deregulation and decentralization. In Kenya, the World Bank began directly funding local governments under its Local Government Reform Program (Esidene, 2011).

These reforms continued to promote deconcentration, as provinces and districts took on more responsibility for service provision, but created no new decision-making powers. During this time, finances were decentralized vertically because the rural development and structural adjustment programs had created overlapping mechanisms, such as the Rural Development Fund and the Local Authority Transfer Fund (KHRC, 2010). By 2010, there were 13 distinct vertical funding mechanisms available to the decentralized levels. However, these mechanisms confused, rather than clarified, lines of authority, increasing administrative inefficiency (Barkan & Chege, 1989).

By most accounts, these efforts at decentralization were not successful, and Kenya remained highly centralized (Ndii, 2010; Ndavi et al., 2009). Various studies have found that previous decentralization frameworks were weakened by: limited decision space for local governments (Muriu, 2013), poor legal basis for decentralization (Chitere, 2004), weak citizen participation (Muriu, 2013; Chitere, 2004; Oyaya, 2004), capacity gaps within local governments (Chitere, 2004; Oyaya, 2004) and continued civil servant dominance (Chitere, 2004; Oyaya, 2004).

2.3 Devolution after 2010

According to constitution of Kenya 2010, chapter 15 article 176 and 177:

- i) There shall be a county government for each county consisting of a county assembly and a county executive.
- ii) County governments shall have reliable source of revenue to enable them govern and provide service effectively

According to schedule 4 of the constitution of Kenya 2010, 14 functions have been devolved to county governments including health services. The county assembly provides oversight while county executive provides services. According to chapter twelve of Constitution of Kenya 2010:

(1) Revenue raised nationally shall be shared equitably among the national and county governments.

(2) County governments may be given additional allocations from the national government's share of the revenue, either conditionally or unconditionally.

An independent constitutional commission, Commission of Revenue allocation (CRA), was set up to independently come up with how national revenue will be shared between national and county governments pursuant to article 217 1 (a)

2.3.1 Human resource for health under devolution

At the county government level, the promulgated constitution of 2010 provided for the creation of County Public Service Boards (CPSB) in every county which would serve as the general employer of all public service employees in specific counties. Public service employees performing devolved functions after the general elections of 2013 were seconded to county governments, and deployed after the human resource management structures in each county were established. In the health sector, the ministry of health in conjunction with the transitional authority undertook the human resource management assessment for each county and further work on building capacity for all CPSBs (Tsofa, 2017).

According to County Government Act number 17 of 2012 article 59 the functions of the County Public Service Board shall be, on behalf of the county government, to:

- (a) Establish and abolish offices in the county public service;
- (b) Appoint persons to hold or act in offices of the county public service including in the Boards of cities and urban areas within the county and to confirm appointments;
- (c) Exercise disciplinary control over, and remove, persons holding or acting in those offices as provided for under this Part;
- (d) Prepare regular reports for submission to the county assembly on the execution of the functions of the Board;
- (e) Promote in the county public service the values and principles referred to in Articles 10 and 232;
- (f) Evaluate and report to the county assembly on the extent to which the values and principles referred to in Articles 10 and 232 are complied with in the county public service;
- (g) Facilitate the development of coherent, integrated human resource planning and budgeting for personnel emoluments in counties;
- (h) Advise the county government on human resource management and development;
- (i) Advise county government on implementation and monitoring of the national performance management system in counties;
- (j) Make recommendations to the Salaries and Remuneration Commission, on behalf of the county government, on the remuneration, pensions and gratuities for county public service employees.

2.3.2 Effects of devolution on the number of healthcare workers across the globe

Typically, devolution changes the governance relations in the health system. Devolution functions to improve performance of the health system through transferring of authority and responsibilities to locally elected governments (Collins, Araujo & Barbosa, 2000). In Mali, devolution has aided in improving the capacity of the human resources for health. Lodenstein and Dao (2011) establishes that devolution can promote the increased recruitment and retention of health workers. When resources are decentralized it means that it is possible to improve the wages of the healthcare workers as well as the work conditions of the various health facilities. More health care personnel are therefore attracted to these regions to improve the healthcare service delivery.

In rural Mali for example there are several constraints to health service provision such as resource management- especially regarding key issues such as allocation and performance of

available human resources. The ratio of qualified population/staff is eight times higher in the urban areas as compared to the rural health centers; and this is especially true for midwives. Another issue is the geographical disparities which limit the increased movement of healthcare personnel to these rural areas. As such, there is limited availability and quality of staff. When the government decentralizes these responsibilities for the management of local health centers to local institutions then these inadequacies can be effectively addressed. Mali has a devolution policy which supports the transfer of human resources at the primary healthcare level from civil service to local governments' service-in such cases, local governments contract local health staff and even pay their salaries and incentives. The District Health Management also trains and monitors the performance of the workers. With devolution, it is expected that there will be increased establishment of new health centers hence increased employment of local health staff by 30%. Further, with devolution there is increased hiring and recruitment of staff from within the locality.

In Mali, decentralization has led to increased hiring of locals thus they are less able to leave their posts. They are offered incentives such as transportation and housing among, other incentives given in kind. Even so, this has only attracted the healthcare personnel at the lower cadres and not highly-skilled staff such as nurses and doctors. Decentralization policies would only be successful if they can resolve issues of attracting and retaining doctors and nurses as Lodenstein and Dao (2011) argued. The central governments tend to provide very fierce competition to the local governments as they provide civil servant contracts with career perspectives and better security. Thus, the posts in the remote areas are just used by people as a bridge to government employment precisely in the urban areas.

China and Tanzania are such nations that have observed this trend among the healthcare workers (Liu et al., 2006). They have reported uneven quality of service provision because the poorer and remote districts could not compete for qualified staff with central government (Munga et al., 2009). Inequity in staffing has also been a serious issue in Kenya where the Northern Counties have very low number of healthcare workers because trained and skilled workers prefer the jobs at the urban centers. Kenya should therefore adopt Mali's policy of decentralized recruiting through harmonizing the employee rights and status of different contracts and regulating competition (Lodenstein & Dao, 2011).

To reinforce this ideology Kolehmainen-Aitken (2004) states that unless equalization techniques are established then there would be competition between richer and poorer local governments and this could lead to inequity in staffing. Lutwama, Roos and Dolamo (2012) on the other hand have argued that decentralization affects the number and performance of healthcare workers. The main reasons as to the limited numbers is because of poor remunerations, lack of motivations or very low incentives more so to move to the remote or poorer regions.

Sihanya (2013) opined that devolution has the ability to make local officials' actions additionally transparent as well as present a check on corruption, appointment according to ties of the family or some other poor practices or connections. However, she also asserts that there exists a local political system that is active, outlets of news that are not part of these webs of influence and that individuals will be ready to blow the whistle where they view problems and that they are likely to be listened to. The foregoing author also established that devolving responsibilities not only impacted the regions or organizations where these responsibilities were devolved to, but also had an impact on the organization which is the ministry of health that is responsible for the devolution of authority. Also, the author highlights that proper governance should outline the policies that the health ministry will be made responsible for in the health care system that is devolved. Some of the examples include regulation of quality as well as training and education of doctors (Sihanya, 2013).

By devolution causing transparency and shunning corruption, it makes the activities of the devolved health sector to be done according to laid down policies and procedures. When these healthcare sectors operate according to regulations, the expectation is that healthcare practitioners will be drawn to the devolved healthcare sector leading to an increase in the number of health care practitioners in the county level and a reduction in healthcare practitioners in the national healthcare sector. Also, devolution creates opportunities in the county level where practitioners who are stuck with minimum growth opportunities at the national level, are likely to pursue. Finally, limited corruption is associated with sufficient resources at the country level and when resources are sufficient, practitioners are bound to acquire job satisfaction which will play a significant role in ensuring the existing health care practitioners are retained with minimum turnover.

Marchal (2009) asserts that on the negative side, devolution poses the danger of unwelcomed and unwanted results. Citing the case of Ghana.. In the context of training for example, the author argues that some training has to be done at the national level. As a result, getting them to be done at the devolved level can be challenging. Also, the author propounds that career structure is likely to suffer since areas of small administration have limited layers and even though the same is advantageous when it comes to efficiency it limits opportunities for individuals who are talented to rise in ranking via promotion.

The image that this situation portrays is that the devolved health care sector presents a limited opportunity for one to grow career-wise as the number of administration layers are limited. Therefore, not many health practitioners (especially those looking for a career growth) are likely to take up roles at the devolved level. As such, the level of growth in the number of employees at the devolved level is likely to be limited due to unattractiveness of the employment posts. Additionally, some programs such as health promotion, TB and HIV are organized in a vertical manner and on some occasions funded by external donors (Marchal, 2009). Being that the devolved system is a new programme, these donors are likely to be uncomfortable about using the devolved structure as they have a lot of confidence in the vertical programme. This situation raises potential conflict between the structure that is devolved and the vertical programme.

The donors lacking confidence in the devolved system, the likelihood of them funding the health activities at the devolved health sector is minimal. As such, due to financing issues, health care practitioners are less likely to go for job opportunities at the devolved level. This situation in the long run is bound to translate into multiple job vacancies at the country health sector and health sector nurses and clinical officer's shortage.

2.3.2. Outcomes of devolution on health work force in Kenya

Beyond the general responsibility of managing county employees, it was not clear what the specific roles the CPSB would undertake, especially in operational human resource management for health workers. It was also unclear on who was responsible for specific welfare elements of health workers including career progression and in-service training including how transfers for health workers across counties was to be managed. One study in Kilifi looked to analyze the early implementation outcomes of this governance reform at the county level.

When county governments took the role of paying salaries for all health practitioners from the national government, the process was characterized by numerous challenges including payroll discrepancies, delayed salary payments, staff missing from the pay role and missing allowances. There are perceptions by the general public that both the county and national governments are often compromised by their particular executive arms of government, via inducements and allowances to rubberstamp executive choices and decisions concerning health workers.

Discrimination and political interference in human resource management for health workers have been witnessed, with some counties reported to have rejected their staff as a result of them being from different tribes to the ones they were sent to (Tsofa et al., 2017). The fear for victimization and political interference, coupled with the ambiguity in inter-county transfers resulted in many health workers seeking transfers back to their counties of origin. As a result of these issues, reports of mass resignations became common (Gitonga, 2015). In late 2013, the 3 major health workers unions called for a nationwide strike pressing for the re-centralization of the health function back to the national government.

2.4. Number of health workers and health infrastructure in Wajir County

In Wajir County, there are 27 private facilities, 80 public health facilities in the 6 constituencies and 2 facilities managed by missions/NGOs. The county government has 10 level 4 hospitals, 26 level 3 health centers, 46 level 2 health centers, 24 clinics and 46 dispensaries. According to the Kenya Integrated Health Budget Survey (KIBHS) of 2006, over 95 percent of Wajir's population covers approximately 5 kilometers in order to access primary health care, while around 4 percent could access a health facility within a kilometer. The county was being served by 5 doctors, 625 community health workers and 118 nurses. The nurse to patient ratio in Wajir county was 1: 4163 while the doctor to patient ratio was 1:132,000, far from the internationally recommended standards of 1:5000 and with a bed capacity of 358 (Wajir First County Integrated Development Plan 2013-2017, 2013).

Despite the glaring shortages in doctors, the County built 34 new dispensaries and 42 maternity centers as well as increasing the number of health workers resulting in delivery of health by skilled personnel rising from 18 percent to 50 percent, according to the County's

director of health (Barasa & Muchui, 2016). Thus, while there is an acute shortage of health personnel in Wajir County, care needs to be taken when redeploying health workers so that regions with pronounced shortages are given priority over others with better health workers' figures. Also issues of gender distribution need to be considered.

The increase in allocations to the health sector is attributed to the development plans within the sector such as construction of new health facilities as well increased recruitment of medical staff. Although the county has increased the number of advertisements for specialist health professionals, most of them don't get responses. This has made the County to change tact and is now interested in recruiting consultants who will look into the issues the County has. The County has also been sponsoring local students to pursue medical related courses in tertiary and higher-level learning institutions who will in turn work in the county upon completion of their studies. In addition, the County government has constructed a Kenya Medical Training College (KMTC) campus close to Wajir Town at an estimated cost of Kshs 200 million. The County's administration hopes to increase the number of people training as nurses, nutritionists and public health officers in order to ensure availability of health workers in the county (Barasa, & Muchui, 2016).

2.5 Global strategy on human resource for health: workforce 2030

The vision that by 2030 all communities have universal access to health workers, without stigma and discrimination, requires combining the adoption of effective policies at national, regional and global levels with adequate investment to address unmet needs. Realistically, the scale-up required in the coming decades to meet increasing demand, address existing gaps and counter expected turnover is greater than all previous estimates. Projections developed by WHO and the World Bank point to the creation of approximately 40 million new health and social care jobs globally to 2030 and to the need for 18 million additional health workers, primarily in low-resource settings, to attain high and effective coverage of the broad range of health services necessary to ensure healthy lives for all (WHO, 2016).

Investments that increase the overall productivity of the health sector and produce better health outcomes are a cornerstone for building strong health systems and stronger economies. This chapter elaborates on three points. First, good health contributes to economic growth. Second, there are important additional pathways by which investments in the health system have spill-over effects that enhance inclusive economic growth, including job creation. Third,

new evidence suggests that expenditures on health are not dead-weight drags on the economy, but rather can be associated with productivity gains in other sectors (WHO, 2016).

2.6. Conceptual Framework

Conceptual framework is a diagrammatic embodiment of associations or linkages between study variables (Robson, 2011). The following framework illustrates the association between the independent variable and four dependent variables as depicted diagrammatically in Figure 2.1. In this study, the dependent variable will be the new constitution and the institutions it has created.

The independent variables will be the key influences or drivers of the dependent variable and for this study they include; number of healthcare workers in terms of absolute numbers, number who have specialized and number on study leave; distribution of health care workers in the sub-counties and budgetary allocation to health.


INDEPENDENT VARIABLE		DEPENDENT VARIABLE	
OLD CONSTITUTION 1963 – 2010		NEW CONSTITUTION 2010 to date	OUTCOME OF DEVOLUTION
Central government <ul style="list-style-type: none"> Ministry of health – manages country’s health services. 		Devolved government <ul style="list-style-type: none"> County department of health – manages county’s health services 	<ul style="list-style-type: none"> Total health workers
<ul style="list-style-type: none"> Public service commission – hires health workers for the whole country. 		<ul style="list-style-type: none"> County public service board-hires county health workers 	<ul style="list-style-type: none"> Number of health workers on paid study leave
<ul style="list-style-type: none"> National treasury – allocates funds to health 		<ul style="list-style-type: none"> County treasury- allocates funds to health 	<ul style="list-style-type: none"> Specialized health workers
<ul style="list-style-type: none"> National assembly- Oversight and representation 		<ul style="list-style-type: none"> County assembly-Oversight and representation 	<ul style="list-style-type: none"> Distribution of health workers in the sub counties
			<ul style="list-style-type: none"> Budgetary allocation to health

Figure 2.1: Conceptual framework

Source: Researcher (2018)

CHAPTER THREE

RESEARCH METHODOLOGY

3.1. Introduction

This chapter describes the research methodology of the study. Research methodology is the procedural plan that will be adopted by the researcher to validly, objectively, economically and accurately answer the research questions. It is a detailed explanation of the procedures and techniques that will be applied for collecting, processing and analyzing data. This section of the study therefore describes the research design, target population and area, sampling frame, sample and sampling technique, data collection instruments, procedures, analysis management and the ethical considerations that the study will adhere to.

3.2. Research Design

This is a descriptive case report study design that employed secondary data analysis techniques to review Wajir County health budget allocation and health department payroll data for 5 years with aim of analyzing how devolution has increased human resource for health in Wajir County.

The data from national ministry of health 2012 2014, 2015, 2016 and 2017 payroll data for health from Wajir County will be analyzed. Data from 2013 wasn't included because it was the transition year, elections were held in March and the payroll was maintained partly at the national level. Budget allocation to Wajir County health services by national ministry of health for financial year 2011/2012 and 2012/2013 will be compared to the four years post-devolution.

3.3. Target Population

The study targeted financial and employee recruitment and retention records of health workers of Wajir County; doctors, nurses, clinical officers and specialists.

3.4. Inclusion Criteria

The inclusion criteria focused on records of all healthcare workers seconded from national government to Wajir County at the start of devolution, as well as those of all healthcare workers who were employed in Wajir in the last 4 years were eligible for the study.

3.5. Exclusion Criteria

The records of private healthcare workers in the last 5 years were not included in the study. Also, the records of healthcare workers from other counties were not included in the study.

3.6.1. Sample size determination and sampling method

Wajir County is made up of 6 sub-counties; Wajir West, Wajir East, Wajir South, Wajir North, Tarbaj and Eldas. The study reviewed the healthcare financial records and healthcare employee recruitment and retention records for these sub-counties.

3.6.2. Validity

The secondary data abstraction tool was pretested two weeks before the actual data collection activity to ensure that any errors, omissions and grammar were corrected before the study began. This ensured that the data collection tool collected the right and correct information that it was intended to measure.

3.6.3. Reliability

This was ensured by abstracting the secondary data from the right documents through the authorized personnel and confirming from other government agencies like controller of budget and council of governors.

3.7. Data Management and analysis

The secondary data was coded and analyzed using a computer based software. The SPSS version 20 was used for analysis where the coded data was entered and analyzed based on the objectives of the study. The data was then analyzed by descriptive statistics, cross tabulations will be done to determine associations and trends, graphs and figures will be utilized to present the results.

The study looked at the number of healthcare workers inherited from the national ministry of health (seconded staff), the number of healthcare workers hired by Wajir county government since devolution, the number of healthcare workers retained by the county from the time of employment for at least two years compared with the number that left the county.

The number of healthcare workers from Wajir County currently undergoing further training was also analyzed against their field of study. This includes doctors, nurses and clinical officers specializing in different fields. The number currently sponsored by Wajir County was compared with the number sponsored by national government before devolution. Wajir county healthcare workers skills mix was also analyzed. The different cadres of nurses, clinical officers, doctors and specialists before and after devolution compared.

The budget allocation to human resource for health by Wajir county government since devolution was checked against national ministry of health allocation to Wajir for a full year before devolution

3.8. Ethical Considerations

Both scientific and ethical approvals were obtained from national commission for science, technology and innovation (NACOSTI) and Strathmore University Ethics Review Committee (SU- IERC). Permission to access the healthcare workers Payroll data from IPPD (integrated payroll and personnel database) and health care workers recruitment records was obtained from the Director of health, chairperson of County Public Service Boards and County Executive Member for Health. These department heads gave consent prior to data retrieval. All the data collected was de-identified and aggregated for privacy reasons.

CHAPTER FOUR

DATA ANALYSIS AND PRESENTATION

4.1 Introduction

This chapter presents the findings of the study and their interpretation. This is done in line with the study objectives.

4.2 Objective 1. Number of health care workers in Wajir before and after devolution

4.2.1: Comparison of the number of healthcare workers as at 2012 under ministry of health and over 5 years under devolution

The study sought to determine the number of health care workers in Wajir County over the last five years. The study wanted to establish the trend on the increase on the numbers over the years. The first year in consideration was 2012 when health was under national government. Then the number from 2014 to 2017 was determined to find out the increase.

Total number of health care workers working in Wajir county from 2012 to 2017

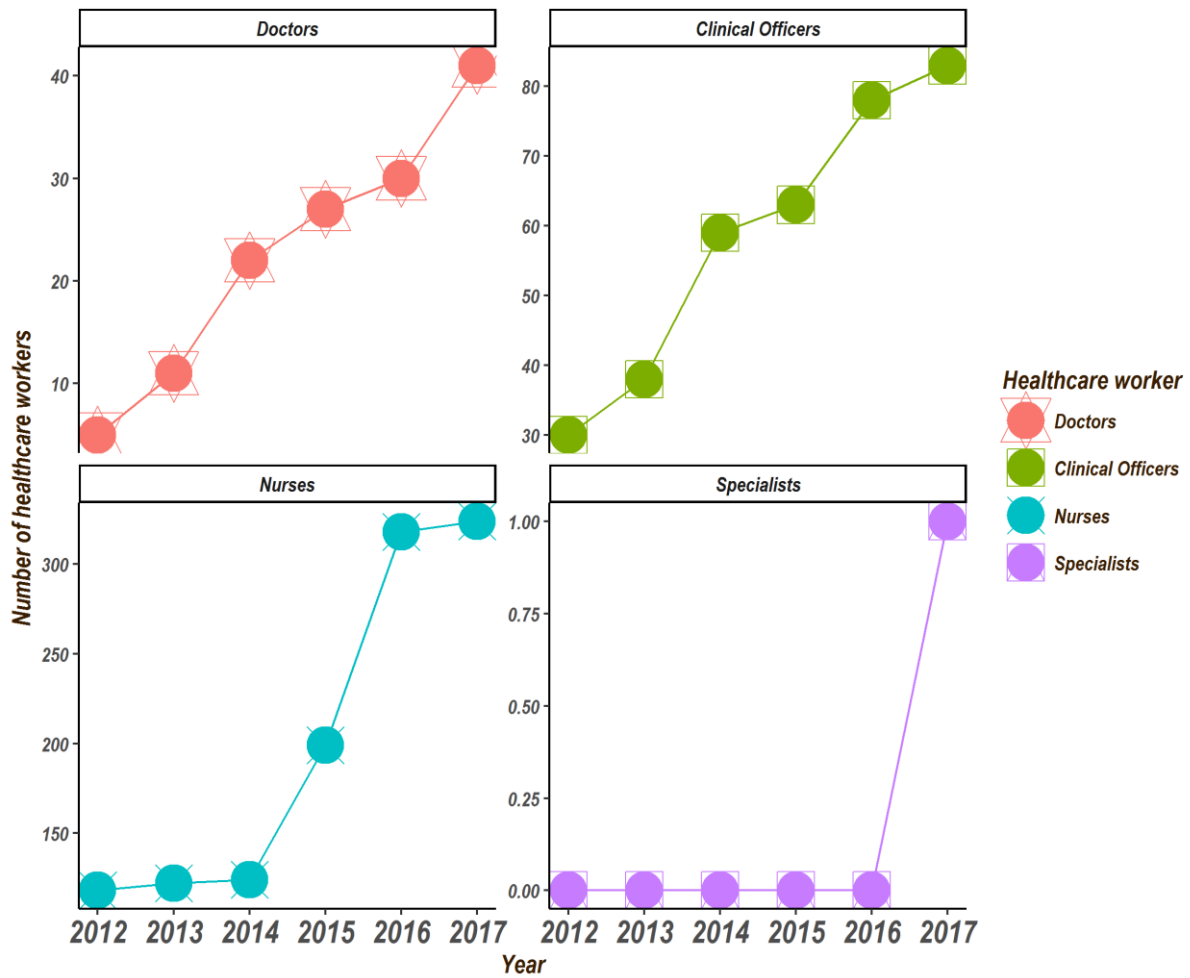


Figure 4.1: Number of health care workers in Wajir from 2012 to 2017.

Result of the study show that Wajir County has substantially increased its health care since inception of devolution. In the year 2012 under the national government, the county had 5 doctors. This number increased over the next 4 years with the number rising to 22 in 2014, 27 in 2015, 30 in 2016 and 41 in 2016. This means 17 doctors were recruited between 2013 and 2014, 5 in 2015, 3 in 2016 and 11 in 2017. The number of clinical officers also increased substantially with only 30 clinical officers in the entire county in 2012. The county did massive recruitment over 4 years under devolution with the number rising to 59 by 2014, 63 by 2015, 78 in 2016 and 83 by 2017.

The study shows that 29 new clinical officers were recruited between 2013 and 2014, 4 in 2015, 15 in 2016 and 5 in 2017. The same was noted for nurses as their number increased.

The county had 118 nurses in 2012, 124 in 2014, 199 in 2015, 318 in 2016 and 324 by end of 2017. This shows massive recruitment as 6 were recruited between 2013 and 2014, 75 nurses recruited in 2015, 119 in 2016 and 6 in 2017. The county did not have any medical specialists in 2012; none was recruited in 2013, 2014, 2015 and 2016 despite several adverts. One medical specialist, a surgeon, was however recruited in 2017.

4.2.2: specialized healthcare workers

The study sought to determine number of specialized health care workers before devolution under national government and after devolution, under county government. The number of specialized doctors, nurses and clinical officers in 2012 was compared to the numbers from 2014 to 2017.

4.2.2.1 Analysis of the different nursing specialization in 2012 under national government and from 2013 to 2017 under county government

The study sought to find out the number of nurses in Wajir County that have undergone further training and specialized in the various specialization recognized by nursing council of Kenya. The number specialized as at 2012 under national government and from 2014 to 2017 under county government was analyzed.

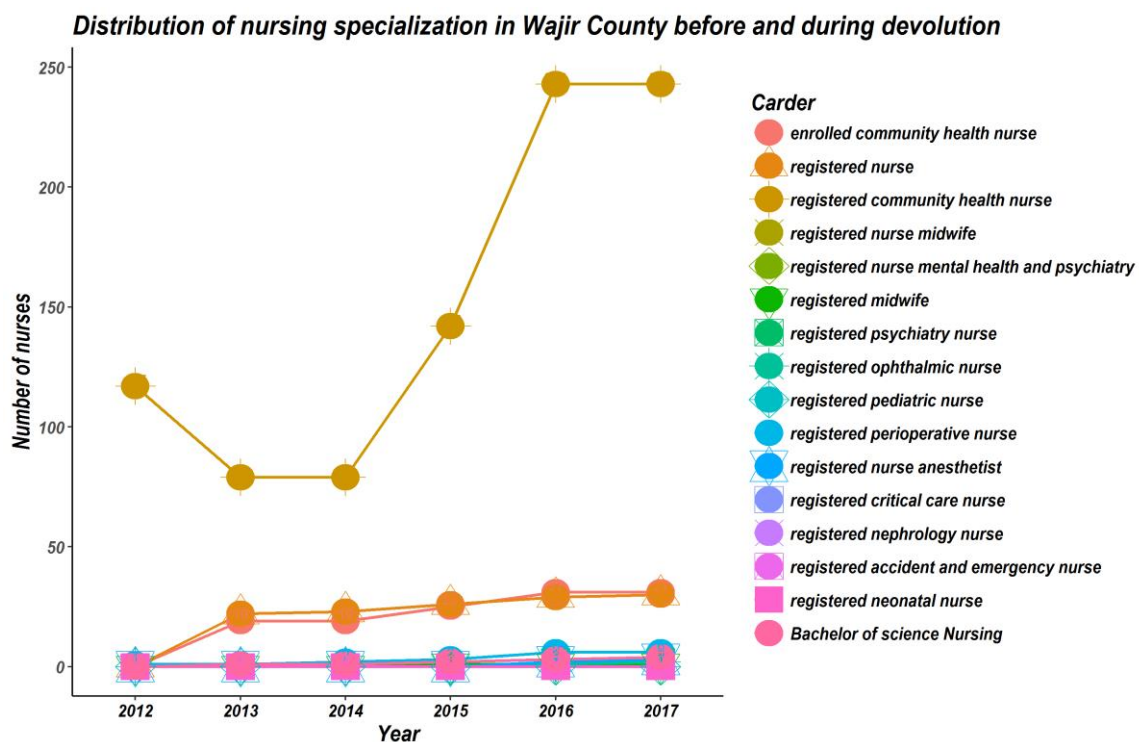


Figure 4.2: Number of specialized nurses in Wajir from 2012 to 2017.

The results of the study show that out of 118 nurses in 2012, 117 were Kenya registered community health nurse. There was only one nurse who has specialized as Kenya registered peri-operative nurse and one nurse with Bachelor of Science nursing. The entire County did not have other specialized nurses. In 2014 out of 124 nurses in 2012, 121 were Kenya registered community health nurse and other non-specialized nurses. There were only two nurses who have specialized as Kenya registered peri-operative nurse and one nurse with Bachelor of Science nursing. In 2015 out of 199 nurses, 193 were Kenya registered community health nurses and other non-specialized nurses.

There were three nurses who have specialized as Kenya registered peri-operative nurse, two with Bachelor of Science nursing and Kenya registered midwife. In 2016 out of 318 nurses, 303 were Kenya registered community health nurse and other non-specialized nurses and number of specialized nurses increased to 15. There were six nurses who had specialized as Kenya registered peri operative nurse, one in midwifery, two in psychiatry, one in ophthalmology, three with Bachelor of Science nursing and two in anesthesia. In 2016 out of 324 nurses, 304 were Kenya registered community health nurse and other non-specialized nurses and number of specialized nurses increased to 20. There were six nurses who have specialized as Kenya registered peri-operative nurse, three in midwifery, two in psychiatry, and two in ophthalmology, four with Bachelor of Science nursing and three in anesthesia.

4.2.2.2: Analysis of the different clinical officer specialization in 2012 under national government and from 2013 to 2017 under county government

The study sought to find out the number of clinical officers in Wajir County that have undergone further training and specialized in the various specialization recognized by clinical officers' council of Kenya. The number specialized as at 2012 under national government and from 2014 to 2017 under county government was analyzed.

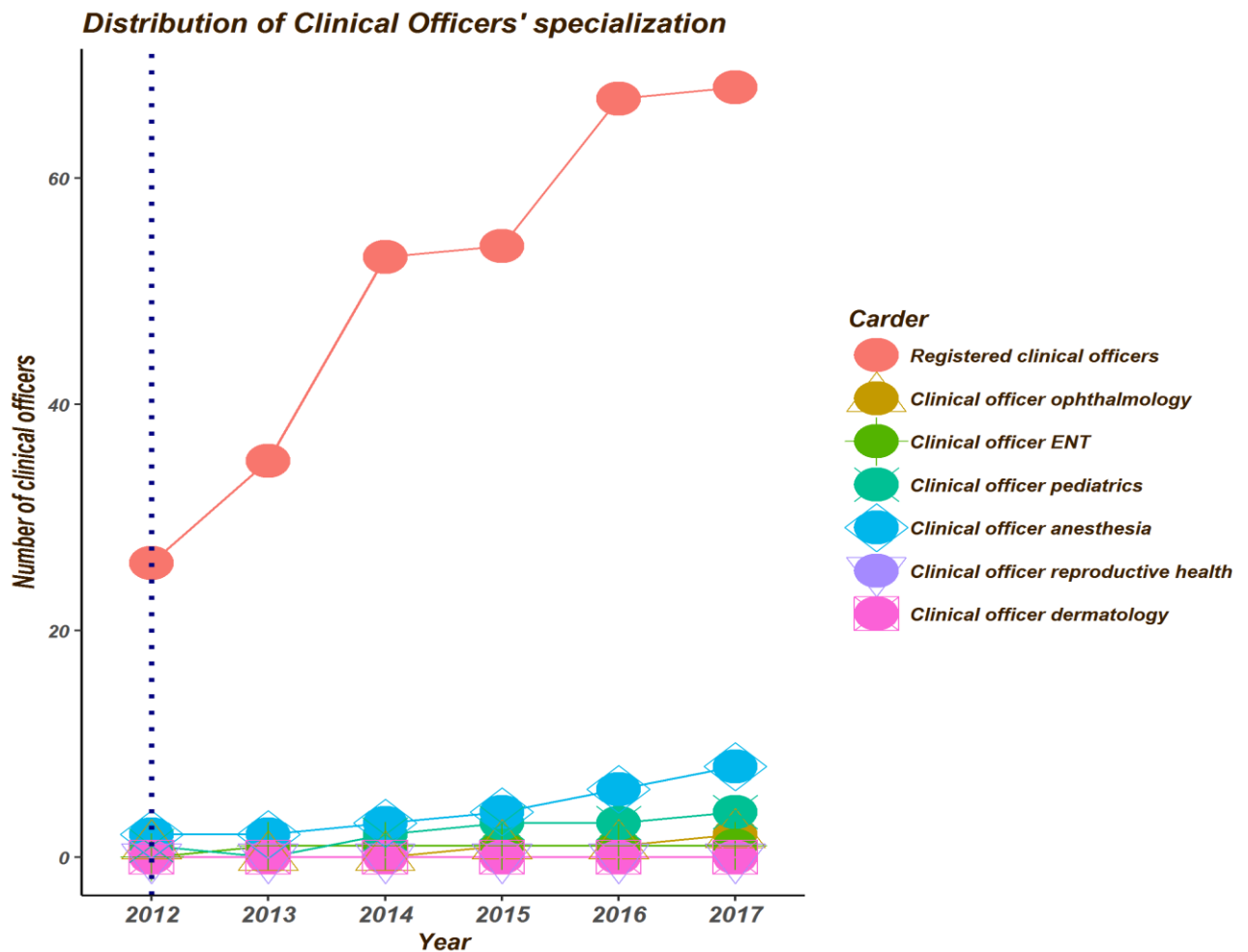


Figure 4.3: Number of specialized clinical officers in Wajir from 2012 to 2017

The results of the study show that out of 30 clinical officers in 2012, 26 were Kenya registered clinical officers without any specialization, there were only four clinical officers who have specialized with one as CO in ophthalmology, one as CO pediatrics and 2 as CO Anaesthesia. Out of 59 clinical officers 2014, 53 were Kenya registered clinical officers without any specialization. The number of clinical officers who have specialized increased to 6 with one as CO ophthalmology, 2 as CO pediatrics and 3 as CO Anaesthesia. Out of 63 clinical officers 2015, 54 were Kenya registered clinical officers without any specialization.

The number of clinical officers who have specialized increased to 9 with 1 as CO ophthalmology, 3 as CO pediatrics, 1 as ENT and 4 as CO Anaesthesia. Out of 78 clinical officers 2016, 67 were Kenya registered clinical officers without any specialization. The number of clinical officers who have specialized increased to 11 with 1 as CO ophthalmology, 3 as CO pediatrics, 1 as ENT and 6 as CO Anaesthesia. Out of 83 clinical officers 2017, 68 were Kenya registered clinical officers without any specialization. The

number of clinical officers who have specialized increased to 15 with 2 as CO ophthalmology, 4 as CO pediatrics, 1 as ENT and 8 as CO Anaesthesia.

4.2.2.3: Analysis of the different medical officers specialization in 2012 under national government and from 2013 to 2017 under county government

The study sought to find out the number of medical officers in Wajir County that have undergone further training and specialized in the various specialization recognized by medical practitioners and Dentist Board of Kenya. The number specialized as at 2012 under national government and from 2014 to 2017 under county government was analyzed.

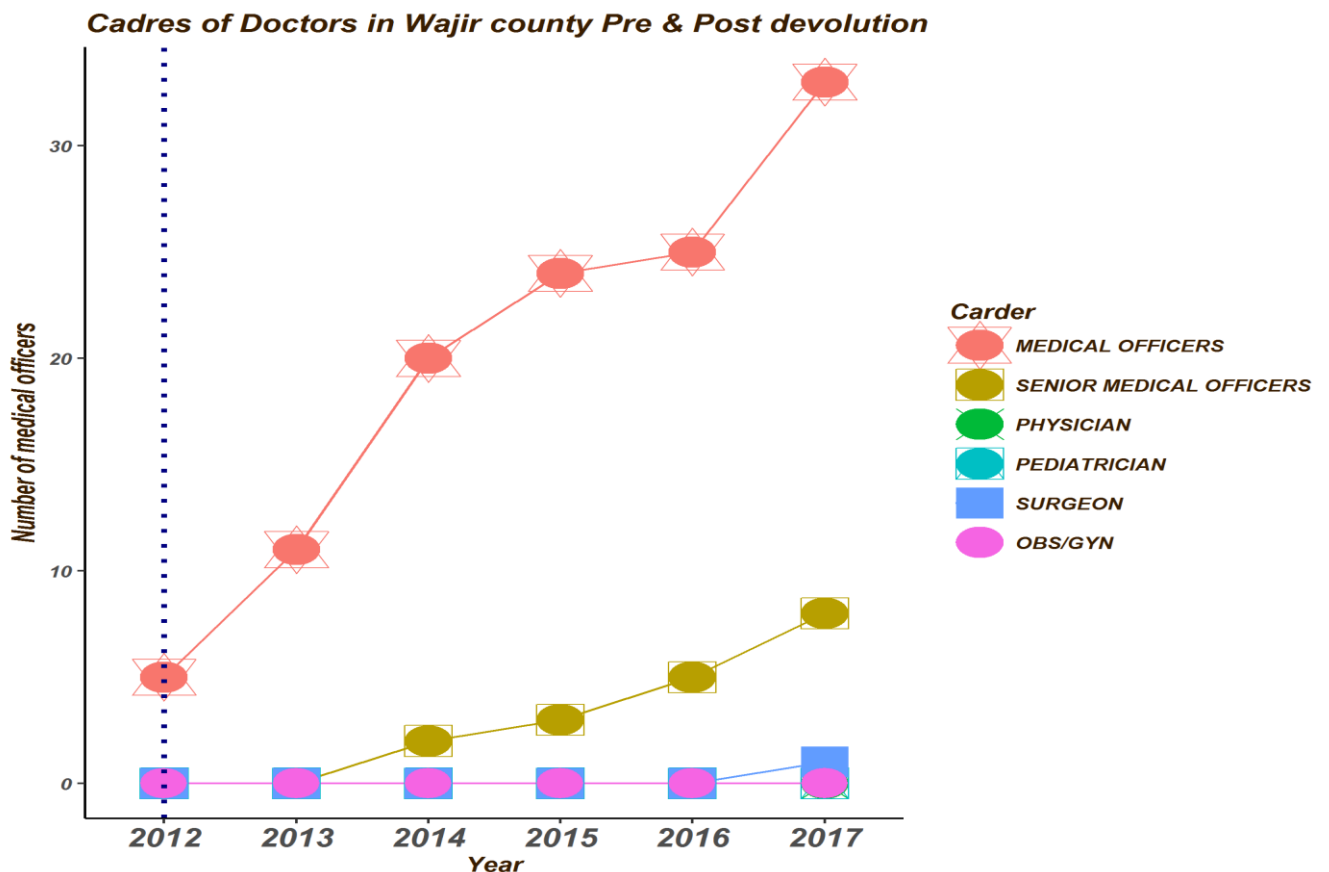


Figure 4.4: Number of specialized doctors in Wajir from 2012 to 2017

The result of the study shows that Wajir County did not have any doctor who has specialized from 2012, until 2017 when they managed to recruit the first surgeon.

4.2.3: Analysis of healthcare workers undergoing training both under national government in 2012 and county government in 2013 to 2017

The study sought to determine the number of health care workers who are undergoing training while in the payroll of either national government in 2012 or county government from 2014 to 2017. The officers are given paid study leave to further their training and specialize to improve health outcomes.

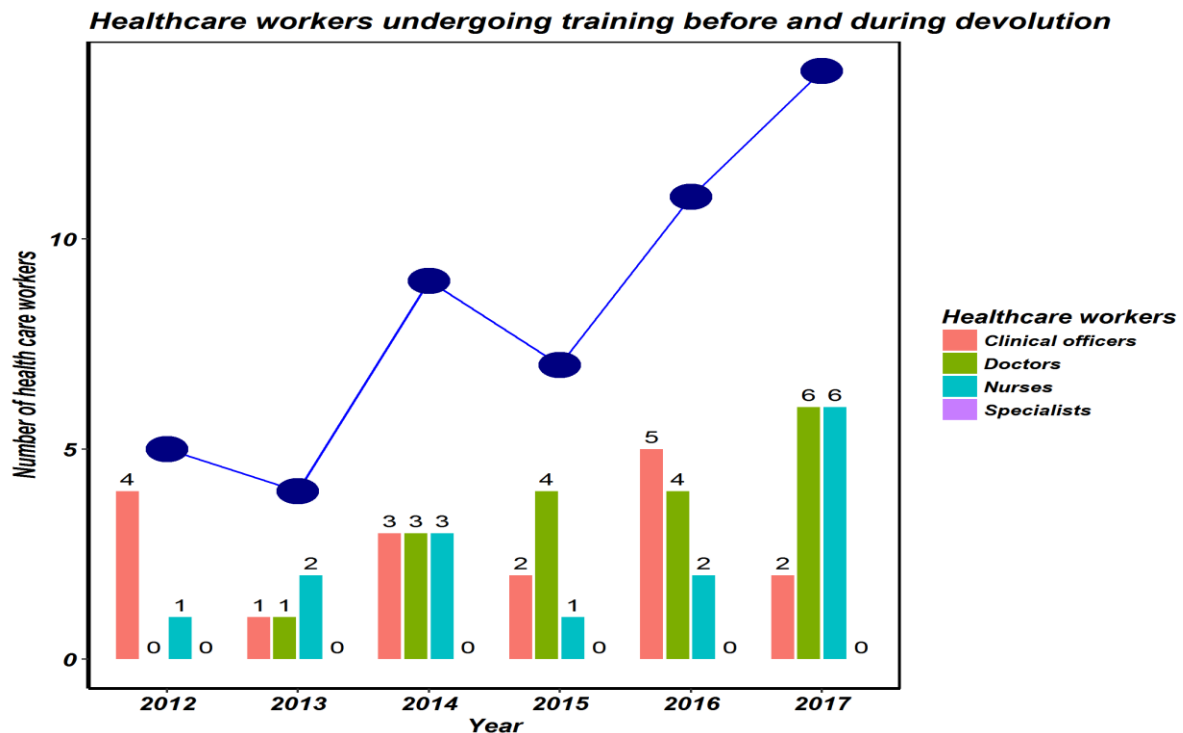


Figure 4.5: Healthcare workers undergoing training before and after devolution

The result of the study show that in 2012 under national government 5 health workers were on study leave to further improve their skills, the 5 were 4 clinical officers and 1 nurse. In 2014 the county government of Wajir released 9 health workers for studies on paid leave. These are 3 medical doctors, 3 nurses and 3 clinical officers. In 2015, 7 health workers were granted study leave; 2 clinical officers, 4 doctors and 1 nurse. In 2016 11 officers were released to study; 5 clinical officers, 4 doctors and 2 nurses. In 2017 14 health workers were released for further studies on paid study leave by Wajir County Government; 6 doctors, 6 nurses and 2 clinical officers

4.3 Objective 2: Salaries and budget allocation to health before and after devolution.

4.3.1: Salaries paid to healthcare workers in Wajir County under devolution as compared to 2012 under national government

Secondary data on the salary paid to healthcare workers mainly doctors, nurses, clinical officers and medical specialists was analyzed. Data on the amount of money spent by national government on these cadres in 2012 was compared with the monies spent by County government in the year 2014 to 2017.

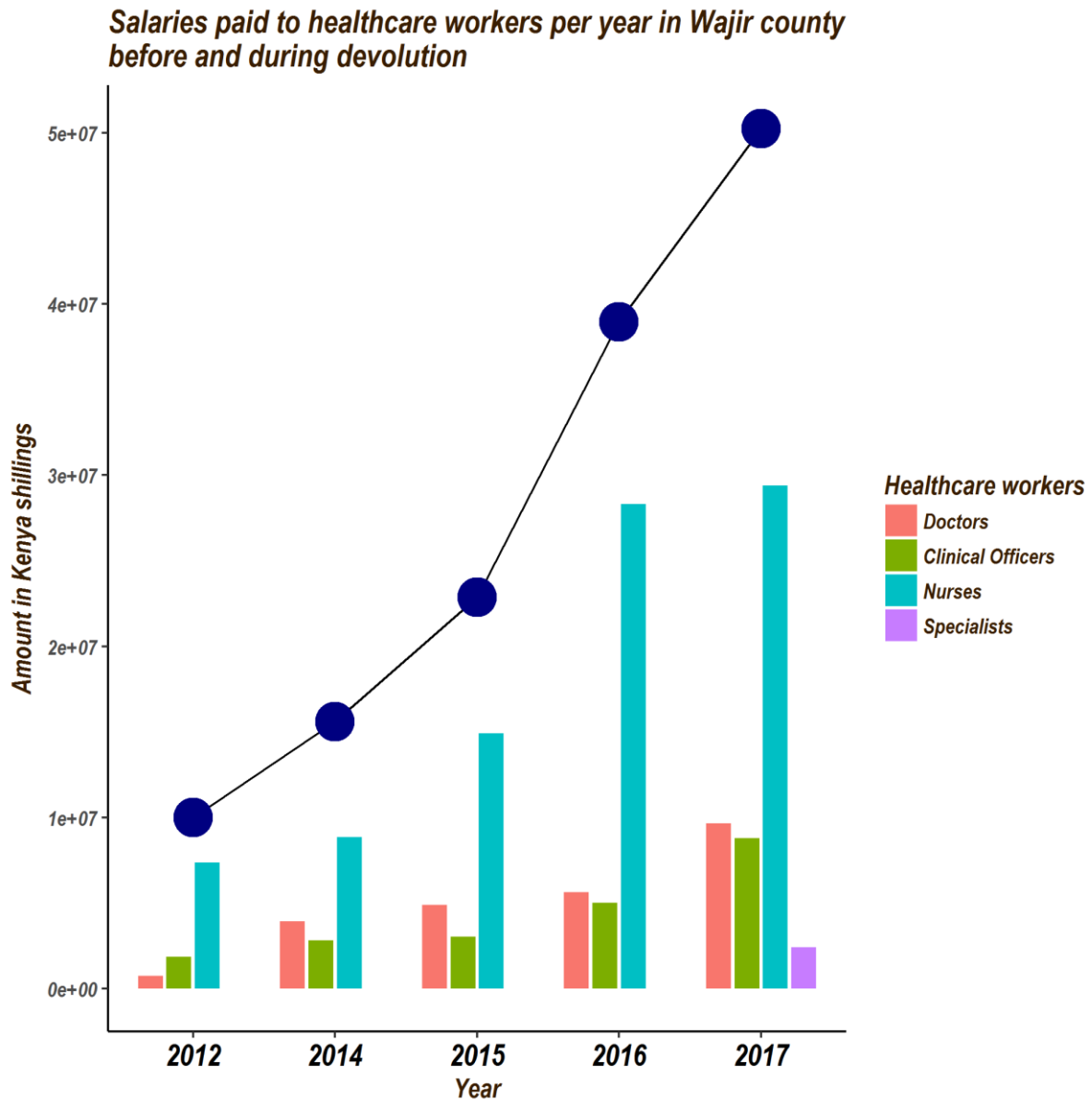


Figure 4.6: salaries paid to healthcare workers in Wajir before and after devolution

The study findings show that amount spent on salaries increased significantly from 2012 all the way to 2017. In the year 2012, the National government spent Kshs 742, 400 on doctors salaries, Kshs 7, 369, 100 to pay nurses and Kshs 1, 873, 500 to pay clinical officers. No money was spent on specialists as there was none in Wajir in 2012. Total amount spent on these cadres in 2012 was Kshs 9, 942, 600. In 2014 the County government spent Kshs 15,

580, 770 (Kshs3, 926, 560 on doctors, Kshs 8, 846, 284 on nurses, Kshs 2, 807, 926 on clinical officers and Kshs 0 on specialists), this was an increase of almost Kshs 6 million.

In 2015, Kshs 22, 858, 660 was spent on salaries, a further of another Kshs 7 million (Kshs 4, 901, 040 on doctors, Kshs 14, 917, 040 on nurses, Kshs 3, 040, 884 on clinical officers, Kshs 0 on specialists). In 2016, Kshs 38, 966, 064 was spent increasing salary spending by almost Kshs 16 million (Kshs 5, 629, 200 on doctors, Kshs 28, 316, 628 on nurses, Kshs 5, 020, 236 on clinical officers, Kshs 0 on specialists). In 2017, spending further increased by almost Kshs 10 million to Kshs 48, 261, 250 (Kshs 9, 669, 030 on doctors, Kshs 29, 380, 950 on nurses, Kshs 8, 791, 360 on clinical officers and Kshs 2, 420, 110 on medical specialists. Wajir County managed to recruit its first specialist, a surgeon, in 2017.

4.3.2 Budgetary allocation to health from national ministry of health to Wajir in 2012 as compared to county government health allocation from 2013 to 2017

The study obtained and analyzed secondary data on budget allocation to health by national government in the year 2012 and allocation by county government to health sector from 2013 to 2017.

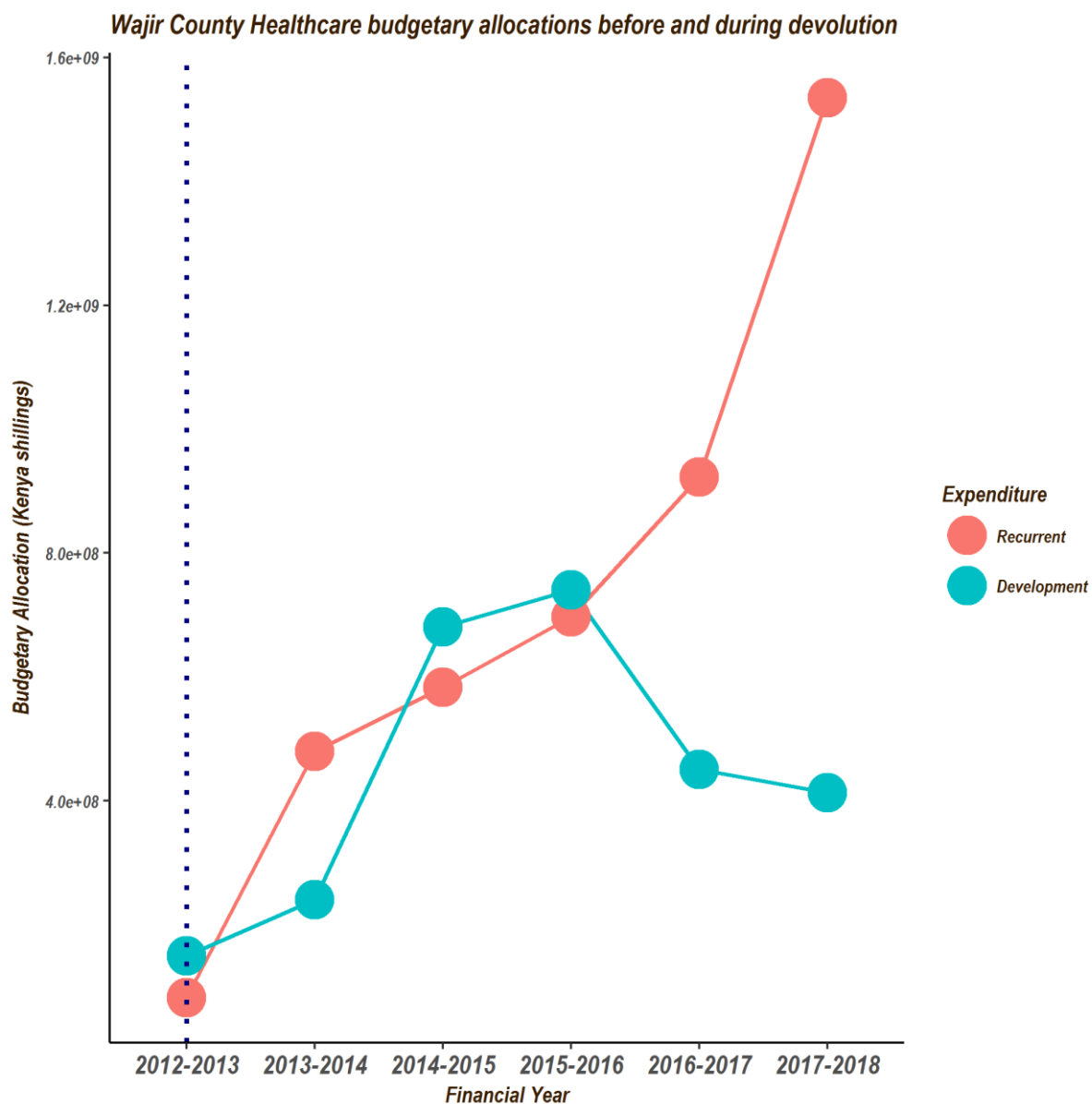


Figure 4.7: Wajir health budget from 2012 to 2017

The results of the study show that Wajir received a total of Kshs 232 million (82 million recurrent and 150 million in development expenditure including projects funded by donors like World Bank) from national government. Once Wajir County took over health docket in 2013 healthcare was allocated Kshs 780 million (Kshs 480 million recurrent and Kshs 240 million development expenditure), almost 4-fold what national government allocated in 2012. In 2014/15 budget health care was allocated Kshs 1.26 billion (Kshs 583.47 million recurrent and 680.42 million development budget). This was an increase of almost Kshs 500 million.

In 2015/16 budget health was allocated almost 1.436 Billion (Kshs 696.57 million recurrent and Kshs 740.86 million development expenditure). This was an increase of about 200 million. In 2016/17 budget health was allocated Kshs 1.372 billion (Kshs 922.32 million recurrent and 450.5 million development budget). Massive amount of resources was invested in human resource with recurrent budget of 922 million. In 2017/18 budget health was allocated Kshs 1.948 billion (Kshs 1.535 billion recurrent and 413 million development budget). This was almost 700 million more than the previous allocation.

4.4: Objective 3: Distribution of healthcare workers in the six different sub counties of Wajir County

The study sought to determine the distribution of doctors, nurses, clinical officers and specialists among the 6 six sub counties of Wajir. Data on distribution of the said health workers was obtained from 2012 (before devolution) and 2013 to 2017 (after devolution).

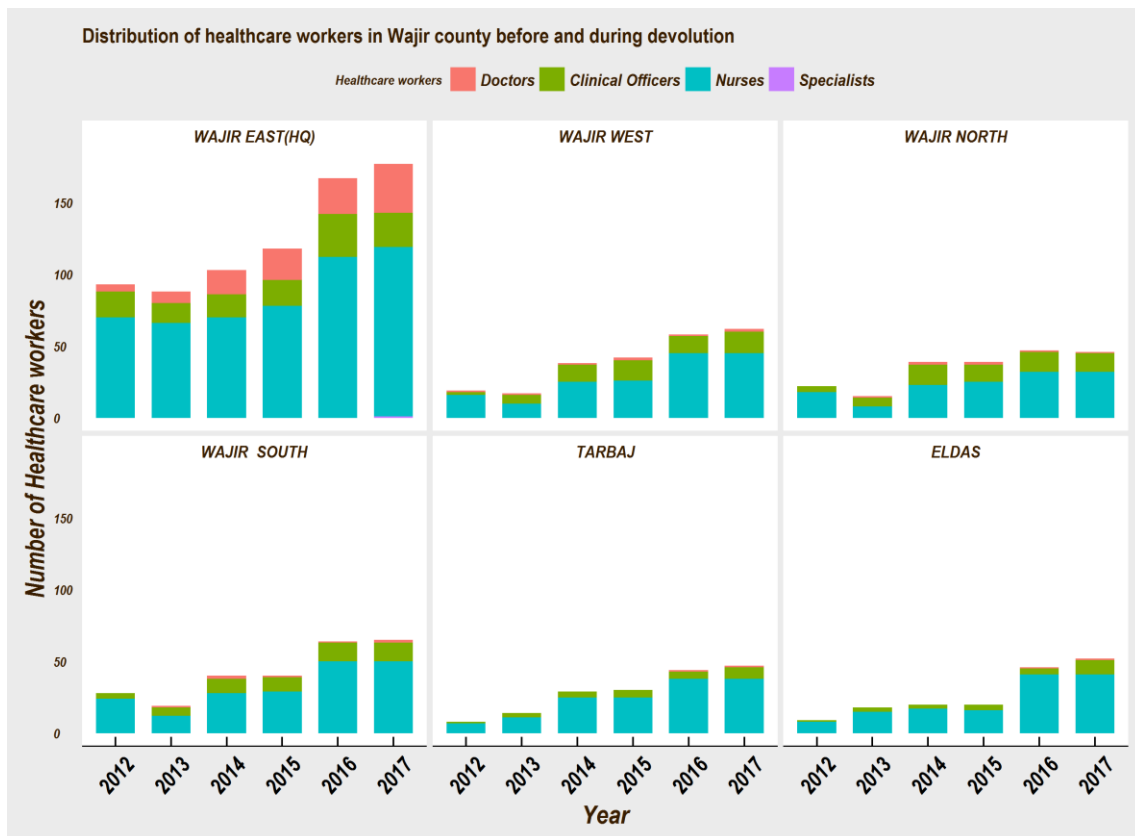


Figure 4.8: Distribution of health workers in Wajir before and after devolution

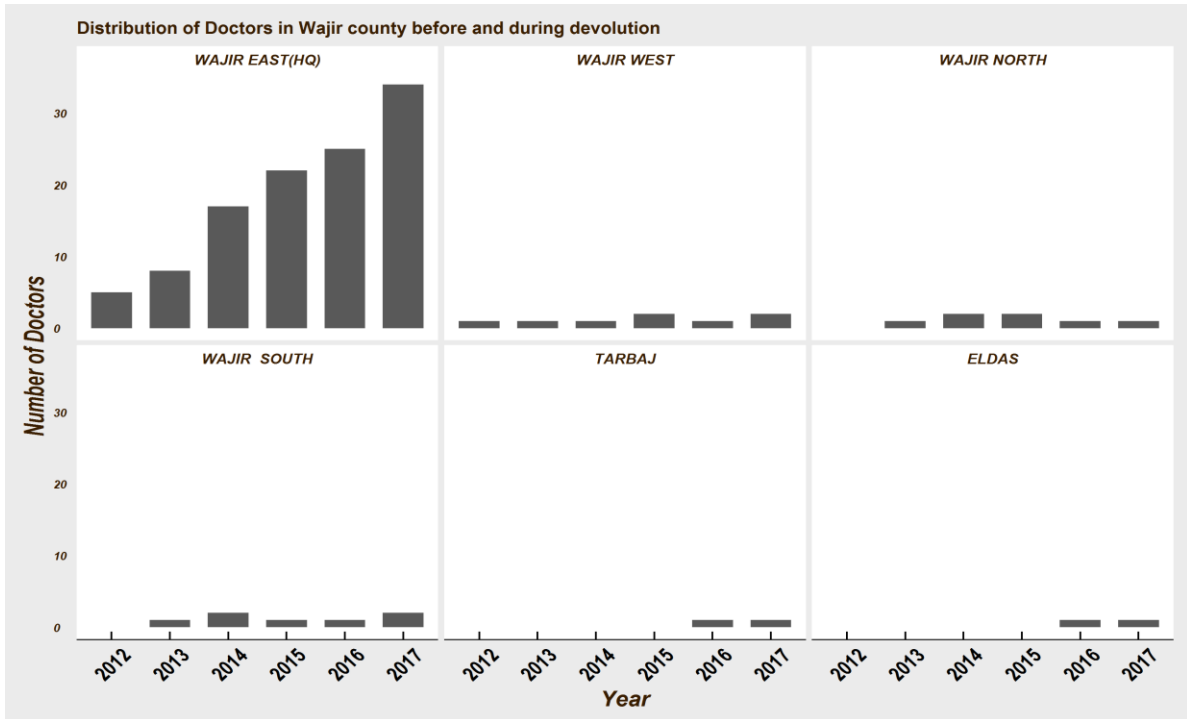


Figure 4.9: Distribution of doctors in Wajir County before and after devolution

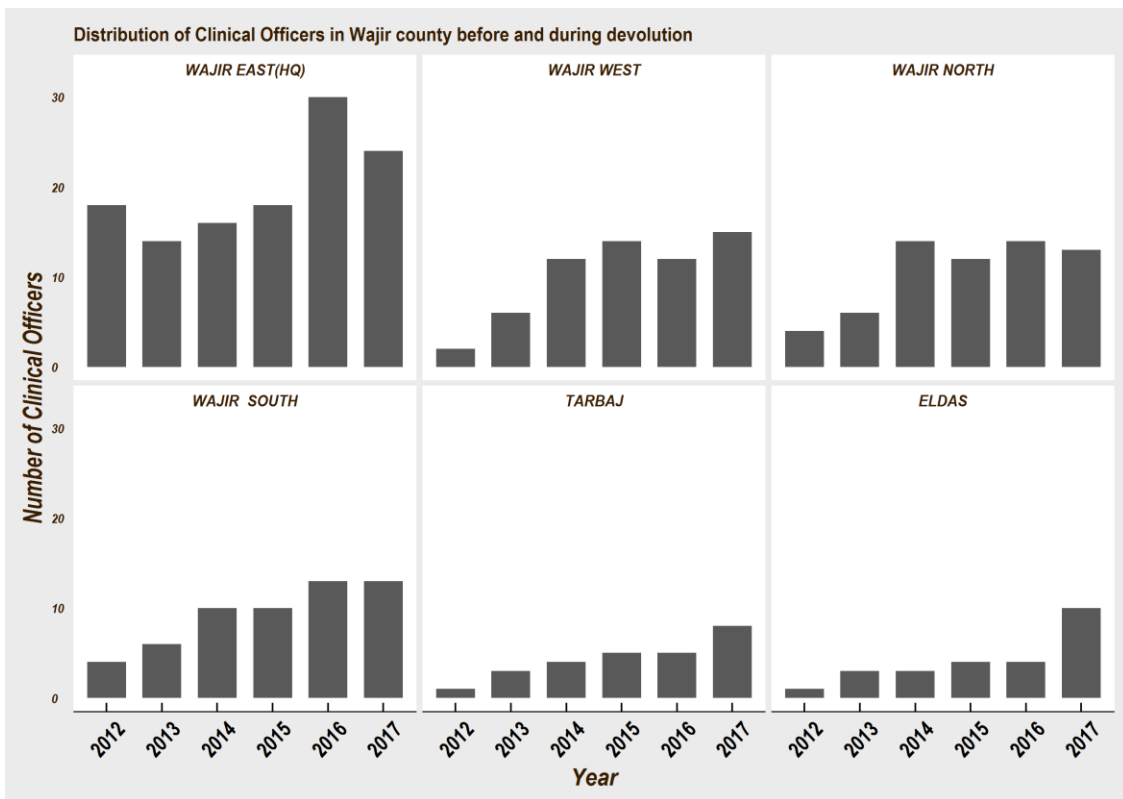


Figure 4.10: Distribution of clinical officers in Wajir County before and after devolution

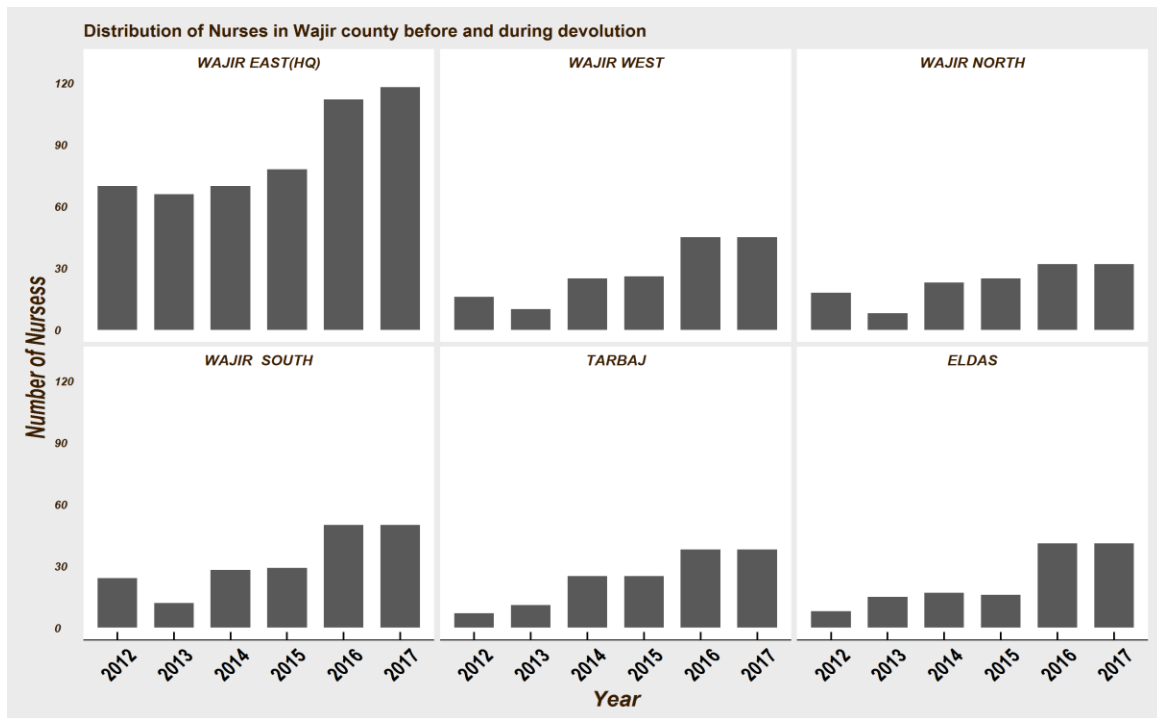


Figure 4.11: Distribution of Nurses in Wajir County before and after devolution

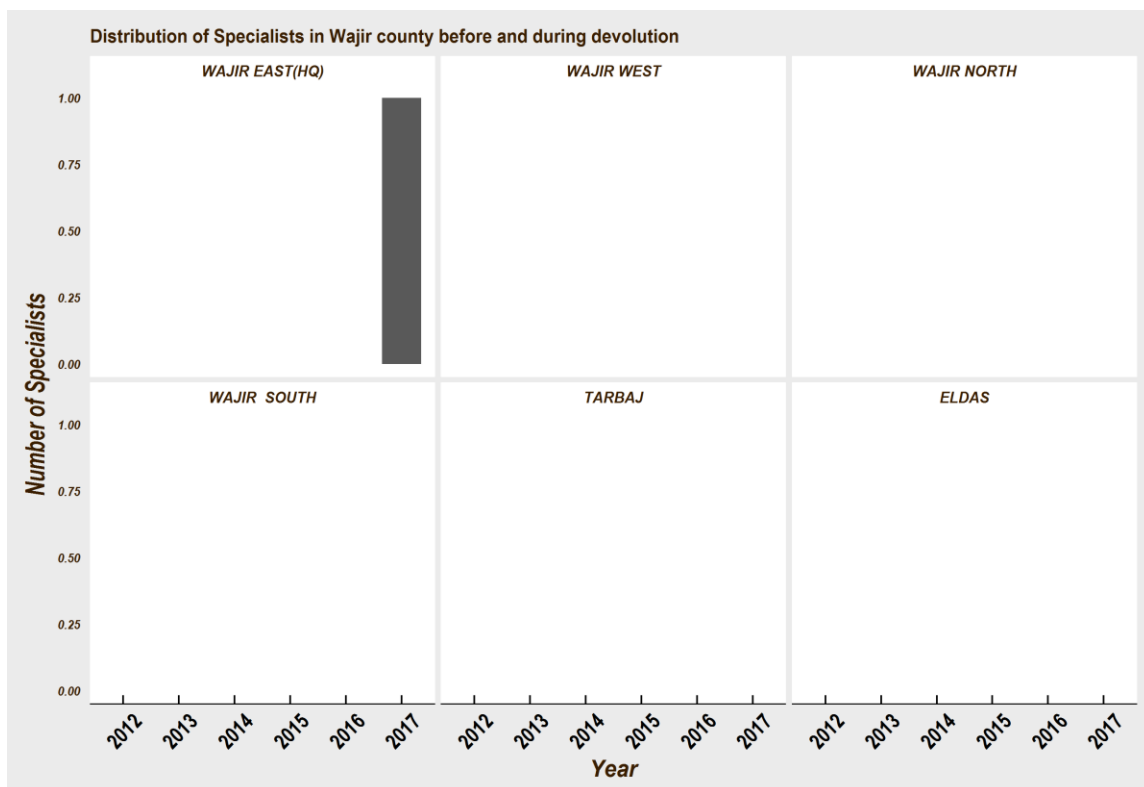


Figure 4.12: Distribution of specialists in Wajir County before and after devolution

4.4.1 Wajir East Sub County

The results of the study show that majority of the healthcare workers work in Wajir East Sub County, the county headquarters, both before and after devolution. The county referral hospital (only level 5 hospital in the county) is located in this sub county. In 2012, out of 152 doctors, nurses and clinical officers 92 (3 doctors, 18 Cos and 70 nurses) were based in Wajir east sub county. In 2014 out of 205 healthcare workers 103 (17 doctors, 70 nurses and 16COs) were based in Wajir based in Wajir east. In 2015 out of 289 health workers 118 (22 doctors, 78 nurses and 18COs) were in Wajir east. In 2016 out of 426 health workers 167 (25 doctors, 112 nurses and 30 COs) were based at the county headquarter. In 2017, out of 448 health workers 177 (34 doctors, 118 nurses, 1 specialist and 24 COs) were based in Wajir East.

Total number of healthcare workers in Wajir east increased from 92 in 2012 to 177 in 2017. The number of doctors increased from 3 in 2012 to 34 by 2017, nurses from 70 to 118, clinical officers from 16 to 24 and one surgeon was recruited from none.

4.4.2 Wajir West Sub County

The results of the study show that the number of the healthcare workers in Wajir west Sub County increased after devolution. In 2012, out of 152 doctors, nurses and clinical officers 19 (1 doctors, 2 Cos and 16 nurses) were based in Wajir west sub county. In 2014 out of 205 healthcare workers 38(1 doctors, 25 nurses and 12 COs) were based in Wajir west. In 2015 out of 289 health workers 42(2doctors, 26 nurses and 14COs) were in Wajir west. In 2016 out of 426 health workers 58 (1 doctors, 45 nurses and 12 COs) were based in Wajir west. In 2017 out of 448 health workers 62 (2 doctors, 45 nurses, and 15 COs) were based in Wajir west. Total number of healthcare workers in Wajir west increased from 19 in 2012 to 62 in 2017. Number of doctors increased from 1 in 2012 to 2 by 2017, nurses from 25 to 45, clinical officers from 2 to 15.

4.4.3 Wajir South Sub-County

The result of the study shows that the number of the healthcare workers in Wajir South Sub County increased after devolution. In 2012 out of 152 doctors, nurses and clinical officers 28 (0 doctors, 4 Cos and 24 nurses) were based in Wajir South Sub County. In 2014, out of 205 healthcare workers 40 (2 doctors, 28 nurses and 10 COs) were based in Wajir south. In 2015 out of 289 health workers 40(1 doctor, 29 nurses and 10 COs) were in Wajir south. In 2016,

out of 426 health workers 58 (1 doctors, 45 nurses and 12 COs) were based in Wajir south. In 2017 out of 448 health workers 64 (1 doctors, 50 nurses, and 13 COs) were based in Wajir south.

Total number of healthcare workers in Wajir south increased from 28 in 2012 to 64 in 2017. The number of doctors increased from 0 in 2012 to 2 in 2014 and 1 by 2017, nurses from 24 to 50, clinical officers from 4 to 13.

4.4.4 Wajir North Sub County

The results of the study show that the number of the healthcare workers in Wajir North Sub County increased after devolution. In 2012, out of 152 doctors, nurses and clinical officers 22 (0 doctors, 4 Cos and 18 nurses) were based in Wajir north sub county. In 2014 out of 205 healthcare workers 39(2 doctors, 23 nurses and 14 COs) were based in Wajir north. In 2015, out of 289 health workers 42(2 doctor, 26 nurses and 14 COs) were in Wajir north. In 2016 out of 426 health workers 47 (1 doctors, 32 nurses and 14 COs) were based in Wajir north. In 2017 out of 448 health workers 46 (1 doctors, 32 nurses, and 13 COs) were based in Wajir north.

Total number of healthcare workers in Wajir north increased from 22 in 2012 to 46 in 2017. Number of doctors increased from 0 in 2012 to 2 in 2014 and 1 by 2017, nurses from 18 to 32, clinical officers from 4 to 13.

4.4.5 Tarbaj Sub County

The results of the study show that the number of the healthcare workers in Tarbaj Sub County increased after devolution. In 2012, out of 152 doctors, nurses and clinical officers 7 (0 doctors, 0 Cos and 7 nurses) were based in Tarbaj sub county. In 2014 out of 205 healthcare workers 14(0 doctors, 11 nurses and 3 COs) were based in Tarbaj. In 2015 out of 289 health workers 30(0 doctor, 25 nurses and 5 COs) were in this sub county. In 2016 out of 426 health workers 44 (1 doctors, 38 nurses and 5 COs) were based in this sub county. In 2017 out of 448 health workers 47 (1 doctors, 38 nurses, and 8 COs) were based in this sub county.

Total number of healthcare workers in Tarbaj increased from 7 in 2012 to 47 in 2017. Number of doctors increased from 0 in 2012 to 1 by 2017, nurses from 7 to 38, clinical officers from 0 to 8.

4.4.6 Eldas Sub County

The results of the study show that the number of the healthcare workers in Eldas Sub County increased after devolution. In 2012, out of 152 doctors, nurses and clinical officers 8 (0 doctors, 0 Cos and 8 nurses) were based in this sub county. In 2014, out of 205 healthcare workers 20(0 doctors, 17 nurses and 3 COs) were based in Eldas. In 2015 out of 289 health workers 20(0 doctor, 16 nurses and 4 COs) were in this sub county. In 2016, out of 426 health workers 46 (1 doctors, 41 nurses and 4 COs) were based in this sub county. In 2017 out of 448 health workers 52(1 doctors, 41 nurses, and 10 COs) were based in this sub county. Total number of healthcare workers in Eldas increased from 8 in 2012 to 52 in 2017. Number of doctors increased from 0 in 2012 to 1 by 2017, nurses from 8 to 41, clinical officers from 0 to 10.

CHAPTER 5

DISCUSSION, CONCLUSION AND RECOMMENDATION

5.1 Introduction

This chapter presents the discussions of the study findings, conclusions, recommendations, and suggestions for further research.

5.2 Discussion of the findings

The result of this study revealed that Wajir County under devolution focused on increasing the number of healthcare workers. From 152 in 2012 to 418 in 2017 (almost 300% increase). The number of doctors increased significantly from only 5 in 2012 to 41 at the end of 2017. The number of nurses increased from 118 in 2012 to 324 while the number of clinical officers increased from 30 to 83. Devolution of health has greatly influenced the increase in health care workers. This is mainly because resources are available for the government at local level and priority area of investment is decided.

The study established that expenditure on health workers salaries increased significantly over the 5 years under review. While the national government spent slightly below Kshs 10 million in the year 2012 on salaries, the county government increased this amount to Kshs 15.5 million in 2014, about Kshs 23 million in 2015, Kshs 38 million in 2016 and Kshs 48 million in 2017. This show that the national government was not in touch with problem in Wajir which is almost 800km from the capital Nairobi. Devolution of health function to the counties through Constitution of Kenya 2010 accelerated catch up of counties which were previously marginalized by successive regimes for close to 50 years.

According to the study findings, budgetary allocation to health service increased with the onset of devolution. The national government through the Ministry of Health allocated 232 million to Wajir in the financial year 2012/2013. The County government in its 2014/2015 budget allocated Kshs 1.263 Billion out of Kshs 7.273 (17% of the budget) to health sector. In 2015/2016 budget health allocation increased to Kshs 1.436 Billion out of total budget of Kshs 8.272 Billion which is 17%. In 2016/2017 the county allocation to health Kshs 1.372 out of Kshs 8.681 Billion which is 15.8% and finally in 2017/2018 budget health was

allocated Kshs 1.948 billion out of total budget of Kshs 9.362 billion which translates to 20.4%.

The increase in allocation was almost 10 fold over the 5 years of devolution. With this massive investment Wajir County managed to strengthen all the six building blocks of health: service delivery, health workforce, health information system, access to essential medicine, financing and leadership/governance. The increased allocation made it possible for the county to operationalize most facilities that were closed due to shortage of staff and construction and of new facilities that has improved access. The County at the beginning of devolution had only one facility that provided caesarian section, the main county referral hospital which was a level 4 facility. The number of functional level 4 facilities providing comprehensive obstetric care now stands at 4 with two more opening soon.

The study established that with devolution, the number of specialized health care workers increased. According to nursing council of Kenya, there are 12 recognized nursing specialties; Kenya Enrolled Community Health Nurse [KECHN], Kenya Enrolled Community Health Nurse [Post Basic] [KECHN PB], Kenya Registered Nurse [KRN], Kenya Registered Community Health Nurse [KRCHN], Kenya Registered Nurse Midwife [KRNM], Kenya Registered Nurse/Mental Health & Psychiatric Nurse [KRN/MHP], Kenya Registered Midwife [KRM], Kenya Registered Community Health Nurse [Post Basic] [KRCHN PB], Kenya Registered Psychiatric Nurse [KRPN], Kenya Registered Ophthalmic Nurse [KROphN], Kenya Registered Paediatric Nurse [KRPaedN] and Kenya Registered Peri – Operative Nurse [KRPON].

The number of specialist nurses gradually increased from 1 to 20 over the 5 years under devolution. There were six nurses who have specialized as Kenya registered peri operative nurse, three in midwifery, two in psychiatry, and two in ophthalmology, four with Bachelor of Science nursing and three in anaesthesia. These very skilled nurses led to improved quality of services to the people of Wajir. The KRPON are well distributed across four sub counties with functional theatres. They have led to reduced post-operative sepsis. There was also a significant increase in number of clinical officers who have specialized. From 4 in 2012 to 15 in 2017, these specialists include ENT, Paediatrics, ophthalmology and anaesthesia clinical officers. They deal in specific area and therefore make accurate and timely diagnosis therefore improving outcome.

According to the findings, the County faces a major challenge of attracting medical specialists. Out of 29 major specialties in Medical Practice recognized by medical board (including Anaesthesia, Anatomic Pathology, Cardiothoracic surgery, Clinical Medical Genetics, Clinical Pathology, Clinical Oncology, Dermatology, Ear, Nose and Throat, Emergency Medicine, Family Medicine, General Surgery, Geriatrics. General Pathology, Immunology Infectious Diseases, Internal Medicine, Orthopaedic Surgery, Oncology, Oncology/Radiotherapy, Paediatrics and Child Health, Palliative medicine, Plastic and reconstructive Surgery, Psychiatry, Public Health, Radiology, Urology, Microbiology, Neurosurgery, Obstetrics and Gynecology, Occupational, Medicine and Ophthalmology), the county has only one Surgeon who was recruited in 2017.

The study also established that the county government has facilitated further studies by releasing staff that get admission to various universities and colleges. These staff sign a legal bonding of three years with the county government so that they don't leave immediately after completing specialization. Once such a staff returns, the county will have a good pool of specialists who will serve the population. Major specialists expected in the county soon include 2 gynecologists, a general surgeon, a radiologist, an ENT surgeon, a cardiothoracic surgeon and ophthalmologist. Several nurses and clinical officers are also undergoing further training to specialize while on county payroll.

5.3 conclusions

Based on the findings of the study, the study concludes that under devolution, Wajir County has increased number of healthcare workers; doctors, clinical officers and nurses. The study further established that the county employed its first specialist, a consultant general surgeon in 2017. Significant number of specialized nurses and clinical officers has also been recruited in the county since inception of devolution. The study found out that the county put more funds for health in the annual budget. The county also took seriously employee satisfaction and emphasized employee training. This was achieved by giving health workers study leave to further their studies.

The study found that there was a positive relationship between devolution and increased number of health workers. The study further concludes that there was a positive relationship between devolution and increased health spending. The results also found a positive

relationship between devolution and increased training of specialists. Overall, there was a positive relationship between devolution and improved health services.

The study also established that the major challenge which the county faced in the implementation of the devolution was attraction of specialists. Despite several attempts to recruit through advertisements, no one applied to work in Wajir County.

5.4 Recommendations of the Study

The study makes two recommendations. One of these is that devolution of health to counties, more so those in hardship areas, should be supported including devolution of human resource for health. Challenges facing the counties should be resolved rather than discussing return of health function to the national government. Health sector will do better under county governments.

Secondly, Wajir County should come up with a deliberate policy on how to attract specialists. Health indicators like maternal mortality will not improve without availability of specialist like Obstetrics and gynecology.

5.5 Suggestions for further research

This study was done on the effect of devolution on number on number of healthcare workers in Wajir. The study recommends that similar studies should be replicated in other counties in hardship areas.

This study concentrated on health workers, which is one of the 6 building blocks of health systems. There are other 5 health systems building blocks including service delivery, health information system, access to essential medicine, financing and governance therefore further studies should focus on effect of devolution on other aspects of the health system.

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APPENDICES

APPENDIX 1: WORK PLAN

Progress Stage	Stage Description	Proposed Dates
1	Choice of Research Topic	August 2017
2	Research Problem Clarification, Research Objectives, Purpose and Significance	September 2017
3	Literature Review	October 2017
4	Proposed Research Method	November 2017
5	Proposal Presentation	Jan 2018
6	Data Collection	Feb 2018
7	Data Analysis and Interpretation	March 2018
8	Dissertation Report Writing – draft	March 2018
9	Final Draft of Research Report	March 2018
10	Submission of dissertation for examination	March 2018
11	Oral Defense of dissertation	March 2018
12	Correction of dissertation	April 2018

APPENDIX 2: BUDGET

Major Activities	Requirements/Participants	Cost Kshs
Literature review, desktop search	Printing, photocopying, fare, lunch, internet bundles	30 000
2 day training of the research assistants (4 research assistants and principle investigator)	Ksh 500 per day per person Venue fee	4000 3500
Actual field work	Professional fee for 4 assistants	20 000
Thesis writing	Three research assistants	15 000
ATOTAL		72500

APPENDIX 3: LETTER TO HR DIRECTOR

Information sheet for human resource director, Wajir County, for pay roll data from 2014 to 2017.

DR ADANKHALIF ADAN KALA
P o Box 68900 – 00622
Nairobi
Cell 0722307456

TO: HUMAN RESOURCE DIRECTOR,
WAJIR COUNTY.

RE: REQUEST FOR PAYROLL DATA FOR HEALTHCARE WORKERS IN WAJIR COUNTY FROM 2014 TO 2017

I am a senior medical officer working in Wajir County currently pursuing master's degree in MBA healthcare management in Strathmore University.

I am doing my dissertation on “effects of devolution on number of healthcare workers in Wajir county-doctors, nurses, clinical officers and specialists”

I am therefore requesting access to payroll data for the above workers working in Wajir County from 2014 to 2017. This will be compared with payroll data from Wajir County for the year 2012.

The data will be handled with utmost confidentiality and no one else will access it. It will be purely used to assess effect of devolution on the number of healthcare workers in Wajir County.

Yours Sincerely
Dr Adankhalif Adan

APPENDIX 4: INFORMATION SHEET FOR CHIEF OFFICER-HEALTH

Information sheet for chief officer of health, Wajir County, for Budget information from 2014 to 2017.

DR ADANKHALIF ADAN KALA
P o Box 68900 – 00622
Nairobi
Cell 0722307456

TO: CHIEF OFFICER OF HEALTH,
WAJIR COUNTY.

RE: REQUEST FOR BUDGET INFORMATION FOR HEALTHCARE SERVICES IN WAJIR COUNTY FROM 2014 TO 2017

I am a senior medical officer working in Wajir County currently pursuing master's degree in MBA healthcare management in Strathmore University.

I am doing my dissertation on “effects of devolution on number of healthcare workers in Wajir county-doctors, nurses, clinical officers and specialists”

I am therefore requesting access to budget information for healthcare services in Wajir County from 2014 to 2017. This will be compared with budget information from National Ministry of health for Wajir County for the year 2012.

The data will be handled with utmost confidentiality and no one else will access it. It will be purely used to assess effect of devolution on the number of healthcare workers in Wajir County.

Yours Sincerely
Dr Adankhalif Adan

APPENDIX 5: INFORMATION FOR HR MANAGER

Information sheet for Human Resource Manager, Ministry of Health-Afya house for Wajir County 2012 payroll data

DR ADANKHALIF ADAN KALA
P o Box 68900 – 00622
Nairobi
Cell 0722307456

TO: HUMAN RESOURCE MANAGER,
MINISTRY OF HEALTH – AFYA HOUSE.

RE: REQUEST FOR PAYROLL DATA FOR HEALTHCARE WORKERS IN WAJIR COUNTY FOR THE YEAR 2012

I am a senior medical officer working in Wajir County currently pursuing master's degree in MBA healthcare management in Strathmore University.

I am doing my dissertation on “effects of devolution on number of healthcare workers in Wajir county-doctors, nurses, clinical officers and specialists”

I am therefore requesting access to payroll data for the above workers working in Wajir County for the year 2012. This will be compared with payroll data from Wajir County from 2014 to 2017.

The data will be handled with utmost confidentiality and no one else will access it. It will be purely used to assess effect of devolution on the number of healthcare workers in Wajir County.

Yours Sincerely
Dr Adankhalif Adan

APPENDIX 6: INFORMATION FOR PRINCIPAL SECRETARY

Information sheet for principal secretary of health requesting for budget information on health services in Wajir County for 2012

DR ADANKHALIF ADAN KALA
P o Box 68900 – 00622
Nairobi
Cell 0722307456

TO: PRINCIPAL SECRETARY,
MINISTRY OF HEALTH –AFYA HOUSE.

RE: REQUEST FOR BUDGET INFORMATION FOR HEALTHCARE SERVICES IN WAJIR COUNTY FOR THE YEAR 2012

I am a senior medical officer working in Wajir County currently pursuing master's degree in MBA healthcare management in Strathmore University.

I am doing my dissertation on “effects of devolution on number of healthcare workers in Wajir county-doctors, nurses, clinical officers and specialists”

I am therefore requesting access to budget information for healthcare services in Wajir County for the year 2012. This will be compared with budge information from Wajir County from 2014 to 2017.

The data will be handled with utmost confidentiality and no one else will access it. It will be purely used to assess effect of devolution on the number of healthcare workers in Wajir County.

Yours Sincerely
Dr Adankhalif Adan

APPENDIX 7: DATA COLLECTION TOOLS

A) PAYROLL DATA

1. MONTHLY PAYROLL DATA FOR WAJIR COUNTY FROM 2014 TO 2017 (UNDER DEVOLUTION)

HEALTHCARE WORKERS	2014	2015	2016	2017
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Number of doctors

Number of nurses

Number of clinical officers

Number of medical specialists

Total number of healthcare workers

2. SALARIES PAID TO WAJIR COUNTY HEALTHCARE WORKERS FROM 2014 TO 2017 (UNDER DEVOLUTION)

SALARIES	2014	2015	2016	2017
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Amount in salaries paid to doctors

Amount in salaries paid to Nurses

Amount in salaries paid to Clinical Officers

Amount of salaries paid to Medical Specialist

Total amount paid to health workers

3. MINISTRY OF HEALTH PAYROLL DATA FOR WAJIR COUNTY BEFORE DEVOLUTION (YEAR 2012)

Health care workers

2012 – PRE DEVOLUTION

Number of doctors

Number of nurses

Number of clinical officers

Number of medical specialists

Total number of healthcare workers in 2012

4. SALARIES PAID TO HEALTHCARE WORKERS IN WAJIR COUNTY IN THE YEAR 2012 (PRE DEVOLUTION)

Salaries

2012- PRE DEVOLUTION

Amount paid to doctors

Amount paid to nurses

Amount paid to clinical officers

Amount paid to medical specialists

Total

A) BUDGET INFORMATION DATA

1. WAJIR COUNTY HEALTHCARE BUDGET FOR THE 5 YEARS POST DEVOLUTION

YEAR	RECURRENT EXPENDITURE	DEVELOPMENT EXPENDITURE	TOTAL
2013 – 2014			
2014 – 2015			
2015 – 2016			
2016 – 2017			
2017 – 2018			
TOTAL OVER 5 YEARS			

2. MINISTRY OF HEALTH BUDGET ALLOCATED TO WAJIR IN THE YEAR 2012 (PRE DEVOLUTION)

YEAR	RECURRENT	DEVELOPMENT	TOTAL
2012/2013			

B) DATA ON DISTRIBUTION OF HEALTHCARE WORKERS PER SUBCOUNTY

1. PRE DEVOLUTION (2012)

SUBCOUNTY	NUMBER IN THE YEAR 2012 UNDER NATIONAL GOVERNMENT			
	DOCTORS	CLINICAL OFFICERS	NURSES	MEDICAL SPECIALISTS
WAJIR EAST				
WAJIR WEST				
WAJIR NORTH				
WAJIR SOUTH				
TARBAJ				
ELDAS				
TOTAL				

1. POST DEVOLUTION DISTRIBUTION OF HEALTHCARE WORKERS
(2013 TO 2017)

SUB-COUNTY	2013				2014				2015				2016		2017					
	D	C	N	S	D	C	N	S	D	C	N	S	D	C	N	M	D	C	N	M
WAJIR EAST																				
WAJIR WEST																				
WAJIR NORTH																				
WAJIR SOUTH																				
TARBAJ																				
ELDAS																				
TOTAL																				

KEY;
D- Doctors
C- Clinical officers
N -Nurses
S- Medical specialists

D. DATA ON HEALTHCARE WORKERS SKILLS MIX

1. NURSES

NUMBER OF DIFFERENT NURSING CADRES BEFORE DEVOLUTION

<u>CARDER</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>
Kenya enrolled community health nurse					
Kenya registered nurse					
Kenya registered community health nurse					

Kenya registered nurse midwife
 Kenya registered nurse mental health and psychiatry
 Kenya registered midwife
 Kenya registered psychiatry nurse
 Kenya registered ophthalmic nurse
 Kenya registered pediatric nurse
 Kenya registered perioperative nurse
 Kenya registered nurse anesthetist
 Kenya registered critical care nurse
 Kenya registered nephrology nurse
 Kenya registered accident and emergency nurse
 Kenya registered neonatal nurse
 Bachelor of science nursing

NUMBER OF DIFFERENT NURSING CADRES AFTER DEVOLUTION

<u>CARDER</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>
Kenya enrolled community health nurse					
Kenya registered nurse					
Kenya registered community health nurse					
Kenya registered nurse midwife					
Kenya registered nurse mental health and psychiatry					
Kenya registered midwife					
Kenya registered psychiatry nurse					
Kenya registered ophthalmic nurse					
Kenya registered pediatric nurse					
Kenya registered perioperative nurse					
Kenya registered nurse anesthetist					
Kenya registered critical care nurse					
Kenya registered nephrology nurse					
Kenya registered accident and emergency nurse					

Kenya registered neonatal nurse

Bachelor of science nursing

2. CLINICAL OFFICERS

PRE DEVOLUTION – 2012

CADRE

NUMBER IN THE YEAR 2012

Registered clinical officers

Clinical officer ophthalmology

Clinical officer ENT

Clinical officer pediatrics

Clinical officer anesthesia

Clinical officer reproductive health

Clinical officer dermatology

POST DEVOLUTION – 2013 TO2017

CARDE	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>
Registered clinical officer					
Clinical officer ENT					
Clinical officer ophthalmology					
Clinical officer pediatrics					
Clinical officer anesthesia					
Clinical officer Reproductive health					
Clinical officer dermatology					

3. MEDICAL OFFICERS

NUMBER OF DIFFERENT CADRES OF DOCTORS IN WAJIR BEFORE DEVOLUTION – YEAR 2012

NUMBER IN 2012

MEDICAL OFFICERS
SENIOR MEDICAL OFFICERS
PHYSICIAN
OBS/GYN
SURGEON
PEDIATRICIAN
TOTAL

NUMBER OF DIFFERENT CADRES OF DOCTORS IN WAJIR POST DEVOLUTION- 2013 TO 2017

	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>
MEDICAL OFFICERS					
SENIOR MEDICAL OFFICERS					
PHYSICIAN					
PEDIATRICIAN					
SURGEON					
PEDIATRICIAN					
TOTAL					

E. DATA ON IN – SERVICE TRAINING

This are healthcare workers undergoing further training while on study leave and (or) fully sponsored by either county government after devolution or national government before devolution.

Pre devolution in service training

Cadre	Number in 2012
Nurses	
Clinical officers	
Doctors	
Specialists	
Total	

Post devolution in service training

Cadre	2013	2014	2015	2016	2017
Nurses					
Clinical officers					
Doctors					
Specialists					
Total					

C) NUMBER OF HEALTH FACILITIES OPERATIONAL

2012 – predevolution

<u>Level</u>	<u>Number in 12</u>
<u>1</u>	
<u>2</u>	
<u>3</u>	
<u>4</u>	
<u>5</u>	
<u>6</u>	

Number of operational facilities post devolution 2013 to 2017

<u>Level</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>
<u>1</u>					
<u>2</u>					
<u>3</u>					
<u>4</u>					
<u>5</u>					
<u>6</u>					

APPENDIX 8: PARTICIPANT INFORMATION CONSENT FORM

ASSESSING THE EFFECT OF DEVOLUTION ON THE NUMBER OF HEALTHCARE WORKERS IN HARDSHIP AREAS: A STUDY ON THE NUMBER OF DOCTORS, CLINICAL OFFICERS, NURSES AND SPECIALISTS IN WAJIR COUNTY.

Section 1

Investigator – Dr Adankhalif Adan kala

Institutional affiliation – Strathmore business school

Section 2 - THE STUDY

This study is being carried out to assess the effect of devolution on number of healthcare workers in hardship areas. The study will be carried out in Wajir County to represent the other hardship areas. The study involves secondary data analysis on payroll and data for the past 5 years. Analysis will be done to compare the numbers before and after devolution.

2.1: Do I have to take part?

No. Taking part in this study is entirely optional and the decision rests only with you. If you decide to take part, you will be asked to provide data on health workers payroll and county health budget. If you are not able to answer all the questions successfully the first time, you may be asked to sit through another informational session after which you may be asked to answer the questions a second time. You are free to decline to take part in the study from this study at any time without giving any reasons.

2.2: Who is eligible to take part in this study?

- a) County director of health
- b) County chief officer health
- c) Principal Secretary – ministry of health
- d) Director of medical service – ministry of health

2.3: What will taking part in this study involve for me?

You will be approached and requested to take part in the study. If you are satisfied that you fully understand the goals behind this study, you will be asked to sign the informed consent form (this form) and then taken through a questionnaire to complete.

2.4: Are there any risks or dangers in taking part in this study?

There are no risks in taking part in this study. All the information you provide will be treated as confidential and will not be used in any way without your express permission.

2.5: Are there any benefits of taking part in this study?

The information will be used to improve health services in hardship areas around the world.

2.6: What will happen to me if I refuse to take part in this study?

Participation in this study is entirely voluntary. Even if you decide to take part at first but later change your mind, you are free to withdraw at any time without explanation.

2.7: Who will have access to my information during this research?

All research records will be stored in securely locked cabinets. That information may be transcribed into our database but this will be sufficiently encrypted and password protected. Only the people who are closely concerned with this study will have access to your information. All your information will be kept confidential.

2.8: Who can I contact in case I have further questions?

You can contact me, ADANKHALIF ADAN KALA, at SBS, or by e-mail adankhalif@yahoo.com, or by phone 0722307456. You can also contact my supervisor, Dr. PRATAP KUMAR, at the Strathmore Business School, Nairobi, or by e-mail pkumar@strathmore.edu or by phone 0731848163.

If you want to ask someone independent anything about this research please contact:

The Secretary–Strathmore University Institutional Ethics Review Board, P. O. BOX 59857, 00200, Nairobi, email ethicsreview@strathmore.edu Tel number: +254 703 034 375

I, _____, have had the study explained to me. I have understood all that I have read and have had explained to me and had my questions answered satisfactorily. I understand that I can change my mind at any stage.

Please tick the boxes that apply to you;

Participation in the research study

I AGREE to take part in this research

I DO NOT AGREE to take part in this research

Storage of information on the completed questionnaire

I AGREE to have my completed questionnaire stored for future data analysis

I DO NOT AGREE to have my completed questionnaire stored for future data analysis

Participant's Signature: _____

Date: _____/_____/_____

DD / MM / YEAR

Participant's Name: _____

Time: _____/_____

HR / MN

I, _____ (Name of person taking consent) certify that I have followed the SOP for this study and have explained the study information to the study participant named above, and that s/he has understood the nature and the purpose of the study and consents to the participation in the study. S/he has been given opportunity to ask questions which have been answered satisfactorily.

Investigator's Signature: _____

Date: _____/_____/_____

DD / MM / YEAR

Investigator's Name: _____

Time: _____/_____

HR / MN

APPENDIX 9: ETHICAL APPROVAL FROM STRATHMORE UNIVERSITY



Strathmore
UNIVERSITY

21st March 2018

SU-IRB 0189/18

DR ADANKHALIF ADAN KALA
P.O Box 68900 - 00622
WAJIR

Email: adankhalif@yahoo.com

Dear Dr Kala,

REF Student Number: MBA-HCM/093848/16 **Protocol ID:** SU-IRB 0189/18
Title: *Assessing The Effect Of Devolution On The Number Of Healthcare Workers In Hardship Areas: A Study On The Number Of Doctors, Clinical Officers, Nurses And Specialists In Wajir County.*

We acknowledge receipt of your application documents to the Strathmore University Institutional Ethics Review Committee (SU-IERC) which includes:

1. Study Proposal dated February 2018
2. Participant Information sheet and consent Form dated 15th March 2018
3. Data Collection tools
4. Study Budget
5. CV

The committee has reviewed your application, and your study "*Assessing the Effect of Devolution on the Number of Healthcare Workers in Hardship Areas: A Study on the Number of Doctors, Clinical Officers, Nurses and Specialists in Wajir County.*" has been granted **approval**.

This approval is valid for one year beginning **21st March 2018** until **20th March 2019**.

In case the study extends beyond one year, you are required to seek an extension of the Ethics approval prior to its expiry. You are required to submit any proposed changes to this proposal to SU-IERC for review and approval prior to implementation of any change.

SU-IERC should be notified when your study is complete.

Thank you

Sincerely,

Amina Salim
Regulatory Affairs Fellow



APPENDIX 10: APPROVAL FROM NACOSTI



NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

Telephone: 020 400 7000,
0713 788787,0735404245
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Email: dg@nacosti.go.ke
Website: www.nacosti.go.ke
When replying please quote

NACOSTI, Upper Kabete
Off Waiyaki Way
P.O. Box 30623-00100
NAIROBI-KENYA

Ref. No. **NACOSTI/P/18/70904/22011**

Date: **24th April, 2018**

Dr. Adankhalif Adan Kala
Strathmore University
P.O. Box 59857-00200
NAIROBI.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on "*Assessing the effect of devolution on the number of healthcare workers in hardship areas: a study on the number of doctors, clinical officers, nurses and specialists in Wajir County*" I am pleased to inform you that you have been authorized to undertake research in **Wajir County** for the period ending **24th April, 2019.**

You are advised to report to **the County Commissioner, the County Director of Education and the County Director of Health Services, Wajir County** before embarking on the research project.

Kindly note that, as an applicant who has been licensed under the Science, Technology and Innovation Act, 2013 to conduct research in Kenya, you shall deposit **a copy** of the final research report to the Commission within **one year** of completion. The soft copy of the same should be submitted through the Online Research Information System.

DR. STEPHEN K. KIBIRU, PhD.
FOR: DIRECTOR-GENERAL/CEO

Copy to:

The County Commissioner
Wajir County.

The County Director of Education
Wajir County.

**ASSESSING THE EFFECT OF DEVOLUTION ON THE NUMBER OF
HEALTHCARE WORKERS IN HARDSHIP AREAS: A CASE STUDY OF
DOCTORS, CLINICAL OFFICERS, NURSES AND SPECIALISTS IN WAJIR
COUNTY**

ADANKHALIF ADAN KALA

MBA-HCM/093848/16

A dissertation submitted to Strathmore Business School in partial fulfillment of the requirements for the award of the degree of Master of Business Administration in Healthcare Management

May 2018

This dissertation is available for Library use on the understanding that it is copyright material and that no quotation from the thesis may be published without proper acknowledgement.

DECLARATION

I declare that this work has not been previously submitted and approved for the award of a degree by this or any other university. To the best of my knowledge and belief, the thesis contains no materials previously published or written by another person except where due reference is made in the thesis itself.

No part of this thesis may be reproduced without the permission of the author and Strathmore University.

Adankhalif Adan Kala
May 2018

Approval

The dissertation of Adankhalif Adan Kala was reviewed and approved by

Dr Pratap Kumar (Supervisor)
Senior Lecturer
Strathmore Business School

Dr. George Njenga
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Strathmore University

ABSTRACT

Kenya has had shortage of healthcare workers since independence, but this picture is worse in the hardship areas as majority of these workers tend to concentrate in urban areas. The Constitution of Kenya 2010 devolved management of health workers to the 47 counties. The aim of this study was to find out the effect of devolution on number of healthcare workers in a typical hardship area, with major focus on doctors, nurses, clinical officers and specialists in Wajir County. The specific objectives were to find out the effect of devolution on the number of healthcare workers, and their distribution in the sub counties and how devolution influenced budgetary allocation to health. Secondary data analysis of the payroll and budget of health department for 5 years was done to find out the number of healthcare workers in terms of absolute numbers, specialization, and amount paid in salaries, number on study leave, and health budget allocation as at 2012 (before devolution and from 2014 to 2017 under county government). Descriptive statistics of graphs was used to present the data. The study established that Wajir County has had tremendous improvement in the number of health care workers in the past 5 years. The study further established that under the devolved governance, the number of healthcare workers who have improved their skills by undergoing further training and specializing in different fields of nursing, medicine and clinical medicine has significantly increased. The study found out that Wajir County allocated significant amount of funds in the annual budget for health, which has availed enough funds to recruit enough health workers. Wajir County recruited its first medical specialist, a surgeon in 2017. The County has also given a substantial number of staff paid study leave to improve number of specialists among doctors, nurses and clinical officers. The study concluded that there was a positive relationship between devolution and improvement in the number of healthcare workers.

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My profound gratitude goes to God for giving me the ability to write this dissertation. My supervisor, Dr Pratap Kumar, for his commitment and detailed assessment and guidance for my work. My sincere thanks also go to my family, my wife Fozia and my two daughters Amirah and Manahil for their support and encouragement.

Thank you all and may God bless you.

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DEFINITION OF KEY TERMS

Devolution	Transfer or delegation of power to a lower level, especially by central government to a local or regional administration.
Wajir County	A county in the former North-Eastern Province of Kenya. Its capital is Wajir town.
Medical doctor	A person with a medical degree whose job is to treat people who are ill or hurt.
Clinical Officer	A person with a diploma or degree and is qualified and authorized to practice medicine and performs general and specialized medical duties. They mainly work at health centers.
Nurse	A profession within the healthcare sector focused on care of individuals, families and communities so that they may maintain or recover optimal health and quality of life.
Medical specialist	These are doctors who have completed advanced education and clinical training in a specific area of medicine (their specialty area). Examples include surgeon, pediatrician, gynecologist, etc.
Healthcare worker	These are people whose job is to protect and improve the health of their communities.
Payroll	A list of employees working in an organization and the amount of money they are to be paid
Budget	An estimate of income and expenditure for a set period of time

LIST OF ABBREVIATIONS

COK-	Constitution of Kenya
CA –	County Assembly
CIDP-	County Integrated Development Plan
CGW-	County Government of Wajir
CO –	Clinical officer
COC -	Clinical Officers Council
CPD -	Continuing Professional Development
CPSB –	County Public Service Board
CRA –	Commission of revenue allocation
DMO -	District Medical Officer
ECN -	Enrolled Community Nurse
GOK -	Government of Kenya
HCW -	Health Care Workers
HMIS -	Health Management Information Systems
HR -	Human Resources
HRD -	Human Resources Development
HRH -	Human Resource for Health
HRIS -	Human Resources Information System
HRM -	Human Resources Management
ICT -	Information & Communication Technology
IMF-	International Monetary Fund
IPPD-	Integrated Personnel Payroll Database
KANU –	Kenya Africa National Union
KMTC -	Kenya Medical Training College
KNBS -	Kenya National Bureau of Statistics
KNEC -	Kenya National Examination Council
KNHRHSP -	Kenya National Human Resources for Health Strategic Plan
KNH-	Kenyatta National Hospital
KRCHN -	Kenya Registered Community Health Nurse
KRN -	Kenya Registered Nurse

KRA –	Kenya Revenue Authority
LATF –	Local Authority Transfer Fund
LMICs -	Low & Middle Income Countries
MD-	Medical Doctor
MMR -	Maternal Mortality Rate
MOE -	Ministry of Education
MDG -	Millennium Development Goal
MOH -	Ministry of Health
MTRH-	Moi Teaching and Referral Hospital
NA –	National Assembly
NHIF –	National Hospital Insurance Fund
NSSF –	National Social Security Fund
PSC –	Public Service Commission
SDG –	Sustainable Development Goals
SU-IERC-	Strathmore university ethical review committee
UHC-	Universal health coverage
WB –	World Bank

CHAPTER ONE

INTRODUCTION

1.1. Background of the Study

Majority of the healthcare personnel tend to concentrate mainly in the urban areas, thus denying services to those in the remote hardship areas. Higher worker density generates better health outcomes, lower burnout, better morale, and greater job satisfaction. Given that the public sector is a major provider of health services in many developing countries and one of the major employers of health workers, their availability and adequacy becomes particularly important in the public health service.

Further, the availability of well-trained and appropriately skilled health workers has the potential to influence the attainment of health goals including health-related SDGs. (WHO, 2016) Health workers are the backbone of strong, resilient health systems. Universal health coverage and guaranteed global health security are only possible with adequate investment in the health workforce. The government of Kenya has set out to achieve 4 main agendas in the next 5 years (2018 – 2022) popularly known as The Big Four, which includes universal health coverage. This requires all the health systems building blocks working at optimum level. The six building blocks include health workforce, healthcare financing, service delivery, information and research, medical products, technologies and leadership/governance. To achieve UHC this government plans to enroll all Kenyans into National hospital insurance fund (NHIF) to improve coverage. The government is also importing 100 medical specialists from Cuba to be posted to each of the 47 counties (at least 2 specialists per county with some counties receiving 3). This will reduce the shortage of specialists facing counties in hardship areas.

Health workforce shortages are increasing the inequities in access to health services, causing preventable illness, disability and death, and threatening public health, economic growth and development, as starkly demonstrated by the Ebola outbreak in West Africa. For instance, Maternal Mortality Rate (MMR) was one such indicator cited as being directly linked to availability of trained service providers with specialized training in maternal health.

Before the promulgation of the new constitution, the Public Service Commission (PSC) was the general employer of all government employees in Kenya, including health practitioners.

Its overall role was to provide general oversight and guidelines for strategic human resource management and development in the public sector. Routine operational human resource development and management functions including appraisal, recruitment, and discipline, payment of salaries, in-service training and promotions were delegated to the various government ministries such as the Ministry of Health, for health workers. In the devolved system of government, the PSC is only mandated to support in employment of national government employees as well as providing oversight of the whole public service sector, both at the county and national level.

Constitutional pressures led to Kenya enacting a new constitution which was promulgated in August 2010. The new constitution created 47 county governments and health care services were devolved to these new entities. While the county executive member, chief officer and director of health runs the county government health docket, the county public service board recruits, disciplines and even dismisses health care workers. The National government through Ministry of Health retained the management of the 4 national referral hospitals; Kenyatta National Hospital(KNH), Moi Teaching and Referral Hospital(MTRH), Mathari Mental Hospital and National Spinal Injury Hospital. The Ministry also retained function of developing of health related policies and training functions. Counties did not have a tailored health policy because there was no standard framework regarding deployment, employment, transfer and remuneration of healthcare personnel for all the 47 counties. The Government and external stakeholders are aware that in order to improve recruitment and increase retention of healthcare personnel in Northern Kenya, and other hardship areas, there is need to invest in incentives specifically targeting healthcare workers posted to work in remote, poorer, hard-to-reach rural areas, enabling them to serve communities that need them most.

1.2. Statement of Problem

Healthcare personnel recruitment, their working conditions as well as their wages have been pertinent issues in the Northern Kenyan Counties. Wajir County historically has experienced the challenge of recruiting and retaining healthcare workers. For a very long period of time, employment of highly skilled healthcare workers to Wajir County and other marginalized areas has proved very difficult (Ministry of health, 2015). One of the major reasons for this is the hardship nature of these counties; there are no basic social amenities like good housing, good food and transport. Additionally, harsh environmental conditions and unsafe working

environments have pushed away qualified personnel from these counties. Most health care workers posted to Wajir resign either before going or desert once they work for few months.

Wajir County has suffered from serious inequities in health worker distribution since independence. The nurse to patient ratio in Wajir county was 1: 4163 while the doctor to patient ratio was 1:132,000, far from the internationally recommended standards of 1:5000 and with a bed capacity of 358 (Wajir First County Integrated Development Plan 2013-2017, 2003). This has been attributed to low numbers of trained healthcare workers and those in training (“pipeline”) whose homes are within the county.

This region has also been politically and historically marginalized resulting in a lack of economic, social, professional opportunities thus exacerbating the healthcare workforce challenges in this part of the country. Moreover, insecurity (mostly perennial inter-tribal/clan conflicts) in this region is a major deterrent that also influences perceptions of the region. As a result, there is a steady exodus of healthcare personnel from Wajir County to other regions. Also, since Kenya’s Defense Forces incursion in Somalia in 2011 which was occasioned by frequent Al-Shabaab militant attacks and abduction of tourists along the Kenyan coast, as well as frequent attacks or abductions to Kenyan healthcare and aid workers, many healthcare workers (especially those from outside Northern Kenya) might have fled the county.

Another significant problem in hardship areas has been institutional weaknesses due to corruption which have resulted in the recruitment of unqualified staff owing to nepotistic tendencies and political interests

1.3. Justification

The effect of devolution on the number of the healthcare workers in hardship areas has not been extensively explored by prior researchers hence the gap in information on this area. Previous studies have explored the effects of devolution on the healthcare service delivery as well as the plight of workers, but failed to analyze the effect on the number of workers. The present study will provide key insights on this subject area focusing on Wajir County.

This kind of study has not been conducted in the management area of study and so the findings and outcome would be used as the basis for solving the issues concerning healthcare workers recruitment and retention in Wajir County. The findings from this study will also form a backbone upon which other studies will be based on. The study will identify

inadequacies that exist in the distribution of healthcare workers and their retention. This study is essential for the partial fulfillment for the award of a Master's degree in Business Administration (Healthcare Management) at Strathmore University.

1.4 Objectives of the study

1.4.1. General objective

To determine the effect of devolution on the number of healthcare workers in Wajir County and influence of devolution on budgetary allocation for health.

1.4.2. Specific Objectives

- i. To determine how devolution has impacted number of healthcare workers in Wajir County
- ii. To evaluate the influence of devolution on distribution of human resource for health in the six sub - counties within Wajir County.
- iii. To find out the difference in amount allocated in the budget to health services by national and county government in Wajir County.

1.5. Research Questions

- i. What is the effect of devolution on the number of the County healthcare workers in Wajir?
- ii. How does devolution influence the distribution of human resource for health in the different sub – counties within Wajir County
- iii. What is the effect of devolution on budgetary allocation for health in the counties?

1.6. Scope of the study

The research will be limited to a study of Wajir County’s department of health and County Public Service Boards. The study seeks to analyze how devolution has affected the county health services in terms of human resource for health and financing of health; two key pillars of health systems.

The study looked at the number of healthcare workers inherited from the national ministry of health (seconded staff), the number of healthcare workers hired by Wajir county government since devolution and the distribution of health care workers in the six sub counties of Wajir.

The number of healthcare workers from Wajir County currently undergoing further training was also analyzed against their field of study. This includes doctors, nurses and clinical officers specializing in different fields. The number currently has been sponsored by Wajir County will be compared with the number sponsored by national government before devolution.

Wajir county healthcare workers skills mix was also analyzed. The different cadres of nurses, clinical officers, doctors and specialists before and after devolution will be compared.

The budget allocation to human resource for health by Wajir county government since devolution was checked against national ministry of health allocation to Wajir for a full year before devolution.

1.7. Significance of the study

The study will help the Wajir County to take full advantage of devolution to optimize number of healthcare workers to WHO recommended numbers.

The National Government will ensure devolution is fully supported so that all counties in the country are at par in regards to provision of health. It will also ensure Equalization fund is released to counties so that marginalized counties such as Wajir County catches up. The generated information will also help with policy development.

The study will also help the international Community embrace devolution so as to achieve the Sustainable Development Goals.

CHAPTER TWO

LITERATURE REVIEW

2.1. Introduction

Devolution is a form of decentralization, or the transfer of authority and responsibility from central to lower levels of government for a range of public functions (Ndii, 2010). The purposes and forms of decentralization vary widely; there is no “one-size-fits-all” approach. Decentralization is usually defined using three categories that represent progressively larger transfers of autonomy and responsibility to subnational governments (Ndii, 2010). Each category presents particular challenges and opportunities for health services. Depending upon the functions and authorities transferred, decentralization processes can involve one or more categories. In Kenya, the constitution identifies the decentralization process as devolution because of the existence of locally elected governors and county assembly members, although minor elements of deconcentration (e.g., seconded staff) and delegation (e.g., the National Hospital Insurance Fund) also exist.

The three types of decentralization are:

- a) Devolution-power, responsibility, and budgetary authority are shifted to locally elected or appointed officials.
- b) Deconcentration-National institutions place staff at the local level but retain decision-making power.
- c) Delegation-Management of public functions is transferred to semiautonomous or parastatal organizations.

2.2. Decentralization before the 2010 Devolution

Decentralization has a long history in Kenya. Following independence in 1963, the British colonial government proposed a system of regional governments based on ethnic and tribal considerations (Institute of Economic Affairs, 2011). This plan was quickly dropped by the Kenya National African Union, the dominant political party at the time. Instead, the party created a unitary state with eight provinces and 175 local authorities (Republic of Kenya, 1977). This structure effectively centralized power with the government in Nairobi, minimizing the control of resources exercised at lower levels (Norad, 2009). Under this act, the Ministry of Local Government provided strong central oversight of local governments,

and government policy was enacted throughout the provinces. Although local authorities were responsible for service provision, they had little decision-making authority under this system (Kunnat, 2009).

Kenya attempted to decentralize decision making numerous times under this original framework. In the 1970s and 1980s, the government created six Regional Development Authorities to plan and coordinate activities (KHRC, 2010). In 1983, the District Focus for Rural Development Strategy put the district at the center of priority setting (Barkan & Chege, 1989). These strategies deconcentrated central ministry administrative staff, while also disempowering local authorities, creating few clear responsibilities or mandates between the two alternatives. By the 1990s, World Bank and International Monetary Fund (IMF) structural adjustment programs were promoting deregulation and decentralization. In Kenya, the World Bank began directly funding local governments under its Local Government Reform Program (Esidene, 2011).

These reforms continued to promote deconcentration, as provinces and districts took on more responsibility for service provision, but created no new decision-making powers. During this time, finances were decentralized vertically because the rural development and structural adjustment programs had created overlapping mechanisms, such as the Rural Development Fund and the Local Authority Transfer Fund (KHRC, 2010). By 2010, there were 13 distinct vertical funding mechanisms available to the decentralized levels. However, these mechanisms confused, rather than clarified, lines of authority, increasing administrative inefficiency (Barkan & Chege, 1989).

By most accounts, these efforts at decentralization were not successful, and Kenya remained highly centralized (Ndii, 2010; Ndavi et al., 2009). Various studies have found that previous decentralization frameworks were weakened by: limited decision space for local governments (Muriu, 2013), poor legal basis for decentralization (Chitere, 2004), weak citizen participation (Muriu, 2013; Chitere, 2004; Oyaya, 2004), capacity gaps within local governments (Chitere, 2004; Oyaya, 2004) and continued civil servant dominance (Chitere, 2004; Oyaya, 2004).

2.3 Devolution after 2010

According to constitution of Kenya 2010, chapter 15 article 176 and 177:

- i) There shall be a county government for each county consisting of a county assembly and a county executive.
- ii) County governments shall have reliable source of revenue to enable them govern and provide service effectively

According to schedule 4 of the constitution of Kenya 2010, 14 functions have been devolved to county governments including health services. The county assembly provides oversight while county executive provides services. According to chapter twelve of Constitution of Kenya 2010:

(1) Revenue raised nationally shall be shared equitably among the national and county governments.

(2) County governments may be given additional allocations from the national government's share of the revenue, either conditionally or unconditionally.

An independent constitutional commission, Commission of Revenue allocation (CRA), was set up to independently come up with how national revenue will be shared between national and county governments pursuant to article 217 1 (a)

2.3.1 Human resource for health under devolution

At the county government level, the promulgated constitution of 2010 provided for the creation of County Public Service Boards (CPSB) in every county which would serve as the general employer of all public service employees in specific counties. Public service employees performing devolved functions after the general elections of 2013 were seconded to county governments, and deployed after the human resource management structures in each county were established. In the health sector, the ministry of health in conjunction with the transitional authority undertook the human resource management assessment for each county and further work on building capacity for all CPSBs (Tsofa, 2017).

According to County Government Act number 17 of 2012 article 59 the functions of the County Public Service Board shall be, on behalf of the county government, to:

- (a) Establish and abolish offices in the county public service;
- (b) Appoint persons to hold or act in offices of the county public service including in the Boards of cities and urban areas within the county and to confirm appointments;
- (c) Exercise disciplinary control over, and remove, persons holding or acting in those offices as provided for under this Part;
- (d) Prepare regular reports for submission to the county assembly on the execution of the functions of the Board;
- (e) Promote in the county public service the values and principles referred to in Articles 10 and 232;
- (f) Evaluate and report to the county assembly on the extent to which the values and principles referred to in Articles 10 and 232 are complied with in the county public service;
- (g) Facilitate the development of coherent, integrated human resource planning and budgeting for personnel emoluments in counties;
- (h) Advise the county government on human resource management and development;
- (i) Advise county government on implementation and monitoring of the national performance management system in counties;
- (j) Make recommendations to the Salaries and Remuneration Commission, on behalf of the county government, on the remuneration, pensions and gratuities for county public service employees.

2.3.2 Effects of devolution on the number of healthcare workers across the globe

Typically, devolution changes the governance relations in the health system. Devolution functions to improve performance of the health system through transferring of authority and responsibilities to locally elected governments (Collins, Araujo & Barbosa, 2000). In Mali, devolution has aided in improving the capacity of the human resources for health. Lodenstein and Dao (2011) establishes that devolution can promote the increased recruitment and retention of health workers. When resources are decentralized it means that it is possible to improve the wages of the healthcare workers as well as the work conditions of the various health facilities. More health care personnel are therefore attracted to these regions to improve the healthcare service delivery.

In rural Mali for example there are several constraints to health service provision such as resource management- especially regarding key issues such as allocation and performance of

available human resources. The ratio of qualified population/staff is eight times higher in the urban areas as compared to the rural health centers; and this is especially true for midwives. Another issue is the geographical disparities which limit the increased movement of healthcare personnel to these rural areas. As such, there is limited availability and quality of staff. When the government decentralizes these responsibilities for the management of local health centers to local institutions then these inadequacies can be effectively addressed. Mali has a devolution policy which supports the transfer of human resources at the primary healthcare level from civil service to local governments' service-in such cases, local governments contract local health staff and even pay their salaries and incentives. The District Health Management also trains and monitors the performance of the workers. With devolution, it is expected that there will be increased establishment of new health centers hence increased employment of local health staff by 30%. Further, with devolution there is increased hiring and recruitment of staff from within the locality.

In Mali, decentralization has led to increased hiring of locals thus they are less able to leave their posts. They are offered incentives such as transportation and housing among, other incentives given in kind. Even so, this has only attracted the healthcare personnel at the lower cadres and not highly-skilled staff such as nurses and doctors. Decentralization policies would only be successful if they can resolve issues of attracting and retaining doctors and nurses as Lodenstein and Dao (2011) argued. The central governments tend to provide very fierce competition to the local governments as they provide civil servant contracts with career perspectives and better security. Thus, the posts in the remote areas are just used by people as a bridge to government employment precisely in the urban areas.

China and Tanzania are such nations that have observed this trend among the healthcare workers (Liu et al., 2006). They have reported uneven quality of service provision because the poorer and remote districts could not compete for qualified staff with central government (Munga et al., 2009). Inequity in staffing has also been a serious issue in Kenya where the Northern Counties have very low number of healthcare workers because trained and skilled workers prefer the jobs at the urban centers. Kenya should therefore adopt Mali's policy of decentralized recruiting through harmonizing the employee rights and status of different contracts and regulating competition (Lodenstein & Dao, 2011).

To reinforce this ideology Kolehmainen-Aitken (2004) states that unless equalization techniques are established then there would be competition between richer and poorer local governments and this could lead to inequity in staffing. Lutwama, Roos and Dolamo (2012) on the other hand have argued that decentralization affects the number and performance of healthcare workers. The main reasons as to the limited numbers is because of poor remunerations, lack of motivations or very low incentives more so to move to the remote or poorer regions.

Sihanya (2013) opined that devolution has the ability to make local officials' actions additionally transparent as well as present a check on corruption, appointment according to ties of the family or some other poor practices or connections. However, she also asserts that there exists a local political system that is active, outlets of news that are not part of these webs of influence and that individuals will be ready to blow the whistle where they view problems and that they are likely to be listened to. The foregoing author also established that devolving responsibilities not only impacted the regions or organizations where these responsibilities were devolved to, but also had an impact on the organization which is the ministry of health that is responsible for the devolution of authority. Also, the author highlights that proper governance should outline the policies that the health ministry will be made responsible for in the health care system that is devolved. Some of the examples include regulation of quality as well as training and education of doctors (Sihanya, 2013).

By devolution causing transparency and shunning corruption, it makes the activities of the devolved health sector to be done according to laid down policies and procedures. When these healthcare sectors operate according to regulations, the expectation is that healthcare practitioners will be drawn to the devolved healthcare sector leading to an increase in the number of health care practitioners in the county level and a reduction in healthcare practitioners in the national healthcare sector. Also, devolution creates opportunities in the county level where practitioners who are stuck with minimum growth opportunities at the national level, are likely to pursue. Finally, limited corruption is associated with sufficient resources at the country level and when resources are sufficient, practitioners are bound to acquire job satisfaction which will play a significant role in ensuring the existing health care practitioners are retained with minimum turnover.

Marchal (2009) asserts that on the negative side, devolution poses the danger of unwelcomed and unwanted results. Citing the case of Ghana.. In the context of training for example, the author argues that some training has to be done at the national level. As a result, getting them to be done at the devolved level can be challenging. Also, the author propounds that career structure is likely to suffer since areas of small administration have limited layers and even though the same is advantageous when it comes to efficiency it limits opportunities for individuals who are talented to rise in ranking via promotion.

The image that this situation portrays is that the devolved health care sector presents a limited opportunity for one to grow career-wise as the number of administration layers are limited. Therefore, not many health practitioners (especially those looking for a career growth) are likely to take up roles at the devolved level. As such, the level of growth in the number of employees at the devolved level is likely to be limited due to unattractiveness of the employment posts. Additionally, some programs such as health promotion, TB and HIV are organized in a vertical manner and on some occasions funded by external donors (Marchal, 2009). Being that the devolved system is a new programme, these donors are likely to be uncomfortable about using the devolved structure as they have a lot of confidence in the vertical programme. This situation raises potential conflict between the structure that is devolved and the vertical programme.

The donors lacking confidence in the devolved system, the likelihood of them funding the health activities at the devolved health sector is minimal. As such, due to financing issues, health care practitioners are less likely to go for job opportunities at the devolved level. This situation in the long run is bound to translate into multiple job vacancies at the country health sector and health sector nurses and clinical officer's shortage.

2.3.2. Outcomes of devolution on health work force in Kenya

Beyond the general responsibility of managing county employees, it was not clear what the specific roles the CPSB would undertake, especially in operational human resource management for health workers. It was also unclear on who was responsible for specific welfare elements of health workers including career progression and in-service training including how transfers for health workers across counties was to be managed. One study in Kilifi looked to analyze the early implementation outcomes of this governance reform at the county level.

When county governments took the role of paying salaries for all health practitioners from the national government, the process was characterized by numerous challenges including payroll discrepancies, delayed salary payments, staff missing from the pay role and missing allowances. There are perceptions by the general public that both the county and national governments are often compromised by their particular executive arms of government, via inducements and allowances to rubberstamp executive choices and decisions concerning health workers.

Discrimination and political interference in human resource management for health workers have been witnessed, with some counties reported to have rejected their staff as a result of them being from different tribes to the ones they were sent to (Tsofa et al., 2017). The fear for victimization and political interference, coupled with the ambiguity in inter-county transfers resulted in many health workers seeking transfers back to their counties of origin. As a result of these issues, reports of mass resignations became common (Gitonga, 2015). In late 2013, the 3 major health workers unions called for a nationwide strike pressing for the re-centralization of the health function back to the national government.

2.4. Number of health workers and health infrastructure in Wajir County

In Wajir County, there are 27 private facilities, 80 public health facilities in the 6 constituencies and 2 facilities managed by missions/NGOs. The county government has 10 level 4 hospitals, 26 level 3 health centers, 46 level 2 health centers, 24 clinics and 46 dispensaries. According to the Kenya Integrated Health Budget Survey (KIBHS) of 2006, over 95 percent of Wajir's population covers approximately 5 kilometers in order to access primary health care, while around 4 percent could access a health facility within a kilometer. The county was being served by 5 doctors, 625 community health workers and 118 nurses. The nurse to patient ratio in Wajir county was 1: 4163 while the doctor to patient ratio was 1:132,000, far from the internationally recommended standards of 1:5000 and with a bed capacity of 358 (Wajir First County Integrated Development Plan 2013-2017, 2013).

Despite the glaring shortages in doctors, the County built 34 new dispensaries and 42 maternity centers as well as increasing the number of health workers resulting in delivery of health by skilled personnel rising from 18 percent to 50 percent, according to the County's

director of health (Barasa & Muchui, 2016). Thus, while there is an acute shortage of health personnel in Wajir County, care needs to be taken when redeploying health workers so that regions with pronounced shortages are given priority over others with better health workers' figures. Also issues of gender distribution need to be considered.

The increase in allocations to the health sector is attributed to the development plans within the sector such as construction of new health facilities as well increased recruitment of medical staff. Although the county has increased the number of advertisements for specialist health professionals, most of them don't get responses. This has made the County to change tact and is now interested in recruiting consultants who will look into the issues the County has. The County has also been sponsoring local students to pursue medical related courses in tertiary and higher-level learning institutions who will in turn work in the county upon completion of their studies. In addition, the County government has constructed a Kenya Medical Training College (KMTC) campus close to Wajir Town at an estimated cost of Kshs 200 million. The County's administration hopes to increase the number of people training as nurses, nutritionists and public health officers in order to ensure availability of health workers in the county (Barasa, & Muchui, 2016).

2.5 Global strategy on human resource for health: workforce 2030

The vision that by 2030 all communities have universal access to health workers, without stigma and discrimination, requires combining the adoption of effective policies at national, regional and global levels with adequate investment to address unmet needs. Realistically, the scale-up required in the coming decades to meet increasing demand, address existing gaps and counter expected turnover is greater than all previous estimates. Projections developed by WHO and the World Bank point to the creation of approximately 40 million new health and social care jobs globally to 2030 and to the need for 18 million additional health workers, primarily in low-resource settings, to attain high and effective coverage of the broad range of health services necessary to ensure healthy lives for all (WHO, 2016).

Investments that increase the overall productivity of the health sector and produce better health outcomes are a cornerstone for building strong health systems and stronger economies. This chapter elaborates on three points. First, good health contributes to economic growth. Second, there are important additional pathways by which investments in the health system have spill-over effects that enhance inclusive economic growth, including job creation. Third,

new evidence suggests that expenditures on health are not dead-weight drags on the economy, but rather can be associated with productivity gains in other sectors (WHO, 2016).

2.6. Conceptual Framework

Conceptual framework is a diagrammatic embodiment of associations or linkages between study variables (Robson, 2011). The following framework illustrates the association between the independent variable and four dependent variables as depicted diagrammatically in Figure 2.1. In this study, the dependent variable will be the new constitution and the institutions it has created.

The independent variables will be the key influences or drivers of the dependent variable and for this study they include; number of healthcare workers in terms of absolute numbers, number who have specialized and number on study leave; distribution of health care workers in the sub-counties and budgetary allocation to health.


INDEPENDENT VARIABLE		DEPENDENT VARIABLE	
OLD CONSTITUTION 1963 – 2010		NEW CONSTITUTION 2010 to date	OUTCOME OF DEVOLUTION
Central government <ul style="list-style-type: none"> Ministry of health – manages country’s health services. 		Devolved government <ul style="list-style-type: none"> County department of health – manages county’s health services 	<ul style="list-style-type: none"> Total health workers
<ul style="list-style-type: none"> Public service commission – hires health workers for the whole country. 		<ul style="list-style-type: none"> County public service board-hires county health workers 	<ul style="list-style-type: none"> Number of health workers on paid study leave
<ul style="list-style-type: none"> National treasury – allocates funds to health 		<ul style="list-style-type: none"> County treasury- allocates funds to health 	<ul style="list-style-type: none"> Specialized health workers
<ul style="list-style-type: none"> National assembly- Oversight and representation 		<ul style="list-style-type: none"> County assembly-Oversight and representation 	<ul style="list-style-type: none"> Distribution of health workers in the sub counties
			<ul style="list-style-type: none"> Budgetary allocation to health

Figure 2.1: Conceptual framework

Source: Researcher (2018)

CHAPTER THREE

RESEARCH METHODOLOGY

3.1. Introduction

This chapter describes the research methodology of the study. Research methodology is the procedural plan that will be adopted by the researcher to validly, objectively, economically and accurately answer the research questions. It is a detailed explanation of the procedures and techniques that will be applied for collecting, processing and analyzing data. This section of the study therefore describes the research design, target population and area, sampling frame, sample and sampling technique, data collection instruments, procedures, analysis management and the ethical considerations that the study will adhere to.

3.2. Research Design

This is a descriptive case report study design that employed secondary data analysis techniques to review Wajir County health budget allocation and health department payroll data for 5 years with aim of analyzing how devolution has increased human resource for health in Wajir County.

The data from national ministry of health 2012 2014, 2015, 2016 and 2017 payroll data for health from Wajir County will be analyzed. Data from 2013 wasn't included because it was the transition year, elections were held in March and the payroll was maintained partly at the national level. Budget allocation to Wajir County health services by national ministry of health for financial year 2011/2012 and 2012/2013 will be compared to the four years post-devolution.

3.3. Target Population

The study targeted financial and employee recruitment and retention records of health workers of Wajir County; doctors, nurses, clinical officers and specialists.

3.4. Inclusion Criteria

The inclusion criteria focused on records of all healthcare workers seconded from national government to Wajir County at the start of devolution, as well as those of all healthcare workers who were employed in Wajir in the last 4 years were eligible for the study.

3.5. Exclusion Criteria

The records of private healthcare workers in the last 5 years were not included in the study. Also, the records of healthcare workers from other counties were not included in the study.

3.6.1. Sample size determination and sampling method

Wajir County is made up of 6 sub-counties; Wajir West, Wajir East, Wajir South, Wajir North, Tarbaj and Eldas. The study reviewed the healthcare financial records and healthcare employee recruitment and retention records for these sub-counties.

3.6.2. Validity

The secondary data abstraction tool was pretested two weeks before the actual data collection activity to ensure that any errors, omissions and grammar were corrected before the study began. This ensured that the data collection tool collected the right and correct information that it was intended to measure.

3.6.3. Reliability

This was ensured by abstracting the secondary data from the right documents through the authorized personnel and confirming from other government agencies like controller of budget and council of governors.

3.7. Data Management and analysis

The secondary data was coded and analyzed using a computer based software. The SPSS version 20 was used for analysis where the coded data was entered and analyzed based on the objectives of the study. The data was then analyzed by descriptive statistics, cross tabulations will be done to determine associations and trends, graphs and figures will be utilized to present the results.

The study looked at the number of healthcare workers inherited from the national ministry of health (seconded staff), the number of healthcare workers hired by Wajir county government since devolution, the number of healthcare workers retained by the county from the time of employment for at least two years compared with the number that left the county.

The number of healthcare workers from Wajir County currently undergoing further training was also analyzed against their field of study. This includes doctors, nurses and clinical officers specializing in different fields. The number currently sponsored by Wajir County was compared with the number sponsored by national government before devolution. Wajir county healthcare workers skills mix was also analyzed. The different cadres of nurses, clinical officers, doctors and specialists before and after devolution compared.

The budget allocation to human resource for health by Wajir county government since devolution was checked against national ministry of health allocation to Wajir for a full year before devolution

3.8. Ethical Considerations

Both scientific and ethical approvals were obtained from national commission for science, technology and innovation (NACOSTI) and Strathmore University Ethics Review Committee (SU- IERC). Permission to access the healthcare workers Payroll data from IPPD (integrated payroll and personnel database) and health care workers recruitment records was obtained from the Director of health, chairperson of County Public Service Boards and County Executive Member for Health. These department heads gave consent prior to data retrieval. All the data collected was de-identified and aggregated for privacy reasons.

CHAPTER FOUR

DATA ANALYSIS AND PRESENTATION

4.1 Introduction

This chapter presents the findings of the study and their interpretation. This is done in line with the study objectives.

4.2 Objective 1. Number of health care workers in Wajir before and after devolution

4.2.1: Comparison of the number of healthcare workers as at 2012 under ministry of health and over 5 years under devolution

The study sought to determine the number of health care workers in Wajir County over the last five years. The study wanted to establish the trend on the increase on the numbers over the years. The first year in consideration was 2012 when health was under national government. Then the number from 2014 to 2017 was determined to find out the increase.

Total number of health care workers working in Wajir county from 2012 to 2017

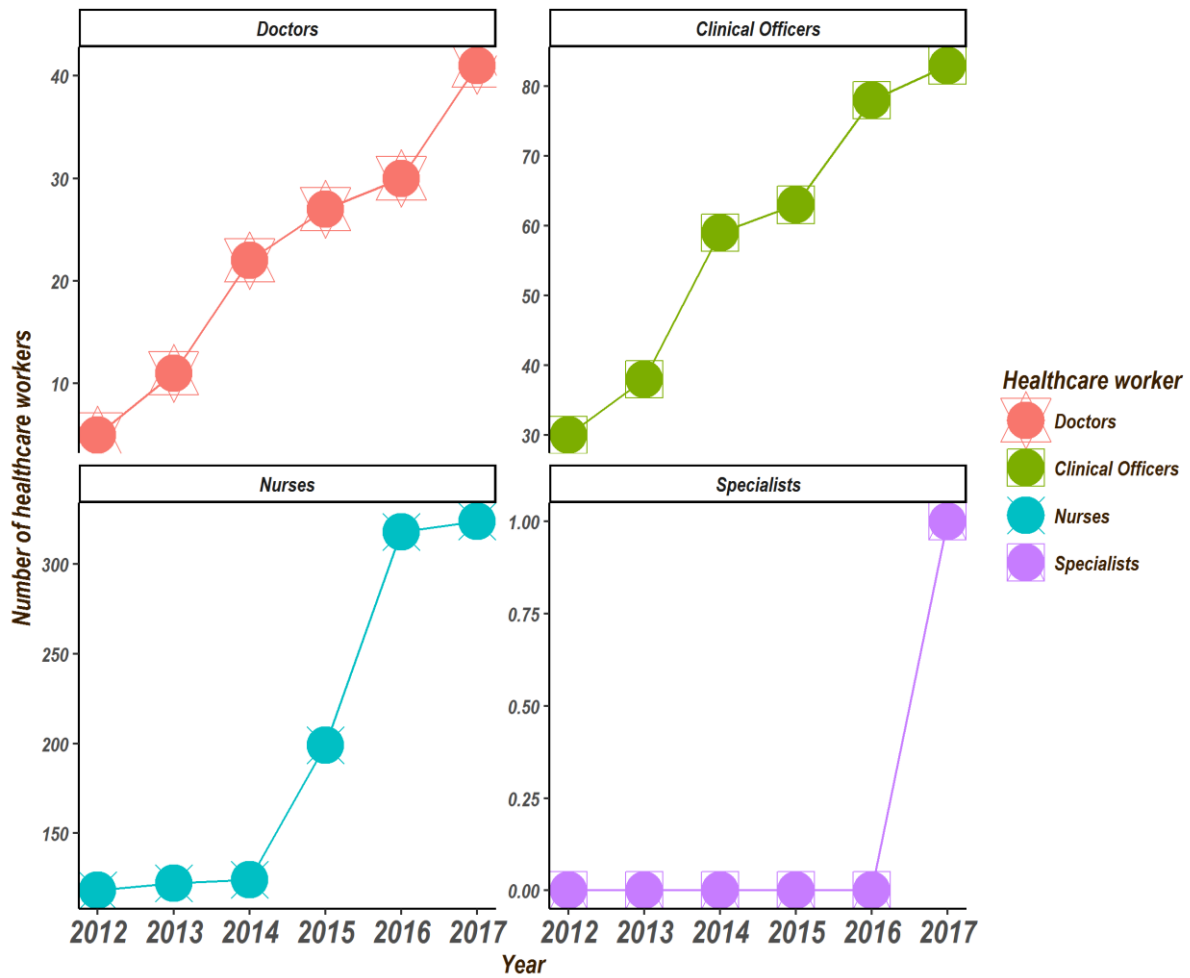


Figure 4.1: Number of health care workers in Wajir from 2012 to 2017.

Result of the study show that Wajir County has substantially increased its health care since inception of devolution. In the year 2012 under the national government, the county had 5 doctors. This number increased over the next 4 years with the number rising to 22 in 2014, 27 in 2015, 30 in 2016 and 41 in 2016. This means 17 doctors were recruited between 2013 and 2014, 5 in 2015, 3 in 2016 and 11 in 2017. The number of clinical officers also increased substantially with only 30 clinical officers in the entire county in 2012. The county did massive recruitment over 4 years under devolution with the number rising to 59 by 2014, 63 by 2015, 78 in 2016 and 83 by 2017.

The study shows that 29 new clinical officers were recruited between 2013 and 2014, 4 in 2015, 15 in 2016 and 5 in 2017. The same was noted for nurses as their number increased.

The county had 118 nurses in 2012, 124 in 2014, 199 in 2015, 318 in 2016 and 324 by end of 2017. This shows massive recruitment as 6 were recruited between 2013 and 2014, 75 nurses recruited in 2015, 119 in 2016 and 6 in 2017. The county did not have any medical specialists in 2012; none was recruited in 2013, 2014, 2015 and 2016 despite several adverts. One medical specialist, a surgeon, was however recruited in 2017.

4.2.2: specialized healthcare workers

The study sought to determine number of specialized health care workers before devolution under national government and after devolution, under county government. The number of specialized doctors, nurses and clinical officers in 2012 was compared to the numbers from 2014 to 2017.

4.2.2.1 Analysis of the different nursing specialization in 2012 under national government and from 2013 to 2017 under county government

The study sought to find out the number of nurses in Wajir County that have undergone further training and specialized in the various specialization recognized by nursing council of Kenya. The number specialized as at 2012 under national government and from 2014 to 2017 under county government was analyzed.

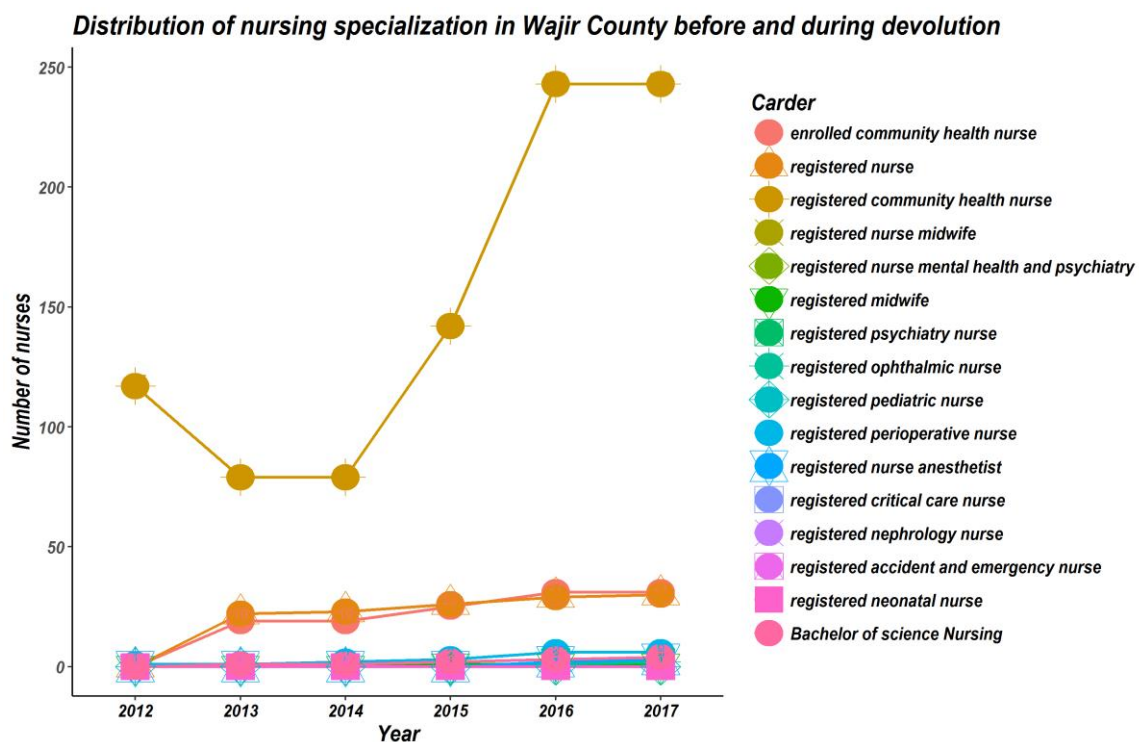


Figure 4.2: Number of specialized nurses in Wajir from 2012 to 2017.

The results of the study show that out of 118 nurses in 2012, 117 were Kenya registered community health nurse. There was only one nurse who has specialized as Kenya registered peri-operative nurse and one nurse with Bachelor of Science nursing. The entire County did not have other specialized nurses. In 2014 out of 124 nurses in 2012, 121 were Kenya registered community health nurse and other non-specialized nurses. There were only two nurses who have specialized as Kenya registered peri-operative nurse and one nurse with Bachelor of Science nursing. In 2015 out of 199 nurses, 193 were Kenya registered community health nurses and other non-specialized nurses.

There were three nurses who have specialized as Kenya registered peri-operative nurse, two with Bachelor of Science nursing and Kenya registered midwife. In 2016 out of 318 nurses, 303 were Kenya registered community health nurse and other non-specialized nurses and number of specialized nurses increased to 15. There were six nurses who had specialized as Kenya registered peri operative nurse, one in midwifery, two in psychiatry, one in ophthalmology, three with Bachelor of Science nursing and two in anesthesia. In 2016 out of 324 nurses, 304 were Kenya registered community health nurse and other non-specialized nurses and number of specialized nurses increased to 20. There were six nurses who have specialized as Kenya registered peri-operative nurse, three in midwifery, two in psychiatry, and two in ophthalmology, four with Bachelor of Science nursing and three in anesthesia.

4.2.2.2: Analysis of the different clinical officer specialization in 2012 under national government and from 2013 to 2017 under county government

The study sought to find out the number of clinical officers in Wajir County that have undergone further training and specialized in the various specialization recognized by clinical officers' council of Kenya. The number specialized as at 2012 under national government and from 2014 to 2017 under county government was analyzed.

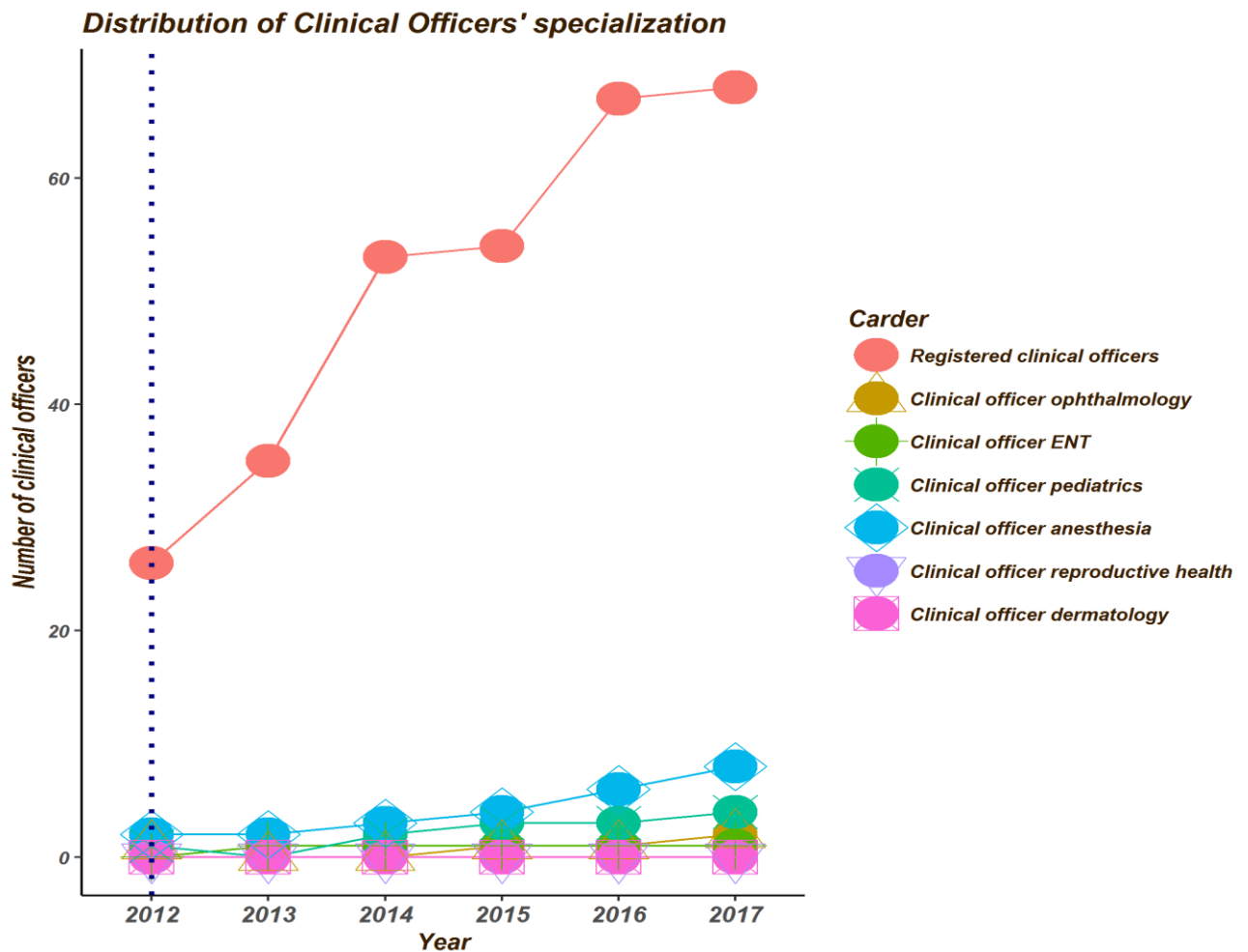


Figure 4.3: Number of specialized clinical officers in Wajir from 2012 to 2017

The results of the study show that out of 30 clinical officers in 2012, 26 were Kenya registered clinical officers without any specialization, there were only four clinical officers who have specialized with one as CO in ophthalmology, one as CO pediatrics and 2 as CO Anaesthesia. Out of 59 clinical officers 2014, 53 were Kenya registered clinical officers without any specialization. The number of clinical officers who have specialized increased to 6 with one as CO ophthalmology, 2 as CO pediatrics and 3 as CO Anaesthesia. Out of 63 clinical officers 2015, 54 were Kenya registered clinical officers without any specialization.

The number of clinical officers who have specialized increased to 9 with 1 as CO ophthalmology, 3 as CO pediatrics, 1 as ENT and 4 as CO Anaesthesia. Out of 78 clinical officers 2016, 67 were Kenya registered clinical officers without any specialization. The number of clinical officers who have specialized increased to 11 with 1 as CO ophthalmology, 3 as CO pediatrics, 1 as ENT and 6 as CO Anaesthesia. Out of 83 clinical officers 2017, 68 were Kenya registered clinical officers without any specialization. The

number of clinical officers who have specialized increased to 15 with 2 as CO ophthalmology, 4 as CO pediatrics, 1 as ENT and 8 as CO Anaesthesia.

4.2.2.3: Analysis of the different medical officers specialization in 2012 under national government and from 2013 to 2017 under county government

The study sought to find out the number of medical officers in Wajir County that have undergone further training and specialized in the various specialization recognized by medical practitioners and Dentist Board of Kenya. The number specialized as at 2012 under national government and from 2014 to 2017 under county government was analyzed.

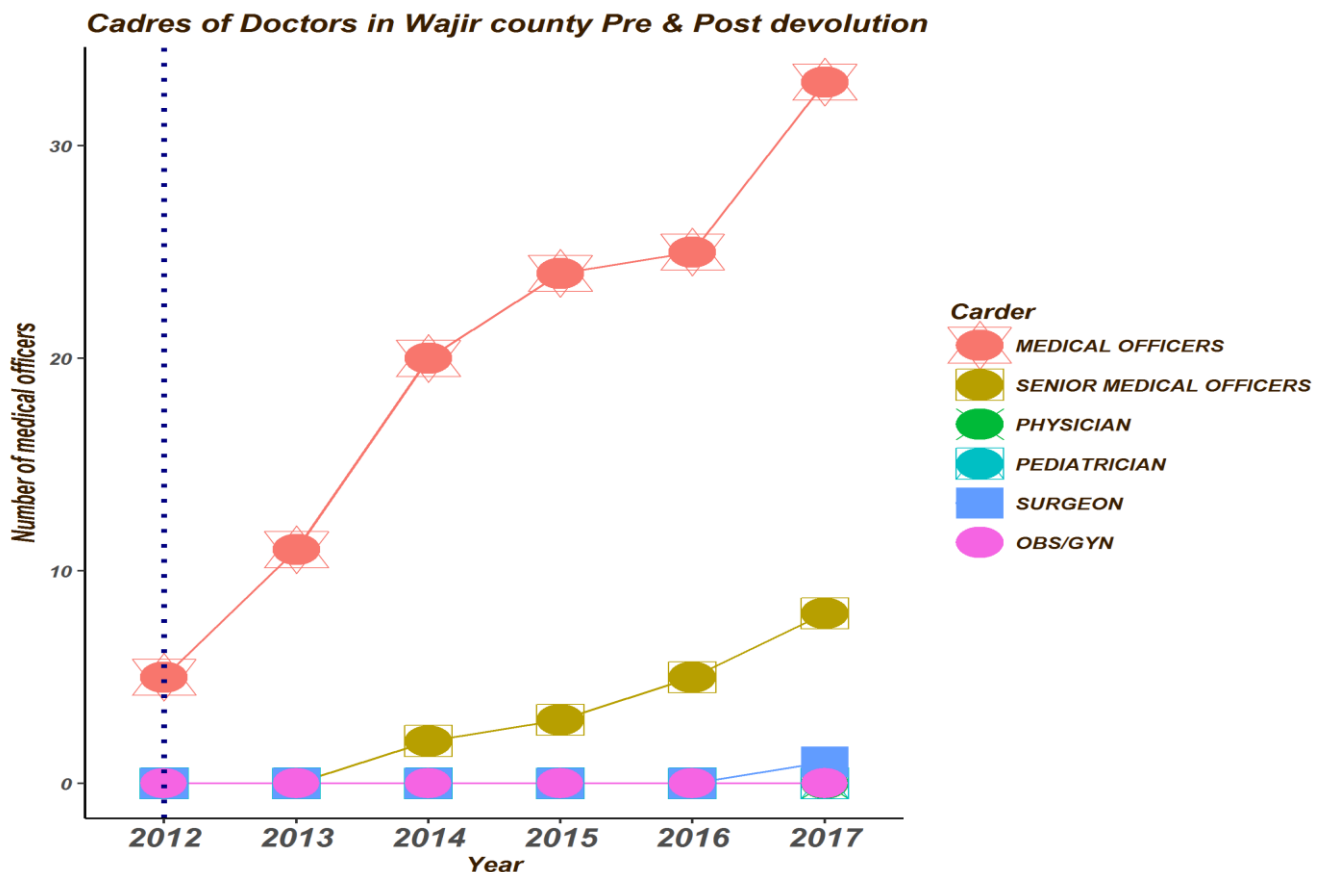


Figure 4.4: Number of specialized doctors in Wajir from 2012 to 2017

The result of the study shows that Wajir County did not have any doctor who has specialized from 2012, until 2017 when they managed to recruit the first surgeon.

4.2.3: Analysis of healthcare workers undergoing training both under national government in 2012 and county government in 2013 to 2017

The study sought to determine the number of health care workers who are undergoing training while in the payroll of either national government in 2012 or county government from 2014 to 2017. The officers are given paid study leave to further their training and specialize to improve health outcomes.

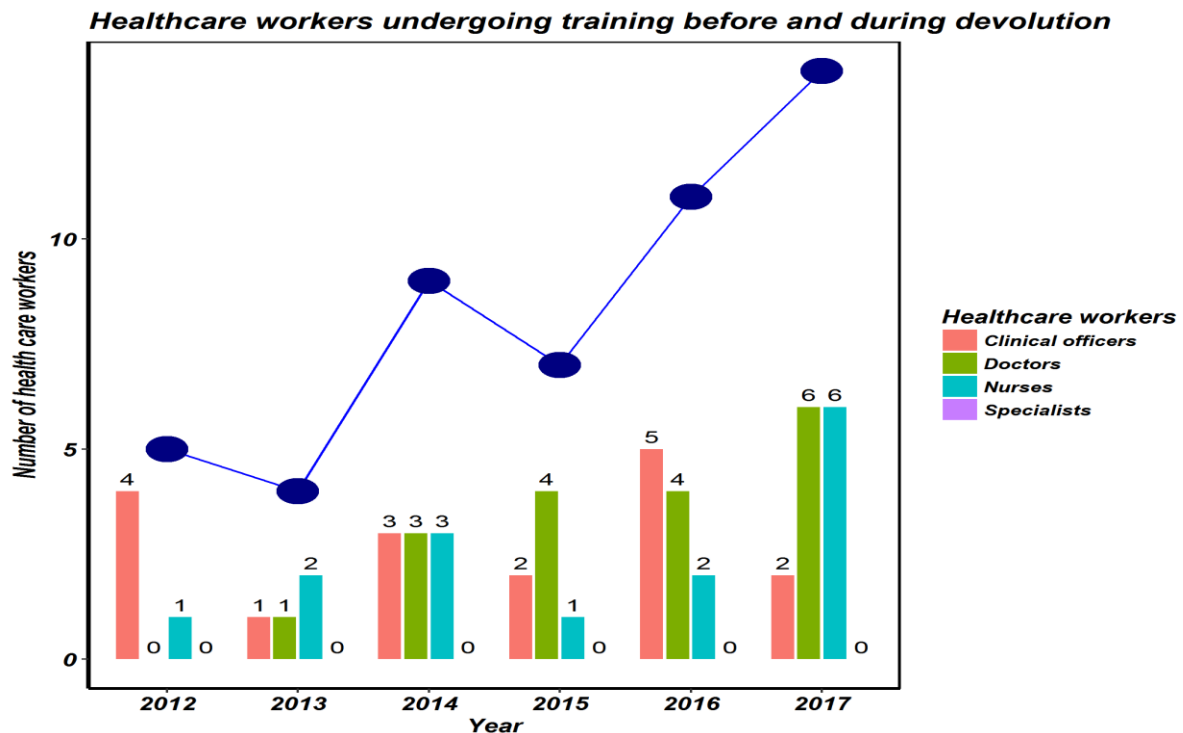


Figure 4.5: Healthcare workers undergoing training before and after devolution

The result of the study show that in 2012 under national government 5 health workers were on study leave to further improve their skills, the 5 were 4 clinical officers and 1 nurse. In 2014 the county government of Wajir released 9 health workers for studies on paid leave. These are 3 medical doctors, 3 nurses and 3 clinical officers. In 2015, 7 health workers were granted study leave; 2 clinical officers, 4 doctors and 1 nurse. In 2016 11 officers were released to study; 5 clinical officers, 4 doctors and 2 nurses. In 2017 14 health workers were released for further studies on paid study leave by Wajir County Government; 6 doctors, 6 nurses and 2 clinical officers

4.3 Objective 2: Salaries and budget allocation to health before and after devolution.

4.3.1: Salaries paid to healthcare workers in Wajir County under devolution as compared to 2012 under national government

Secondary data on the salary paid to healthcare workers mainly doctors, nurses, clinical officers and medical specialists was analyzed. Data on the amount of money spent by national government on these cadres in 2012 was compared with the monies spent by County government in the year 2014 to 2017.

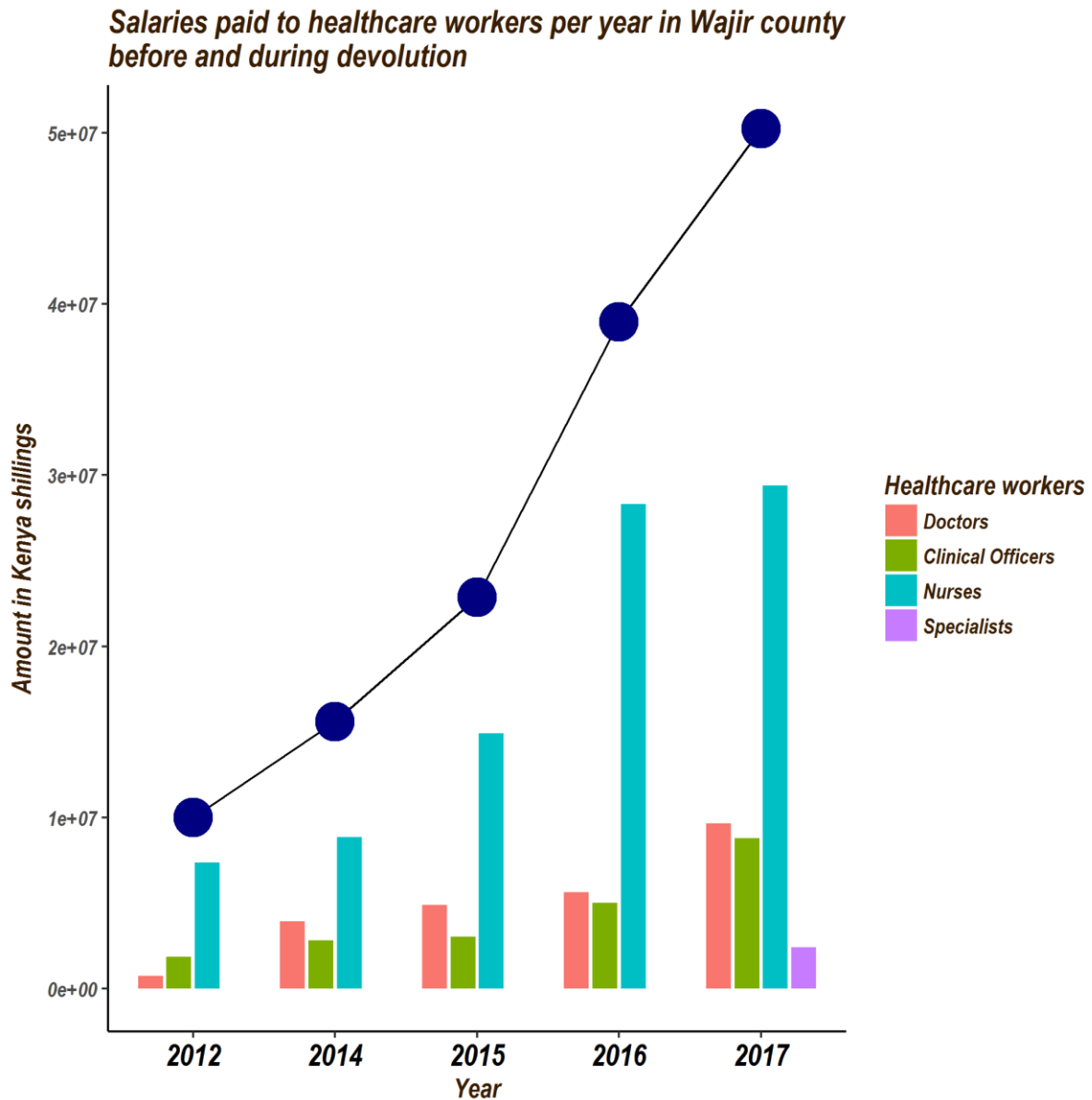


Figure 4.6: salaries paid to healthcare workers in Wajir before and after devolution

The study findings show that amount spent on salaries increased significantly from 2012 all the way to 2017. In the year 2012, the National government spent Kshs 742, 400 on doctors salaries, Kshs 7, 369, 100 to pay nurses and Kshs 1, 873, 500 to pay clinical officers. No money was spent on specialists as there was none in Wajir in 2012. Total amount spent on these cadres in 2012 was Kshs 9, 942, 600. In 2014 the County government spent Kshs 15,

580, 770 (Kshs3, 926, 560 on doctors, Kshs 8, 846, 284 on nurses, Kshs 2, 807, 926 on clinical officers and Kshs 0 on specialists), this was an increase of almost Kshs 6 million.

In 2015, Kshs 22, 858, 660 was spent on salaries, a further of another Kshs 7 million (Kshs 4, 901, 040 on doctors, Kshs 14, 917, 040 on nurses, Kshs 3, 040, 884 on clinical officers, Kshs 0 on specialists). In 2016, Kshs 38, 966, 064 was spent increasing salary spending by almost Kshs 16 million (Kshs 5, 629, 200 on doctors, Kshs 28, 316, 628 on nurses, Kshs 5, 020, 236 on clinical officers, Kshs 0 on specialists). In 2017, spending further increased by almost Kshs 10 million to Kshs 48, 261, 250 (Kshs 9, 669, 030 on doctors, Kshs 29, 380, 950 on nurses, Kshs 8, 791, 360 on clinical officers and Kshs 2, 420, 110 on medical specialists. Wajir County managed to recruit its first specialist, a surgeon, in 2017.

4.3.2 Budgetary allocation to health from national ministry of health to Wajir in 2012 as compared to county government health allocation from 2013 to 2017

The study obtained and analyzed secondary data on budget allocation to health by national government in the year 2012 and allocation by county government to health sector from 2013 to 2017.

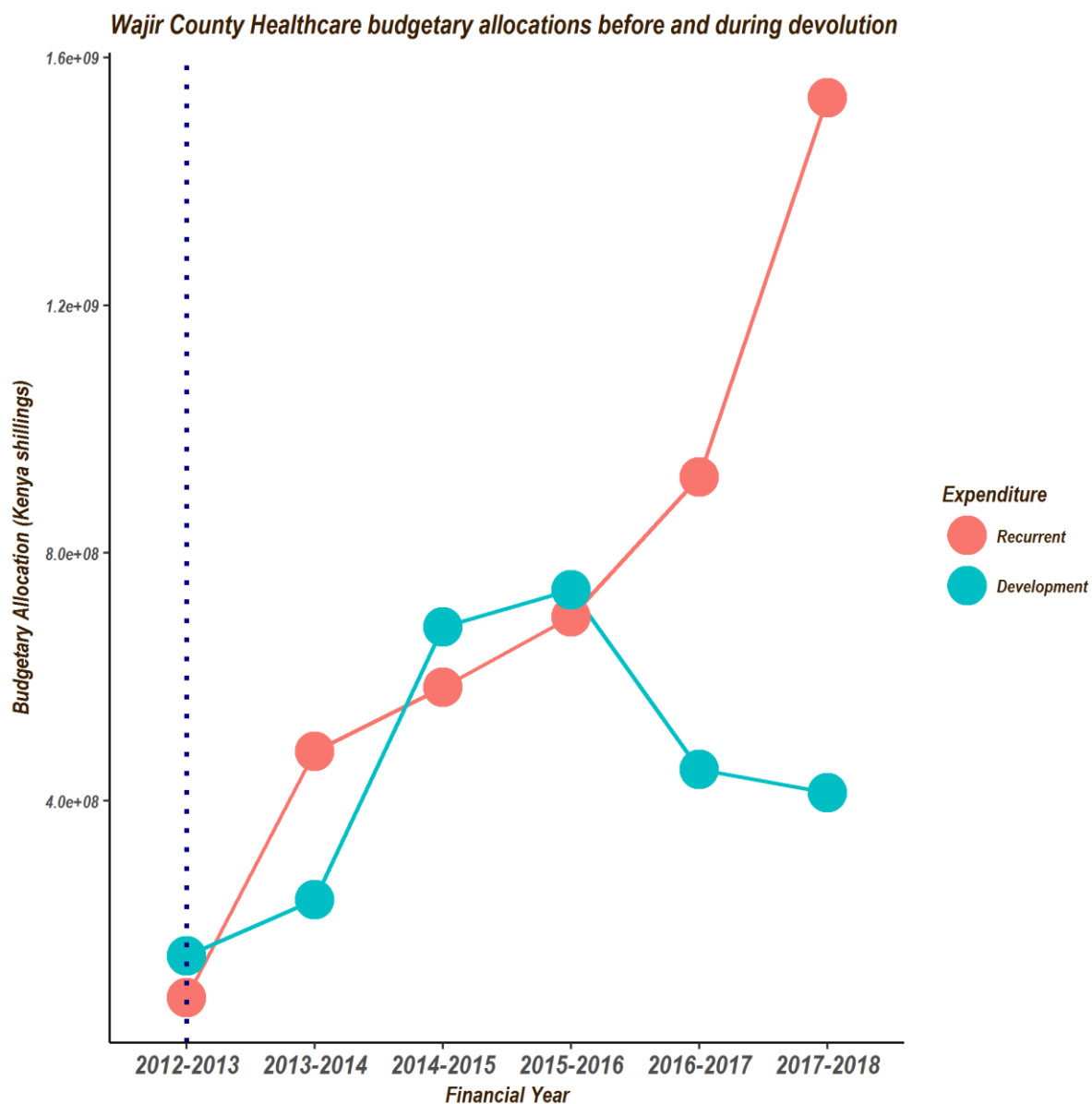


Figure 4.7: Wajir health budget from 2012 to 2017

The results of the study show that Wajir received a total of Kshs 232 million (82 million recurrent and 150 million in development expenditure including projects funded by donors like World Bank) from national government. Once Wajir County took over health docket in 2013 healthcare was allocated Kshs 780 million (Kshs 480 million recurrent and Kshs 240 million development expenditure), almost 4-fold what national government allocated in 2012. In 2014/15 budget health care was allocated Kshs 1.26 billion (Kshs 583.47 million recurrent and 680.42 million development budget). This was an increase of almost Kshs 500 million.

In 2015/16 budget health was allocated almost 1.436 Billion (Kshs 696.57 million recurrent and Kshs 740.86 million development expenditure). This was an increase of about 200 million. In 2016/17 budget health was allocated Kshs 1.372 billion (Kshs 922.32 million recurrent and 450.5 million development budget). Massive amount of resources was invested in human resource with recurrent budget of 922 million. In 2017/18 budget health was allocated Kshs 1.948 billion (Kshs 1.535 billion recurrent and 413 million development budget). This was almost 700 million more than the previous allocation.

4.4: Objective 3: Distribution of healthcare workers in the six different sub counties of Wajir County

The study sought to determine the distribution of doctors, nurses, clinical officers and specialists among the 6 six sub counties of Wajir. Data on distribution of the said health workers was obtained from 2012 (before devolution) and 2013 to 2017 (after devolution).

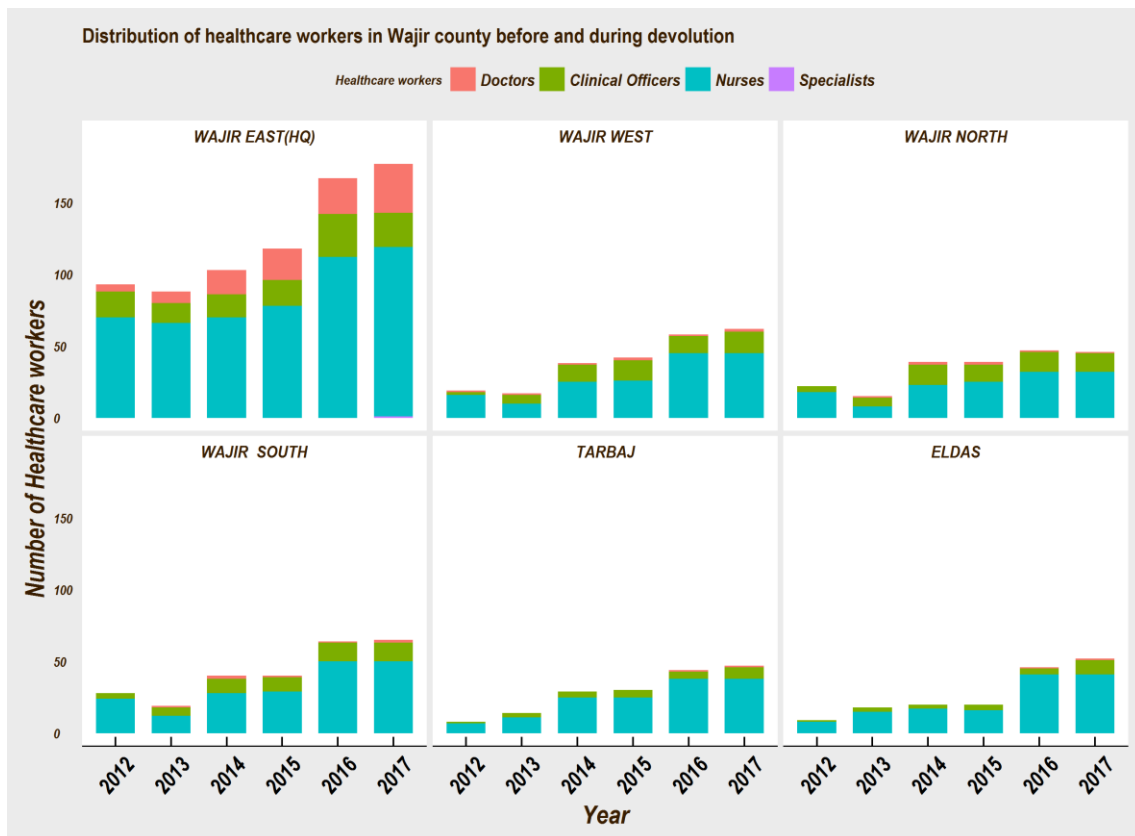


Figure 4.8: Distribution of health workers in Wajir before and after devolution

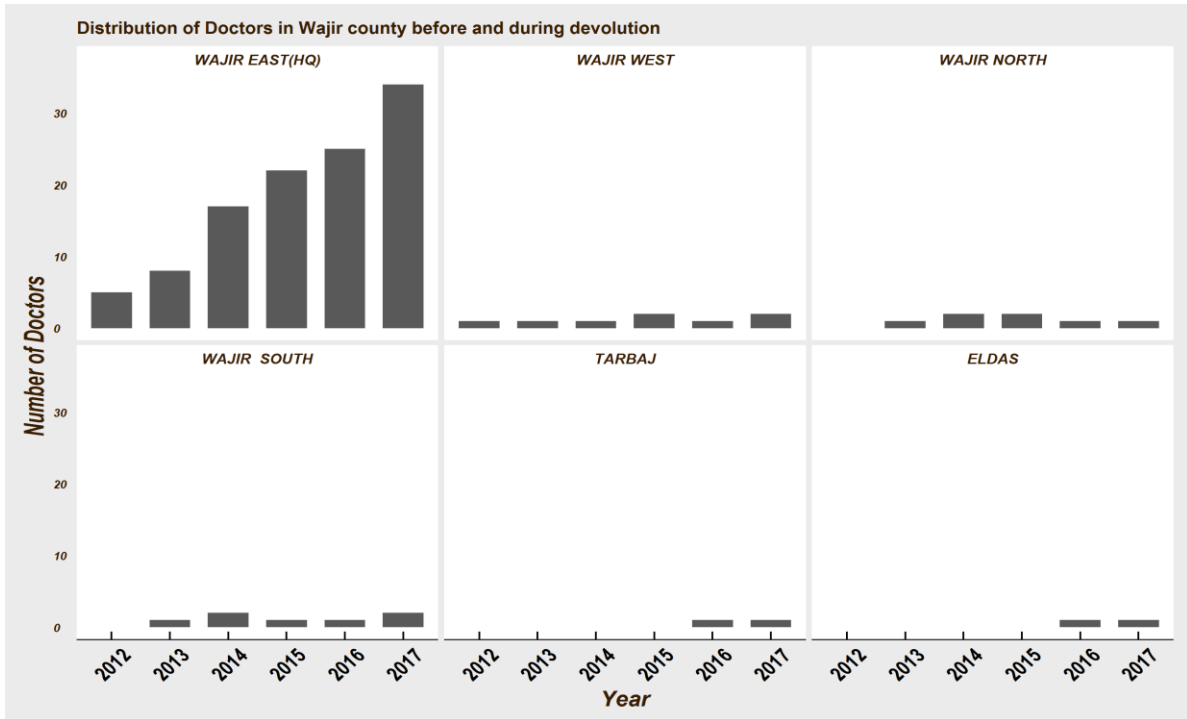


Figure 4.9: Distribution of doctors in Wajir County before and after devolution

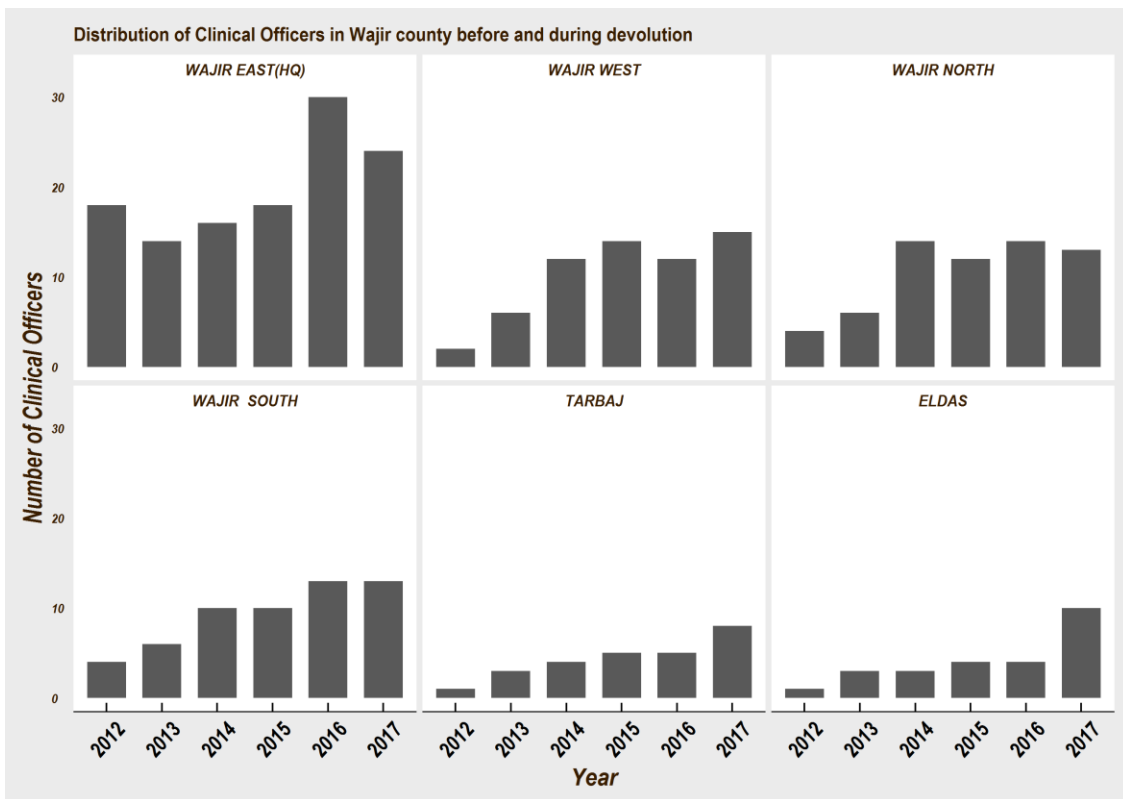


Figure 4.10: Distribution of clinical officers in Wajir County before and after devolution

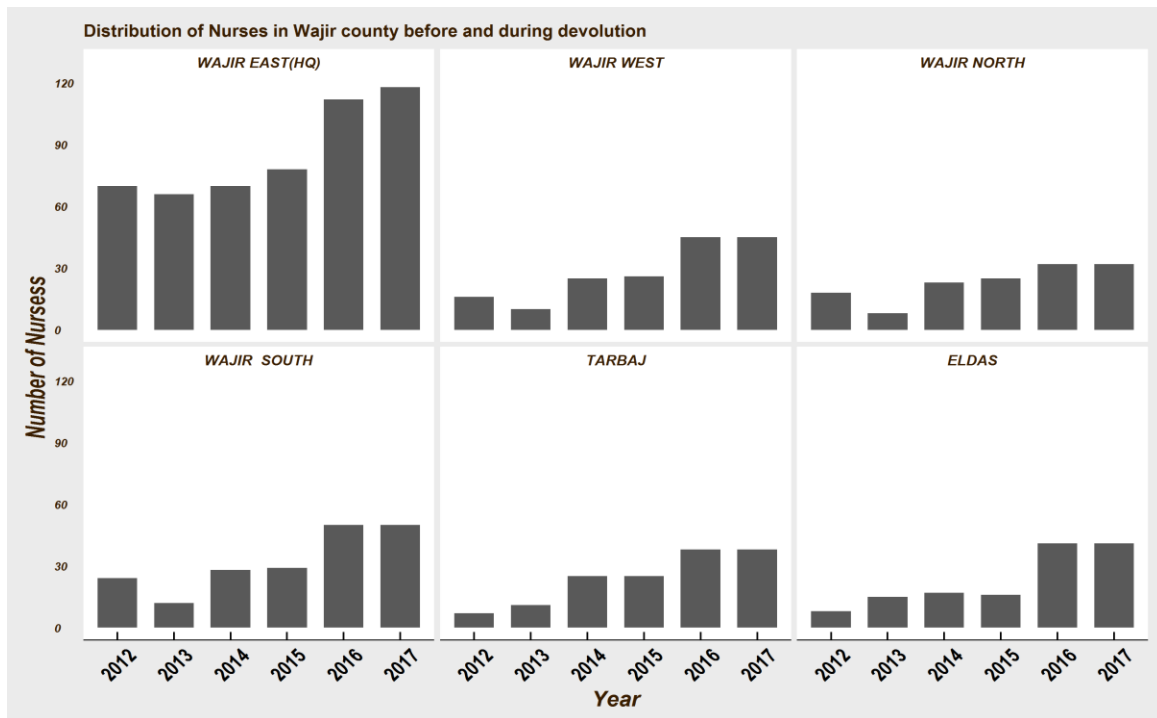


Figure 4.11: Distribution of Nurses in Wajir County before and after devolution

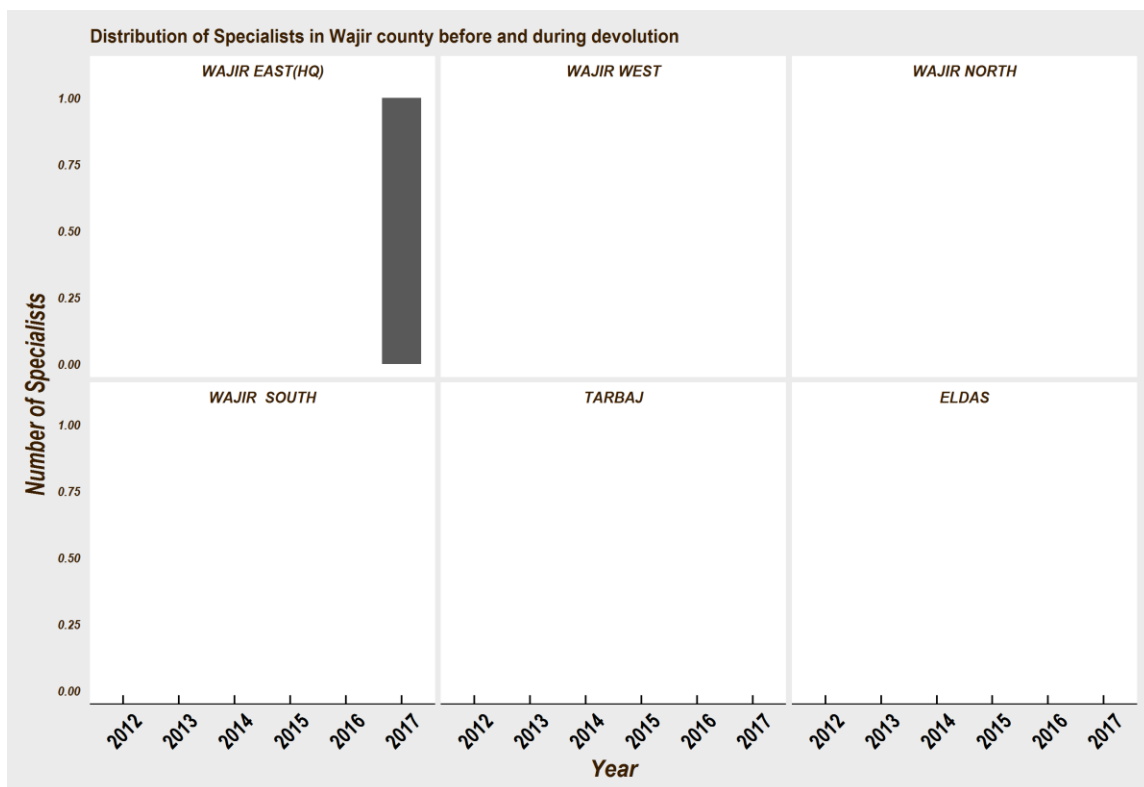


Figure 4.12: Distribution of specialists in Wajir County before and after devolution

4.4.1 Wajir East Sub County

The results of the study show that majority of the healthcare workers work in Wajir East Sub County, the county headquarters, both before and after devolution. The county referral hospital (only level 5 hospital in the county) is located in this sub county. In 2012, out of 152 doctors, nurses and clinical officers 92 (3 doctors, 18 Cos and 70 nurses) were based in Wajir east sub county. In 2014 out of 205 healthcare workers 103 (17 doctors, 70 nurses and 16COs) were based in Wajir based in Wajir east. In 2015 out of 289 health workers 118 (22 doctors, 78 nurses and 18COs) were in Wajir east. In 2016 out of 426 health workers 167 (25 doctors, 112 nurses and 30 COs) were based at the county headquarter. In 2017, out of 448 health workers 177 (34 doctors, 118 nurses, 1 specialist and 24 COs) were based in Wajir East.

Total number of healthcare workers in Wajir east increased from 92 in 2012 to 177 in 2017. The number of doctors increased from 3 in 2012 to 34 by 2017, nurses from 70 to 118, clinical officers from 16 to 24 and one surgeon was recruited from none.

4.4.2 Wajir West Sub County

The results of the study show that the number of the healthcare workers in Wajir west Sub County increased after devolution. In 2012, out of 152 doctors, nurses and clinical officers 19 (1 doctors, 2 Cos and 16 nurses) were based in Wajir west sub county. In 2014 out of 205 healthcare workers 38(1 doctors, 25 nurses and 12 COs) were based in Wajir west. In 2015 out of 289 health workers 42(2doctors, 26 nurses and 14COs) were in Wajir west. In 2016 out of 426 health workers 58 (1 doctors, 45 nurses and 12 COs) were based in Wajir west. In 2017 out of 448 health workers 62 (2 doctors, 45 nurses, and 15 COs) were based in Wajir west. Total number of healthcare workers in Wajir west increased from 19 in 2012 to 62 in 2017. Number of doctors increased from 1 in 2012 to 2 by 2017, nurses from 25 to 45, clinical officers from 2 to 15.

4.4.3 Wajir South Sub-County

The result of the study shows that the number of the healthcare workers in Wajir South Sub County increased after devolution. In 2012 out of 152 doctors, nurses and clinical officers 28 (0 doctors, 4 Cos and 24 nurses) were based in Wajir South Sub County. In 2014, out of 205 healthcare workers 40 (2 doctors, 28 nurses and 10 COs) were based in Wajir south. In 2015 out of 289 health workers 40(1 doctor, 29 nurses and 10 COs) were in Wajir south. In 2016,

out of 426 health workers 58 (1 doctors, 45 nurses and 12 COs) were based in Wajir south. In 2017 out of 448 health workers 64 (1 doctors, 50 nurses, and 13 COs) were based in Wajir south.

Total number of healthcare workers in Wajir south increased from 28 in 2012 to 64 in 2017. The number of doctors increased from 0 in 2012 to 2 in 2014 and 1 by 2017, nurses from 24 to 50, clinical officers from 4 to 13.

4.4.4 Wajir North Sub County

The results of the study show that the number of the healthcare workers in Wajir North Sub County increased after devolution. In 2012, out of 152 doctors, nurses and clinical officers 22 (0 doctors, 4 Cos and 18 nurses) were based in Wajir north sub county. In 2014 out of 205 healthcare workers 39(2 doctors, 23 nurses and 14 COs) were based in Wajir north. In 2015, out of 289 health workers 42(2 doctor, 26 nurses and 14 COs) were in Wajir north. In 2016 out of 426 health workers 47 (1 doctors, 32 nurses and 14 COs) were based in Wajir north. In 2017 out of 448 health workers 46 (1 doctors, 32 nurses, and 13 COs) were based in Wajir north.

Total number of healthcare workers in Wajir north increased from 22 in 2012 to 46 in 2017. Number of doctors increased from 0 in 2012 to 2 in 2014 and 1 by 2017, nurses from 18 to 32, clinical officers from 4 to 13.

4.4.5 Tarbaj Sub County

The results of the study show that the number of the healthcare workers in Tarbaj Sub County increased after devolution. In 2012, out of 152 doctors, nurses and clinical officers 7 (0 doctors, 0 Cos and 7 nurses) were based in Tarbaj sub county. In 2014 out of 205 healthcare workers 14(0 doctors, 11 nurses and 3 COs) were based in Tarbaj. In 2015 out of 289 health workers 30(0 doctor, 25 nurses and 5 COs) were in this sub county. In 2016 out of 426 health workers 44 (1 doctors, 38 nurses and 5 COs) were based in this sub county. In 2017 out of 448 health workers 47 (1 doctors, 38 nurses, and 8 COs) were based in this sub county.

Total number of healthcare workers in Tarbaj increased from 7 in 2012 to 47 in 2017. Number of doctors increased from 0 in 2012 to 1 by 2017, nurses from 7 to 38, clinical officers from 0 to 8.

4.4.6 Eldas Sub County

The results of the study show that the number of the healthcare workers in Eldas Sub County increased after devolution. In 2012, out of 152 doctors, nurses and clinical officers 8 (0 doctors, 0 Cos and 8 nurses) were based in this sub county. In 2014, out of 205 healthcare workers 20(0 doctors, 17 nurses and 3 COs) were based in Eldas. In 2015 out of 289 health workers 20(0 doctor, 16 nurses and 4 COs) were in this sub county. In 2016, out of 426 health workers 46 (1 doctors, 41 nurses and 4 COs) were based in this sub county. In 2017 out of 448 health workers 52(1 doctors, 41 nurses, and 10 COs) were based in this sub county. Total number of healthcare workers in Eldas increased from 8 in 2012 to 52 in 2017. Number of doctors increased from 0 in 2012 to 1 by 2017, nurses from 8 to 41, clinical officers from 0 to 10.

CHAPTER 5

DISCUSSION, CONCLUSION AND RECOMMENDATION

5.1 Introduction

This chapter presents the discussions of the study findings, conclusions, recommendations, and suggestions for further research.

5.2 Discussion of the findings

The result of this study revealed that Wajir County under devolution focused on increasing the number of healthcare workers. From 152 in 2012 to 418 in 2017 (almost 300% increase). The number of doctors increased significantly from only 5 in 2012 to 41 at the end of 2017. The number of nurses increased from 118 in 2012 to 324 while the number of clinical officers increased from 30 to 83. Devolution of health has greatly influenced the increase in health care workers. This is mainly because resources are available for the government at local level and priority area of investment is decided.

The study established that expenditure on health workers salaries increased significantly over the 5 years under review. While the national government spent slightly below Kshs 10 million in the year 2012 on salaries, the county government increased this amount to Kshs 15.5 million in 2014, about Kshs 23 million in 2015, Kshs 38 million in 2016 and Kshs 48 million in 2017. This show that the national government was not in touch with problem in Wajir which is almost 800km from the capital Nairobi. Devolution of health function to the counties through Constitution of Kenya 2010 accelerated catch up of counties which were previously marginalized by successive regimes for close to 50 years.

According to the study findings, budgetary allocation to health service increased with the onset of devolution. The national government through the Ministry of Health allocated 232 million to Wajir in the financial year 2012/2013. The County government in its 2014/2015 budget allocated Kshs 1.263 Billion out of Kshs 7.273 (17% of the budget) to health sector. In 2015/2016 budget health allocation increased to Kshs 1.436 Billion out of total budget of Kshs 8.272 Billion which is 17%. In 2016/2017 the county allocation to health Kshs 1.372 out of Kshs 8.681 Billion which is 15.8% and finally in 2017/2018 budget health was

allocated Kshs 1.948 billion out of total budget of Kshs 9.362 billion which translates to 20.4%.

The increase in allocation was almost 10 fold over the 5 years of devolution. With this massive investment Wajir County managed to strengthen all the six building blocks of health: service delivery, health workforce, health information system, access to essential medicine, financing and leadership/governance. The increased allocation made it possible for the county to operationalize most facilities that were closed due to shortage of staff and construction and of new facilities that has improved access. The County at the beginning of devolution had only one facility that provided caesarian section, the main county referral hospital which was a level 4 facility. The number of functional level 4 facilities providing comprehensive obstetric care now stands at 4 with two more opening soon.

The study established that with devolution, the number of specialized health care workers increased. According to nursing council of Kenya, there are 12 recognized nursing specialties; Kenya Enrolled Community Health Nurse [KECHN], Kenya Enrolled Community Health Nurse [Post Basic] [KECHN PB], Kenya Registered Nurse [KRN], Kenya Registered Community Health Nurse [KRCHN], Kenya Registered Nurse Midwife [KRNM], Kenya Registered Nurse/Mental Health & Psychiatric Nurse [KRN/MHP], Kenya Registered Midwife [KRM], Kenya Registered Community Health Nurse [Post Basic] [KRCHN PB], Kenya Registered Psychiatric Nurse [KRPN], Kenya Registered Ophthalmic Nurse [KROphN], Kenya Registered Paediatric Nurse [KRPaedN] and Kenya Registered Peri – Operative Nurse [KRPON].

The number of specialist nurses gradually increased from 1 to 20 over the 5 years under devolution. There were six nurses who have specialized as Kenya registered peri operative nurse, three in midwifery, two in psychiatry, and two in ophthalmology, four with Bachelor of Science nursing and three in anaesthesia. These very skilled nurses led to improved quality of services to the people of Wajir. The KRPON are well distributed across four sub counties with functional theatres. They have led to reduced post-operative sepsis. There was also a significant increase in number of clinical officers who have specialized. From 4 in 2012 to 15 in 2017, these specialists include ENT, Paediatrics, ophthalmology and anaesthesia clinical officers. They deal in specific area and therefore make accurate and timely diagnosis therefore improving outcome.

According to the findings, the County faces a major challenge of attracting medical specialists. Out of 29 major specialties in Medical Practice recognized by medical board (including Anaesthesia, Anatomic Pathology, Cardiothoracic surgery, Clinical Medical Genetics, Clinical Pathology, Clinical Oncology, Dermatology, Ear, Nose and Throat, Emergency Medicine, Family Medicine, General Surgery, Geriatrics. General Pathology, Immunology Infectious Diseases, Internal Medicine, Orthopaedic Surgery, Oncology, Oncology/Radiotherapy, Paediatrics and Child Health, Palliative medicine, Plastic and reconstructive Surgery, Psychiatry, Public Health, Radiology, Urology, Microbiology, Neurosurgery, Obstetrics and Gynecology, Occupational, Medicine and Ophthalmology), the county has only one Surgeon who was recruited in 2017.

The study also established that the county government has facilitated further studies by releasing staff that get admission to various universities and colleges. These staff sign a legal bonding of three years with the county government so that they don't leave immediately after completing specialization. Once such a staff returns, the county will have a good pool of specialists who will serve the population. Major specialists expected in the county soon include 2 gynecologists, a general surgeon, a radiologist, an ENT surgeon, a cardiothoracic surgeon and ophthalmologist. Several nurses and clinical officers are also undergoing further training to specialize while on county payroll.

5.3 conclusions

Based on the findings of the study, the study concludes that under devolution, Wajir County has increased number of healthcare workers; doctors, clinical officers and nurses. The study further established that the county employed its first specialist, a consultant general surgeon in 2017. Significant number of specialized nurses and clinical officers has also been recruited in the county since inception of devolution. The study found out that the county put more funds for health in the annual budget. The county also took seriously employee satisfaction and emphasized employee training. This was achieved by giving health workers study leave to further their studies.

The study found that there was a positive relationship between devolution and increased number of health workers. The study further concludes that there was a positive relationship between devolution and increased health spending. The results also found a positive

relationship between devolution and increased training of specialists. Overall, there was a positive relationship between devolution and improved health services.

The study also established that the major challenge which the county faced in the implementation of the devolution was attraction of specialists. Despite several attempts to recruit through advertisements, no one applied to work in Wajir County.

5.4 Recommendations of the Study

The study makes two recommendations. One of these is that devolution of health to counties, more so those in hardship areas, should be supported including devolution of human resource for health. Challenges facing the counties should be resolved rather than discussing return of health function to the national government. Health sector will do better under county governments.

Secondly, Wajir County should come up with a deliberate policy on how to attract specialists. Health indicators like maternal mortality will not improve without availability of specialist like Obstetrics and gynecology.

5.5 Suggestions for further research

This study was done on the effect of devolution on number on number of healthcare workers in Wajir. The study recommends that similar studies should be replicated in other counties in hardship areas.

This study concentrated on health workers, which is one of the 6 building blocks of health systems. There are other 5 health systems building blocks including service delivery, health information system, access to essential medicine, financing and governance therefore further studies should focus on effect of devolution on other aspects of the health system.

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APPENDICES

APPENDIX 1: WORK PLAN

Progress Stage	Stage Description	Proposed Dates
1	Choice of Research Topic	August 2017
2	Research Problem Clarification, Research Objectives, Purpose and Significance	September 2017
3	Literature Review	October 2017
4	Proposed Research Method	November 2017
5	Proposal Presentation	Jan 2018
6	Data Collection	Feb 2018
7	Data Analysis and Interpretation	March 2018
8	Dissertation Report Writing – draft	March 2018
9	Final Draft of Research Report	March 2018
10	Submission of dissertation for examination	March 2018
11	Oral Defense of dissertation	March 2018
12	Correction of dissertation	April 2018

APPENDIX 2: BUDGET

Major Activities	Requirements/Participants	Cost Kshs
Literature review, desktop search	Printing, photocopying, fare, lunch, internet bundles	30 000
2 day training of the research assistants (4 research assistants and principle investigator)	Ksh 500 per day per person Venue fee	4000 3500
Actual field work	Professional fee for 4 assistants	20 000
Thesis writing	Three research assistants	15 000
ATOTAL		72500

APPENDIX 3: LETTER TO HR DIRECTOR

Information sheet for human resource director, Wajir County, for pay roll data from 2014 to 2017.

DR ADANKHALIF ADAN KALA
P o Box 68900 – 00622
Nairobi
Cell 0722307456

TO: HUMAN RESOURCE DIRECTOR,
WAJIR COUNTY.

RE: REQUEST FOR PAYROLL DATA FOR HEALTHCARE WORKERS IN WAJIR COUNTY FROM 2014 TO 2017

I am a senior medical officer working in Wajir County currently pursuing master's degree in MBA healthcare management in Strathmore University.

I am doing my dissertation on “effects of devolution on number of healthcare workers in Wajir county-doctors, nurses, clinical officers and specialists”

I am therefore requesting access to payroll data for the above workers working in Wajir County from 2014 to 2017. This will be compared with payroll data from Wajir County for the year 2012.

The data will be handled with utmost confidentiality and no one else will access it. It will be purely used to assess effect of devolution on the number of healthcare workers in Wajir County.

Yours Sincerely
Dr Adankhalif Adan

APPENDIX 4: INFORMATION SHEET FOR CHIEF OFFICER-HEALTH

Information sheet for chief officer of health, Wajir County, for Budget information from 2014 to 2017.

DR ADANKHALIF ADAN KALA
P o Box 68900 – 00622
Nairobi
Cell 0722307456

TO: CHIEF OFFICER OF HEALTH,
WAJIR COUNTY.

RE: REQUEST FOR BUDGET INFORMATION FOR HEALTHCARE SERVICES IN WAJIR COUNTY FROM 2014 TO 2017

I am a senior medical officer working in Wajir County currently pursuing master's degree in MBA healthcare management in Strathmore University.

I am doing my dissertation on “effects of devolution on number of healthcare workers in Wajir county-doctors, nurses, clinical officers and specialists”

I am therefore requesting access to budget information for healthcare services in Wajir County from 2014 to 2017. This will be compared with budget information from National Ministry of health for Wajir County for the year 2012.

The data will be handled with utmost confidentiality and no one else will access it. It will be purely used to assess effect of devolution on the number of healthcare workers in Wajir County.

Yours Sincerely
Dr Adankhalif Adan

APPENDIX 5: INFORMATION FOR HR MANAGER

Information sheet for Human Resource Manager, Ministry of Health-Afya house for Wajir County 2012 payroll data

DR ADANKHALIF ADAN KALA
P o Box 68900 – 00622
Nairobi
Cell 0722307456

TO: HUMAN RESOURCE MANAGER,
MINISTRY OF HEALTH – AFYA HOUSE.

RE: REQUEST FOR PAYROLL DATA FOR HEALTHCARE WORKERS IN WAJIR COUNTY FOR THE YEAR 2012

I am a senior medical officer working in Wajir County currently pursuing master's degree in MBA healthcare management in Strathmore University.

I am doing my dissertation on “effects of devolution on number of healthcare workers in Wajir county-doctors, nurses, clinical officers and specialists”

I am therefore requesting access to payroll data for the above workers working in Wajir County for the year 2012. This will be compared with payroll data from Wajir County from 2014 to 2017.

The data will be handled with utmost confidentiality and no one else will access it. It will be purely used to assess effect of devolution on the number of healthcare workers in Wajir County.

Yours Sincerely
Dr Adankhalif Adan

APPENDIX 6: INFORMATION FOR PRINCIPAL SECRETARY

Information sheet for principal secretary of health requesting for budget information on health services in Wajir County for 2012

DR ADANKHALIF ADAN KALA
P o Box 68900 – 00622
Nairobi
Cell 0722307456

TO: PRINCIPAL SECRETARY,
MINISTRY OF HEALTH –AFYA HOUSE.

RE: REQUEST FOR BUDGET INFORMATION FOR HEALTHCARE SERVICES IN WAJIR COUNTY FOR THE YEAR 2012

I am a senior medical officer working in Wajir County currently pursuing master's degree in MBA healthcare management in Strathmore University.

I am doing my dissertation on “effects of devolution on number of healthcare workers in Wajir county-doctors, nurses, clinical officers and specialists”

I am therefore requesting access to budget information for healthcare services in Wajir County for the year 2012. This will be compared with budge information from Wajir County from 2014 to 2017.

The data will be handled with utmost confidentiality and no one else will access it. It will be purely used to assess effect of devolution on the number of healthcare workers in Wajir County.

Yours Sincerely
Dr Adankhalif Adan

APPENDIX 7: DATA COLLECTION TOOLS

A) PAYROLL DATA

1. MONTHLY PAYROLL DATA FOR WAJIR COUNTY FROM 2014 TO 2017 (UNDER DEVOLUTION)

HEALTHCARE WORKERS	2014	2015	2016	2017
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Number of doctors

Number of nurses

Number of clinical officers

Number of medical specialists

Total number of healthcare workers

2. SALARIES PAID TO WAJIR COUNTY HEALTHCARE WORKERS FROM 2014 TO 2017 (UNDER DEVOLUTION)

SALARIES	2014	2015	2016	2017
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Amount in salaries paid to doctors

Amount in salaries paid to Nurses

Amount in salaries paid to Clinical Officers

Amount of salaries paid to Medical Specialist

Total amount paid to health workers

3. MINISTRY OF HEALTH PAYROLL DATA FOR WAJIR COUNTY BEFORE DEVOLUTION (YEAR 2012)

Health care workers

2012 – PRE DEVOLUTION

Number of doctors

Number of nurses

Number of clinical officers

Number of medical specialists

Total number of healthcare workers in 2012

4. SALARIES PAID TO HEALTHCARE WORKERS IN WAJIR COUNTY IN THE YEAR 2012 (PRE DEVOLUTION)

Salaries

2012- PRE DEVOLUTION

Amount paid to doctors

Amount paid to nurses

Amount paid to clinical officers

Amount paid to medical specialists

Total

A) BUDGET INFORMATION DATA

1. WAJIR COUNTY HEALTHCARE BUDGET FOR THE 5 YEARS POST DEVOLUTION

YEAR	RECURRENT EXPENDITURE	DEVELOPMENT EXPENDITURE	TOTAL
2013 – 2014			
2014 – 2015			
2015 – 2016			
2016 – 2017			
2017 – 2018			
TOTAL OVER 5 YEARS			

2. MINISTRY OF HEALTH BUDGET ALLOCATED TO WAJIR IN THE YEAR 2012 (PRE DEVOLUTION)

YEAR	RECURRENT	DEVELOPMENT	TOTAL
2012/2013			

B) DATA ON DISTRIBUTION OF HEALTHCARE WORKERS PER SUBCOUNTY

1. PRE DEVOLUTION (2012)

SUBCOUNTY	NUMBER IN THE YEAR 2012 UNDER NATIONAL GOVERNMENT			
	DOCTORS	CLINICAL OFFICERS	NURSES	MEDICAL SPECIALISTS
WAJIR EAST				
WAJIR WEST				
WAJIR NORTH				
WAJIR SOUTH				
TARBAJ				
ELDAS				
TOTAL				

1. POST DEVOLUTION DISTRIBUTION OF HEALTHCARE WORKERS
(2013 TO 2017)

SUB-COUNTY	2013				2014				2015				2016		2017					
	D	C	N	S	D	C	N	S	D	C	N	S	D	C	N	M	D	C	N	M
WAJIR EAST																				
WAJIR WEST																				
WAJIR NORTH																				
WAJIR SOUTH																				
TARBAJ																				
ELDAS																				
TOTAL																				

KEY;

D- Doctors

C- Clinical officers

N -Nurses

S- Medical specialists

D. DATA ON HEALTHCARE WORKERS SKILLS MIX

1. NURSES

NUMBER OF DIFFERENT NURSING CADRES BEFORE DEVOLUTION

<u>CARDER</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>
Kenya enrolled community health nurse					
Kenya registered nurse					
Kenya registered community health nurse					

Kenya registered nurse midwife
 Kenya registered nurse mental health and psychiatry
 Kenya registered midwife
 Kenya registered psychiatry nurse
 Kenya registered ophthalmic nurse
 Kenya registered pediatric nurse
 Kenya registered perioperative nurse
 Kenya registered nurse anesthetist
 Kenya registered critical care nurse
 Kenya registered nephrology nurse
 Kenya registered accident and emergency nurse
 Kenya registered neonatal nurse
 Bachelor of science nursing

NUMBER OF DIFFERENT NURSING CADRES AFTER DEVOLUTION

<u>CARDER</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>
Kenya enrolled community health nurse					
Kenya registered nurse					
Kenya registered community health nurse					
Kenya registered nurse midwife					
Kenya registered nurse mental health and psychiatry					
Kenya registered midwife					
Kenya registered psychiatry nurse					
Kenya registered ophthalmic nurse					
Kenya registered pediatric nurse					
Kenya registered perioperative nurse					
Kenya registered nurse anesthetist					
Kenya registered critical care nurse					
Kenya registered nephrology nurse					
Kenya registered accident and emergency nurse					

Kenya registered neonatal nurse

Bachelor of science nursing

2. CLINICAL OFFICERS

PRE DEVOLUTION – 2012

CADRE

NUMBER IN THE YEAR 2012

Registered clinical officers

Clinical officer ophthalmology

Clinical officer ENT

Clinical officer pediatrics

Clinical officer anesthesia

Clinical officer reproductive health

Clinical officer dermatology

POST DEVOLUTION – 2013 TO2017

CARDE	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>
Registered clinical officer					
Clinical officer ENT					
Clinical officer ophthalmology					
Clinical officer pediatrics					
Clinical officer anesthesia					
Clinical officer Reproductive health					
Clinical officer dermatology					

3. MEDICAL OFFICERS

NUMBER OF DIFFERENT CADRES OF DOCTORS IN WAJIR BEFORE DEVOLUTION – YEAR 2012

NUMBER IN 2012

MEDICAL OFFICERS
SENIOR MEDICAL OFFICERS
PHYSICIAN
OBS/GYN
SURGEON
PEDIATRICIAN
TOTAL

NUMBER OF DIFFERENT CADRES OF DOCTORS IN WAJIR POST DEVOLUTION- 2013 TO 2017

	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>
MEDICAL OFFICERS					
SENIOR MEDICAL OFFICERS					
PHYSICIAN					
PEDIATRICIAN					
SURGEON					
PEDIATRICIAN					
TOTAL					

E. DATA ON IN – SERVICE TRAINING

This are healthcare workers undergoing further training while on study leave and (or) fully sponsored by either county government after devolution or national government before devolution.

Pre devolution in service training

Cadre	Number in 2012
Nurses	
Clinical officers	
Doctors	
Specialists	
Total	

Post devolution in service training

Cadre	2013	2014	2015	2016	2017
Nurses					
Clinical officers					
Doctors					
Specialists					
Total					

C) NUMBER OF HEALTH FACILITIES OPERATIONAL

2012 – predevolution

<u>Level</u>	<u>Number in 12</u>
<u>1</u>	
<u>2</u>	
<u>3</u>	
<u>4</u>	
<u>5</u>	
<u>6</u>	

Number of operational facilities post devolution 2013 to 2017

<u>Level</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>
<u>1</u>					
<u>2</u>					
<u>3</u>					
<u>4</u>					
<u>5</u>					
<u>6</u>					

APPENDIX 8: PARTICIPANT INFORMATION CONSENT FORM

ASSESSING THE EFFECT OF DEVOLUTION ON THE NUMBER OF HEALTHCARE WORKERS IN HARDSHIP AREAS: A STUDY ON THE NUMBER OF DOCTORS, CLINICAL OFFICERS, NURSES AND SPECIALISTS IN WAJIR COUNTY.

Section 1

Investigator – Dr Adankhalif Adan kala

Institutional affiliation – Strathmore business school

Section 2 - THE STUDY

This study is been carried out to assess the effect of devolution on number of healthcare workers in hardship areas. The study will carried out in Wajir County to represent the other hardship areas. The study involves secondary data analysis on payroll and data for the past 5 years. Analysis will be done to compare the numbers before and after devolution.

2.1: Do I have to take part?

No. Taking part in this study is entirely optional and the decision rests only with you. If you decide to take part, you will be asked to provide data on health workers payroll and county health budget. If you are not able to answer all the questions successfully the first time, you may be asked to sit through another informational session after which you may be asked to answer the questions a second time. You are free to decline to take part in the study from this study at any time without giving any reasons.

2.2: Who is eligible to take part in this study?

- a) County director of health
- b) County chief officer health
- c) Principal Secretary – ministry of health
- d) Director of medical service – ministry of health

2.3: What will taking part in this study involve for me?

You will be approached and requested to take part in the study. If you are satisfied that you fully understand the goals behind this study, you will be asked to sign the informed consent form (this form) and then taken through a questionnaire to complete.

2.4: Are there any risks or dangers in taking part in this study?

There are no risks in taking part in this study. All the information you provide will be treated as confidential and will not be used in any way without your express permission.

2.5: Are there any benefits of taking part in this study?

The information will be used to improve health services in hardship areas around the world.

2.6: What will happen to me if I refuse to take part in this study?

Participation in this study is entirely voluntary. Even if you decide to take part at first but later change your mind, you are free to withdraw at any time without explanation.

2.7: Who will have access to my information during this research?

All research records will be stored in securely locked cabinets. That information may be transcribed into our database but this will be sufficiently encrypted and password protected. Only the people who are closely concerned with this study will have access to your information. All your information will be kept confidential.

2.8: Who can I contact in case I have further questions?

You can contact me, ADANKHALIF ADAN KALA, at SBS, or by e-mail adankhalif@yahoo.com, or by phone 0722307456. You can also contact my supervisor, Dr. PRATAP KUMAR, at the Strathmore Business School, Nairobi, or by e-mail pkumar@strathmore.edu or by phone 0731848163.

If you want to ask someone independent anything about this research please contact:

The Secretary–Strathmore University Institutional Ethics Review Board, P. O. BOX 59857, 00200, Nairobi, email ethicsreview@strathmore.edu Tel number: +254 703 034 375

I, _____, have had the study explained to me. I have understood all that I have read and have had explained to me and had my questions answered satisfactorily. I understand that I can change my mind at any stage.

Please tick the boxes that apply to you;

Participation in the research study

I AGREE to take part in this research

I DO NOT AGREE to take part in this research

Storage of information on the completed questionnaire

I AGREE to have my completed questionnaire stored for future data analysis

I DO NOT AGREE to have my completed questionnaire stored for future data analysis

Participant's Signature: _____

Date: _____/_____/_____

DD / MM / YEAR

Participant's Name: _____

Time: _____/_____

HR / MN

I, _____ (Name of person taking consent) certify that I have followed the SOP for this study and have explained the study information to the study participant named above, and that s/he has understood the nature and the purpose of the study and consents to the participation in the study. S/he has been given opportunity to ask questions which have been answered satisfactorily.

Investigator's Signature: _____

Date: _____/_____/_____

DD / MM / YEAR

Investigator's Name: _____

Time: _____/_____

HR / MN

APPENDIX 9: ETHICAL APPROVAL FROM STRATHMORE UNIVERSITY



Strathmore
UNIVERSITY

21st March 2018

SU-IRB 0189/18

DR ADANKHALIF ADAN KALA
P.O Box 68900 - 00622
WAJIR

Email: adankhalif@yahoo.com

Dear Dr Kala,

REF Student Number: MBA-HCM/093848/16 **Protocol ID:** SU-IRB 0189/18
Title: *Assessing The Effect Of Devolution On The Number Of Healthcare Workers In Hardship Areas: A Study On The Number Of Doctors, Clinical Officers, Nurses And Specialists In Wajir County.*

We acknowledge receipt of your application documents to the Strathmore University Institutional Ethics Review Committee (SU-IERC) which includes:

1. Study Proposal dated February 2018
2. Participant Information sheet and consent Form dated 15th March 2018
3. Data Collection tools
4. Study Budget
5. CV

The committee has reviewed your application, and your study "*Assessing the Effect of Devolution on the Number of Healthcare Workers in Hardship Areas: A Study on the Number of Doctors, Clinical Officers, Nurses and Specialists in Wajir County.*" has been granted **approval**.

This approval is valid for one year beginning **21st March 2018** until **20th March 2019**.

In case the study extends beyond one year, you are required to seek an extension of the Ethics approval prior to its expiry. You are required to submit any proposed changes to this proposal to SU-IERC for review and approval prior to implementation of any change.

SU-IERC should be notified when your study is complete.

Thank you

Sincerely,

Amina Salim
Regulatory Affairs Fellow



APPENDIX 10: APPROVAL FROM NACOSTI



NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

Telephone: 020 400 7000,
0713 788787,0735404245
Fax: +254-20-318245,318249
Email: dg@nacosti.go.ke
Website: www.nacosti.go.ke
When replying please quote

NACOSTI, Upper Kabete
Off Waiyaki Way
P.O. Box 30623-00100
NAIROBI-KENYA

Ref. No. **NACOSTI/P/18/70904/22011**

Date: **24th April, 2018**

Dr. Adankhalif Adan Kala
Strathmore University
P.O. Box 59857-00200
NAIROBI.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on "*Assessing the effect of devolution on the number of healthcare workers in hardship areas: a study on the number of doctors, clinical officers, nurses and specialists in Wajir County*" I am pleased to inform you that you have been authorized to undertake research in **Wajir County** for the period ending **24th April, 2019.**

You are advised to report to **the County Commissioner, the County Director of Education and the County Director of Health Services, Wajir County** before embarking on the research project.

Kindly note that, as an applicant who has been licensed under the Science, Technology and Innovation Act, 2013 to conduct research in Kenya, you shall deposit **a copy** of the final research report to the Commission within **one year** of completion. The soft copy of the same should be submitted through the Online Research Information System.

DR. STEPHEN K. KIBIRU, PhD.
FOR: DIRECTOR-GENERAL/CEO

Copy to:

The County Commissioner
Wajir County.

The County Director of Education
Wajir County.

