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Factors influencing job satisfaction among doctors  
working in public health facilities in Democratic  
Republic of the Congo.

Gerse Lucide Lukianame Munduku, MD

Graduate School of Public Health  
Yonsei University  
Department Global Health Policy and Financing

Division Of Health Policy and Financing Capacity Building  
Program

Factors influencing job satisfaction among doctors  
working in public health facilities in Democratic  
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Directed by Professor Sohee Park

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Master of Public Health

Gerse Lucide Lukianame Munduku, MD

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This certifies that the Master's Thesis  
of GERSE LUCIDE LUKIANAME MUNDUKU is approved



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Thesis Committee Member: SOHEE PARK

---

Thesis Committee Member: SANG SOOK BECK

---

Thesis Committee Member: JI YOUNG LEE

Graduate School of Public Health  
Yonsei University

December 2021

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## LIST OF ABBREVIATION AND ACRONYMS

AIDS	: Acquired Immunodeficiency Syndrome
ANAPI	: National Agency for the Promotion of Investments
ANC	: Antenatal Care
AOR	: Adjusted Odd Ratio
DHS	: Demographic and Health Survey
DNHIS	: Division of the National Health Information System
DRC	: Democratic Republic of Congo
FP	: Familial Planning
GF	: Global Fund
HA	: Health Area
HC	: Health Center
HF	: Health Facility
HIV	: Human Immunodeficiency Virus
HRH	: Health Human Resources
HZ	: Health Zone
KSPH	: Kinshasa School of Public Health
MoPH	: Ministry of Public Health
PH	: Provincial Hospital
PHD	: Provincial Health Division
PHI	: Provincial Health Inspectorate
RTC	: Restricted Technical Committee
SC	: Steering Committee
SHOPS Plus	: Sustaining Health Outcomes through the Private Sector Plus
SPA	: Service Provision Assessment
USAID	: United States Agency for International Development

## **ABSTRACT**

### **Background:**

Doctors play a key role in the adaptation and performance of the healthcare systems in their structure and available resources. But gradually a physician's job has lost its charm as it used to be in past. Employee job satisfaction is the fulfillment, gratification, and enjoyment that comes from work. Doctors, whose needs and expectations are satisfied, tend to be more productive compared to their colleagues. In Democratic Republic of Congo (DRC) assuring job satisfaction among doctors is a major challenging issue, but no one ever conducted a study of this magnitude on doctor's job satisfaction nationwide.

Thus, this paper is aimed at describing factors influencing job satisfaction among doctors working in public health facilities in Democratic Republic of the Congo.

### **Methods:**

A descriptive cross-sectional nation-based study design was carried out on December 2021 to describe the factors influencing job satisfaction among 952 doctors working in Public Health Facilities in the Democratic Republic of the Congo, using secondary data coming from Demographic and Health Survey (DHS) Program/Service Provision Assay (SPA) DRC 2017 – 2018. Chi-square test and logistic regression analysis were used to identify factors related to job satisfaction. Variables which have P-value less than or equal to 0.05 with corresponding AOR (Adjusted Odds Ratio) at 95 % confidence interval was considered to declare the significance association.

### **Results:**

The overall job satisfaction among doctors working in Public Health Facilities in the Democratic Republic of the Congo was 23.0%. However, 371 (39.0 %) declared they have received promotional opportunities, 754 (79.2 %) declared they received salary supplements, and 519 (54.5%) received non-monetary incentives. The majority of doctors were males

(85.1%), general practitioner (98.3%) or worked in referral general hospitals (77.8%). Also, more than half of doctors (66.5%) worked more than 45 hours on average each week, and the mean of their hours of work was 49.8 hours. Almost all doctors 98.5% had less than or equal to 15 years of work experience, and the mean of their work experience was 3.7 years. 63.3% of doctors were managers and 62.8% of them were in rural area.

The management position, written job description and in-service training opportunity were identified as significant factors for the satisfaction of doctors on their job after adjusting for confounding factors. Doctors who were in management position were 2.789 times more likely to get satisfied with their job compared to those who were not (AOR = 2.789, 95% CI (1.798, 4.325)). Those who had or declared to have a written job description were 1.697 times more likely to get satisfied with their job compared to the counterpart (AOR = 1.697, 95% CI (1.184, 2.431)). Those doctors who have received at least one in-service training, training updates or refresher trainings within past 24 months were 1.90 times more likely to get satisfied with their job compared to those who have not (AOR = 1.90, 95% CI (1.32, 2.73)).

**Conclusion:**

According to this study, only one-fourth of the doctors working in public sector in the Democratic Republic of Congo were satisfied on their work. The study suggests that doctor's management position, written job description and in-service training opportunity were identified as important predictors of job satisfaction. Therefore, those indicators should be considered to improve the quality of healthcare in public health policy making process.

**Keywords:**

Job satisfaction, Associated factors, doctors, Health facilities, Democratic Republic of Cong

## 1 INTRODUCTION

It is widely recognized that medical doctors play a key role in the adaptation and performance of the healthcare systems in their structure and available resources. (Denis and van Gestel, 2016). Physicians have a unique influence on the utilization of healthcare resources by prescribing treatments and drugs. They can play various formal and informal roles that help creating a rich environment for improved practices and ultimately increase the performance of healthcare organizations (Baker and Denis, 2011). The medical profession has long been considered as one of the most sacred and well reputed professions. But gradually a physician's job has lost its charm as it used to be in past (Atif, Khan and Maqbool, 2015).

Employee job satisfaction is the fulfillment, gratification, and enjoyment that comes from work. It is not just the money or the fringe benefits, but the feelings employees receive from the work itself. The most used research definition of job satisfaction is by Locke who defined it as “a pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences.” Implicit in Locke's definition is the importance of both effects, or feeling, and cognition, or thinking. When we think, we have feelings about what we think (Li, 2017); (Locke, 1976). In another way, it is defined simply as how people feel about their jobs and different aspects of their jobs. It is the extent to which people like (satisfaction) or dislike (dissatisfaction) their jobs (Kraut, 1998).

The ability to produce, the quality of the work, the opportunity to learn and express creativity, the sense of pride in their profession, the recognition for a job well done, the ability to work well in a team, the social satisfaction derived from relationships at work, the opportunity to

experience personal growth and the rewards from a physically supportive work environment, and autonomy are all factors that impact job satisfaction (Powell, 2001).

Work satisfaction is comprised of intrinsic and extrinsic factors. Intrinsic factors are those internally derived and include personal achievement, sense of accomplishment, and prestige. Extrinsic factors are those derived from factors in the practice environment and include pay and benefits, working conditions, and resources (PHAM, HOANG and NGUYEN, 2021).

To study job satisfaction many theorists have been identified. Edwin A. Locke's range of affect theory (Nahar et al., 2013) is arguably the most famous job satisfaction model. The main premise of this theory is that satisfaction is determined by a discrepancy between what one wants in a job and what one has in a job. Further, the theory states that how much one values a given facet of work (e.g., the degree of autonomy in a position) moderates how satisfied/dissatisfied one becomes when expectations are or are not met. When a person values a particular facet of a job, his satisfaction is more greatly impacted both positively (when expectations are met) and negatively (when expectations are not met), compared to one who does not value that facet (Singh and Sinha, 2013). Doctors, whose needs and expectations are satisfied, tend to be more productive compared to their colleagues (Temesgen, Aycheh and Leshargie, 2018).

Another well-known job satisfaction theory is the dispositional theory. It is a very general theory that suggests that people have innate dispositions that cause them to have tendencies toward a certain level of satisfaction, regardless of one's job. This approach became a notable explanation of job satisfaction in light of evidence that job satisfaction tends to be stable over time and across careers and jobs (Staw and Cohen-Charash, 2005). Research also indicates that identical twins have similar levels of job satisfaction (Hahn et al., 2015; Segal, Hur and Graham, 2015).

Frederick Herzberg's two-factor theory (a.k.a. motivator hygiene theory) attempts to explain satisfaction and motivation in the workplace. This theory states that satisfaction and dissatisfaction are driven by different factors— motivation and hygiene factors, respectively. An employee's motivation to work is continually related to job satisfaction of a subordinate (Herzberg, Mausner and Snyderman, 1959). Motivation can be seen as an inner force that drives individuals to attain personal and organization goals. Motivating factors are those aspects of the job that make people want to perform, and provide people with satisfaction, for example, achievement in work, recognition, and promotion opportunities (Conrad, Ghosh and Isaacson, 2015).

Hackman and Oldham proposed the job characteristics model, which is widely used as a framework to study how particular job characteristics impact job outcomes, including job satisfaction. The model states that there are five core job characteristics (skill variety, task identity, task significance, autonomy, and feedback) which impact three critical psychological states (experienced meaningfulness, experienced responsibility for outcomes, and knowledge of the actual results), in turn influencing work outcomes (job satisfaction, absenteeism, work motivation, etc.). Job satisfaction describes how content an individual is with his or her job. The happier people are within their job, the more satisfied they are said to be. Job satisfaction is not the same as motivation, although it is clearly linked. The most common way of measurement of job satisfaction is the use of rating scales where employees report their reactions to their jobs (Ali et al., 2014). Questions relate to rate of pay, work responsibilities, variety of tasks, promotional opportunities in the work itself, and coworkers (Asegid, Belachew and Yimam, 2014).

## **2 LITERATURE REVIEW**

### **2.1 Health system in the Democratic Republic of the Congo**

#### **2.1.1 The health system Organization**

The Ministry of Public Health is structured into 3 levels. First is the central level. This level consists of the Cabinet of the Minister, the General Secretariat with the Central Directorates, the specialized programs, the general health inspectorate as well as hospitals and other national structures. It has normative, regulatory and tertiary care delivery responsibility. It defines the policies, strategies, standards and guidelines. It provides advisory support, compliance control and monitoring of the implementation in the provinces. It also plays the role of mobilizing and redistributing resources. This level is undergoing administrative reform.

Second is the intermediate or provincial level. This level is made up of the Cabinet of the Provincial Minister in charge of health, a provincial health division (PHD), a provincial health inspectorate (PHI), the provincial hospital (PH) and other health provincial structures. It ensures the role of technical supervision, monitoring and the translation of guidelines, strategies and policies in the form of instructions and fact sheets for facilitate the implementation of actions at the Health Zone (HZ) level. It also ensures the management and administration of provincial health services as well as the inspection and control of healthcare, pharmaceutical and Health Sciences facilities. It finally has the mission of providing secondary referral health care through the provincial hospital.

Third is the Peripheral or operational level. This level includes 516 Health Zones (HZ), with 393 general referral hospitals and 8504 planned Health Areas (HA), of which 8,266 have a health center. The operational level is responsible for implementing the primary health care strategy. It is important to note that the health system described above also includes health facilities (HFs) from the private for-profit and not-for-profit sector. It is in fact the health services of non-governmental and faith-based organizations. These HFs are subject to the same obligations to provide services, monitoring and evaluation than in the public sector (Ministry of Health, 2018).

### 2.1.2 Healthcare delivery organization

In the DRC, the healthcare delivery is ensured by public and private sectors.

The public sector is organized around health centers, General Referral Hospitals, Provincial Hospitals, Armed Forces and Police Hospitals, as well as other departments organizing care for their workers. The private sector is subdivided into two categories, private for-profit, and private not-for-profit (these are health services of non-governmental and faith-based organizations) and traditional medicine. The pharmaceutical sector is mainly in private sector.

The private health sector is an important actor in the DRC's Health System, but the extent of its contributions is largely unknown. Private providers, especially faith-based organizations, gained momentum in the late 1990s and early 2000s to fill gaps that emerged in the public health sector as a result of political and civil destabilization.(Chopsplus, 2019). The for-profit private sector is flourishing above all in urban areas and in economic centers. It is made up of medical and paramedical practices, clinics or polyclinics, and diagnostic centers (laboratories, imaging). Authorizations to open are granted by the Ministry of Public Health (MoPH) while the request to open is approved by the Provincial Ministry of Health. The texts intended to

clarify the attributions of the central power and those of the provinces in this competing matter are still lacking (Ministry of Health, 2018). Non-governmental and faith-based organizations sector has been present in the DRC since colonial times and represents around 40% of the health care offer (Anapi, 2018). The main players are the Catholic, Protestant, Kimbanguist and The Salvation Army churches, which manage hospitals and health centers (Brunner et al., 2018; Ministry of Health, 2018).

It should also be mentioned that today the cities of the DRC are subject to an unplanned rampant urbanization and a spectacular growth of their populations. This calls for work on the adaptation of the mode of organization of health services in urban areas, taking into account these changes (Chenge, 2013). Traditional medicine constitutes a significant part of the healthcare delivery. It is even, in certain circles, the first resort due to the absence of modern facilities and the low financial accessibility of care for the populations. For certain specific pathologies (fractures and mental disorders), the population primarily resorts to traditional healers. There is a National Program of Traditional Medicine in place since 2001 which regulates the offer of care in this area. (Ministry of Health, 2018).

### 2.1.3 Challenges in healthcare and services delivery

#### *Healthcare and services provision challenges.*

Despite the progress observed, the delivery of health care and services in the DRC is experiencing recurring priority challenges.

First Poor health coverage. 79% of Health Areas (HA) have a health center (HC) offering a minimum package of activities (MPA), of which 15% are built with sustainable materials. Second, Poor quality of health care and services offered. It is recognized that the quality of

care and services is low. The decline in the quality of care and services is the result of a combination of several factors, in particular: ①the problem related to health providers (availability in quantity and quality, quality of training, rapid turnover, and remuneration; ②dilapidated infrastructure and basic equipment; and ③frequent drug stockouts. Added to this is the fact that health facilities do not apply the mechanisms provided for better monitoring, evaluation and control of this quality (medical audit, examinations of the patient's file, supervision of practice, discharge surveys, suggestion boxes, tutoring, etc.). Third, Low utilization of services and care offered. Utilization of services is affected by the triple dimension of accessibility (financial, socio-cultural, and geographic). Fourth, Poor resilience of health facilities to health emergencies. The external evaluation of the International Health Regulations showed that the country's minimum capacities in terms of prevention, detection and rapid response to threats to public health, were still weak. The analysis of known epidemics since 2016 revealed that the investigation and the response were late and inadequate, due to the absence, or lack of preparation, of rapid intervention teams, as well as the lack of pre-positioning kits responding to the design of potential hazards, and the lack of coordination, surveillance and response. Fifth, Low public accountability for health services. The low functionality of Board of Directors, Management Committee and Health Committee, the non-representativeness of the communities and the absence of mechanisms for collecting the expectations of the population as to their satisfaction, mean that the communities do not exercise their control vis-à-vis health facilities and services provided (Ministry of Health, 2018).

#### *Infrastructure and Equipment challenges*

The health sector has a shortage of infrastructure and equipment meeting national construction standards. Of the 8,504 planned Health Areas (HA) in the DRC, 238 do not have a health center. It should be noted, however, that despite the 8,266 existing health

centers, only 1,006 are built with sustainable materials, or 12% of them. Some are in a state of disrepair, so that 671 health centers need to be rehabilitated. The rest of the health centers (7120) are built either in semi-durable or in adobe. Of the country's 516 health zones, 393 health zones have a general referral hospital. Of these general referral hospitals, 152 have been rehabilitated and 60 have been built. The maintenance capacity at the level of the Ministry of Health remains weak. This situation is due to the non-application of standards, the non-existence of maintenance units at the various levels of the health system, and the non-integration of costs in the investment projects of the government and donors (Ministry of Health, 2018).

#### *Human resources for health issues*

Imbalance in the production of human resources for health (HRH) and inequitable distribution of these: With regard to the production of human resources, there is a problem of imbalance in the organization of sectors and of the equitable distribution of health professionals, both between rural and urban areas and between health structures in the same province (health, 2018)The persistence of the high proportion of students in the nursing stream leads to an overproduction of the nursing category compared to other professional categories. The increased production of nurses and doctors in recent years has resulted in the uncontrolled creation of lucrative private structures offering poor quality care, as well as the use of doctors at the first level of the health system (medicalization of centers health) (Chenge et al., 2010) in several provinces of the country, particularly in urban areas..

Like many other southern countries, the DRC had chosen to delegate responsibility for first-level services to non-medical professionals (nurses, assistants, doctors or others) (Dormael, 2003; Ministry of Health, 2006). The reason given was the scarcity of doctors, who, in order

to be used rationally, were assigned to a more centralized level of care, namely hospitals. The increase in this phenomenon of first-line medicalization requires the country to regulate the services of doctors at this level and to define, through appropriate research (action research), the conditions under which this medicalization of the first line could have a positive impact on the supply of care.

Regarding the management of human resources, there are significant disparities in the geographical distribution. There is a concentration of health personnel in the big cities, particularly in Kinshasa and in the urban centers of the provinces. Regarding the ratio of nurses per 5,000 inhabitants, it is fair to say that there is a plethora of nurses in all provinces in the light of the above information. As for the ratio of one doctor per 1,000 inhabitants, only 3 provinces have numbers that meet or exceed international standards, as shown in the graph below. Apart from nurses and doctors, whose numbers seem sufficient, the country has a shortage in certain other professional categories. This is particularly the case with pharmacy assistants and pharmacists, dental surgeons, anesthetists, radiology technicians, physiotherapists and specialists in physical medicine. Particular attention deserves to be paid to the scarcity of midwives in the DRC.

The insufficient quality of the education received by health professionals and the development of providers' skills: The insufficient quality of health professionals is due to the proliferation of secondary, higher or university level establishments that do not meet standards. The latter suffer from the under-equipment of laboratories, professional practice rooms, and quality internship places, the underqualification of certain teachers and internship supervisors, as well as teaching programs unsuited to the needs in the field, and a lack of a concerted training policy between the Ministry of Higher and University Education, trainer, and the Ministry of Health, user of products from universities and higher institutes of medical techniques.

Continuing education, although it has been formalized through legal, regulatory and normative texts, has not always improved significantly.

**The low motivation and retention of health personnel:** The health personnel are not very motivated, given the bad working conditions, the insufficiency of the incentive measures (absence of valorization of acquired experiences, absence of professionalization opportunities, absence of bush and remoteness bonuses, absence advancement in grade, lack of a better working environment, and absence of other social benefits ...), non-payment of salaries, for some, and low salaries, for those who receive their salary.

**Aging staff and retirement issue:** The retirement process is one of the essential questions that preoccupy the whole government as well as the administrations, in view of its sensitivity and its importance in terms of efficient and sustainable management of human resources, specifically concerning the management of promotions and recruitment in order to ensure succession in the public administration. Failure to complete the retirement process resulted in a stock of more than 10,000 officials of ministry of health eligible for retirement, as well as a relative and almost automatic freeze on promotions. Under the leadership of the Ministry of the Civil Service, in collaboration with the Ministry of Health, the retirement process takes place according to an operational and sequential approach in accordance with the strategic retirement plan adopted in 2016 on the initiative. of the Ministry of the Civil Service. From the foregoing, it follows that there is a contrast between, on the one hand, the digital overproduction of nurses, which predominates for the hospital sector, and the majority of which are concentrated in large cities, and, of on the other hand, the lack of qualified personnel in the other agglomerations. The health sciences education sector faces a lack of regulation and quality control. Thus, both overproduction and the quality of the training provided in many of these schools mean that the staff is bloated and unqualified.

*Issues related to drugs, vaccines and specific inputs.*

Medicines, a fundamental product for quality health care, still experience supply problems (the low availability of essential drugs, vaccines, and essential inputs, in health facilities), financial accessibility, quality and rational use weakening the functioning of the health system.

*National Health Information System Issues*

The NHIS is not yet capable of providing real-time quality data for decision-making and planning of health interventions. The problems related to this pillar are: first, the disintegration of the various components of the NHIS, related to the non-regulation of almost all of the various components, leads to the proliferation of approaches and tools for collection, validation, transmission and analysis of data; second, the low completeness, promptness and accuracy of the data collected, mainly related to the weak capacity building and the weak computerization of the sector; third, the poor dissemination of quality information, related to the multiplicity of data production sources and the multiplicity of dissemination sites within the Ministry, leads to under-use of the official website of the Ministry of Public Health; and fourth, the lack of relevance of some indicators in the monitoring and evaluation framework makes it difficult to monitor the performance of the country in relation to the indicators not provided.

*Health financing issues*

The analysis of the situation reveals the low allocation of public resources to the health sector and the inefficient use of health resources at the national and provincial levels.

The low allocation of public resources to the health sector: Not only is the level of total health expenditure limited, but the allocation of public resources to the health sector is low. Total

health expenditure (THE) per capita increased from \$ 15 in 2008 to \$ 23 in 2016 (Health, 2014) in real terms, but it remains well below the cost of the essential services package, set at \$ 86 (McIntyre, Meheus and Røttingen, 2017). In addition, public health expenditure was only \$ 3.2 in 2016: while the health budget increased from 3% to 7% of the overall budget between 2008 and 2016, the contribution of the State relative to THEs stagnated at 14% or 15% between 2008 and 2016, and public health expenditure as a share of total public expenditure, only increased by one percentage point between 2006 (5%) in 2016 (6%). At the same time, the contribution of donors increased from 34% in 2008 to 43% of THEs in 2016, posing a problem of sustainability. Even more alarming is the problem of the contribution of households to THEs: while it has declined slightly (from 43% in 2016 to 34% of THEs in 2018), it remains significant.

Inefficient use of health resources at national and provincial levels: This weakness in the growth of public health expenditure could be explained by a fairly volatile budget execution. In 2016, the increase in budget execution (from 59% to 96%) was due to budget overruns, in particular that of expenditure linked to the functioning of the Ministry of Health (123%), to economic and social interventions (236%), remuneration (104%), as well as the reduction in the share of the budget allocated to other administrations.

Financial management and procurement procedures as enacted are not strictly observed in the sector. A weakness can also be observed in the regulation and control of financing and management of resources, since the documents and accounting records are not well maintained, the standards for the use of revenues generated at the level of health structures are non-existent, financial information concerning some support from partners is difficult to communicate, and their management is not very transparent.

*Governance and leadership challenges in the health system*

The priority issues of the DRC health system identified over the past five years are as follows: First, the regulation and the standardization of the sector are insufficient and ineffective: the legal texts instituted by the Constitution are not voted and the regulatory texts are not adopted. Several standards developed and circulating in health zones are neither validated nor adopted by the technical coordination committee (TCC). There is a lack of dissemination and popularization; Second, slowness in the implementation of health sector reforms, particularly universal health coverage, hospital reform, human resource development, laboratory development, etc. Third, the persistence of sectoral coordination problems: the national steering committee and the technical structures, commissions and working groups responsible for this coordination are not yet functioning optimally; there is a deficit in the production of strategic information for monitoring and evaluation. Fourth, sub-optimal intra and intersectoral collaboration to improve the health of the population: collaboration within and outside the health sector with other sectors, the private sector as well as with communities, is not yet optimal to promote the supply of and demand for quality healthcare services; overlaps persist in the attributions of certain structures of the Ministry of Public Health (MoPH), several consultation frameworks have not worked, and the monitoring of contracts within the framework of the public-private partnership remains insufficient. Fifth, weak community dynamics in support of the demand for care: community participation bodies are not functional and do not make it possible to contribute to decision-making in response to community expectations (Ministry of Health, 2018).

The working conditions and environment described above, which the health system imprints, do not visibly inspire feelings of satisfaction among healthcare providers especially doctors. However, doctors make an important contribution to the management and leadership of health services and the delivery of healthcare across (Denis and van Gestel, 2016).

For several years, the Democratic Republic of Congo (DRC) has experienced numerous strikes within the medical profession. The claims of these doctors are essentially financial and statutory and are intended to put pressure on the government. In the DRC, many doctors are paid by the state. However, it is struggling to honor its commitments to its health workers. Many doctors complain that they are poorly paid and some are simply not paid (Ravez et al., 2019). The complexity and the environment of a medical institution can hide a low quality of life and the harmful effects associated therewith (Vasconcelos Filho et al., 2016).

## 2.2 Literature Review

Physician satisfaction is a critical measure of their wellness which has been negatively is associated with different healthcare outcomes, including healthcare quality, patient satisfaction and adherence to treatments, and interpersonal aspects of patient care (Domagała et al., 2018). However, the factors leading to physician satisfaction need to be further understood (Smith, 2001). Despite the availability of empirical studies evaluating factors associated with physician satisfaction and literature reviews in the field (Scheurer et al., 2009). Among European studies differentiating between satisfied and dissatisfied participants, the proportion of satisfied physicians varied from 21% to 95.6% and the weighted percentage of satisfied physicians was 55.3% (95% CI 48.2–62.4) (Domagała et al., 2018).

In developed and developing countries, job satisfaction has been found to be a significant predictor of the quality and efficiency of the health systems (Suliman et al., 2017a). Many developing countries have worsening grades of job satisfaction in their doctors.(Atif, Khan

and Maqbool, 2015), and DRC deserves that attention be paid to its situation. In DRC assuring the satisfaction of health care provider with their job is a major challenging problem, but only one study exists in DRC on the assessment of job satisfaction for the healthcare providers in University Clinics of Lubumbashi, and it indicates that the physicians are the most unsatisfied of the group (Mundongo, 2014). We just realize the importance of the issue on job satisfaction in Democratic Republic of the Congo. No one ever conducted a study of this magnitude on doctor's job satisfaction nationwide. The lack of research addressing the factors that influence job satisfaction among doctors working in public health facilities in Democratic Republic of the Congo is a problem because policy makers will not be provided with information to better satisfy the doctors and thereby improve the qualitative and quantitative clinical output.

To address issues, above-mentioned in the country's Healthcare System, related to the availability and retention of qualified health human resources (HRH), to the basic trainings, and to the development of health provider skills, programs are to be developed. Policymakers will have information that helps build those necessary programs which provide the health sector with quality providers in sufficient quantity, and who are equitably distributed, working in good conditions and thus being able to provide quality care to the population (Ministry of Health, 2018).

This paper is aimed at describing factors influencing job satisfaction among doctors working in public health facilities in Democratic Republic of the Congo. Specifically, it aims to determine the doctors' overall job satisfaction and to identify factors influencing that satisfaction among doctors in public health facilities in Democratic Republic of the Congo.

### 2.3 Conceptual Framework of the study

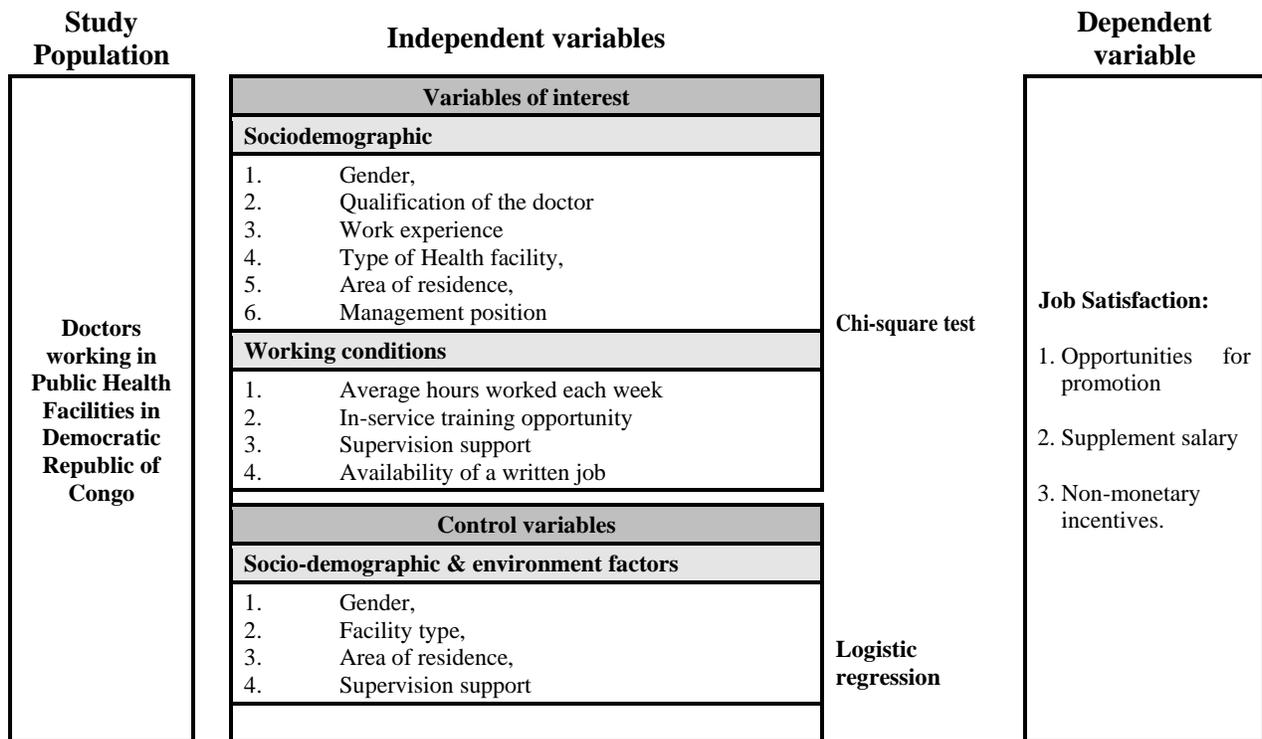


Figure 1. Conceptual Framework of the study

### **3 MATERIALS AND METHODS**

#### **3.1 Study design, area, period and population**

A descriptive cross-sectional nation-based study design was carried out to describe the factors influencing job satisfaction among doctors working in Public Health Facilities in the Democratic Republic of the Congo, using secondary data coming from Demographic and Health Survey (DHS)-Service Provision Assay (SPA) DRC 2017 – 2018 (SPA DRC, 2019).

#### **3.2 Presentation of SPA DRC 2017 - 2018**

SPA-DRC 2017-18 was the first survey of its kind conducted in the DRC. It was carried out by the School of Health Public of the University of Kinshasa at the request of the Ministry of Public Health. The goal of this survey was to collect information on the provision of healthcare services in the DRC in order to assess the health facilities capacity and their readiness to provide quality healthcare. (SPA DRC, 2019).

The SPA DRC 2017-18 was a sample survey of Health facilities in the formal sector in order to provide information on the environment and the functioning of the various components of the health system which may affect the quality of services. The SPA DRC 2017- 2018 thus provides the basic indicators that can be used to measure future progress.

It provided information on the overall availability of the various services, on the capacity of HFs to respond quickly to the provision of general and specific services. In addition, it has made it possible to assess the readiness of health facilities to provide patients / clients with

quality health care services in effective and efficient way. The result of this assessment is to design high-quality interventions to improve service delivery to the population and with a minimum risk.

### 3.3 Organization of the Survey SPA DRC 2017- 2018

The ministry of Public Health (MoPH) thus assisted the Kinshasa School of Public Health (KSPH) during all phases of the implementation of the SPA DRC 2017-2018, including the training of interviewers (data collectors), field supervision, analysis of results and preparation of the report.

In order to ensure that the activities of the investigation would be carried out appropriately, a Steering Committee (SC) and a Restricted Technical Committee (RTC) have been set up. The first committee was made up of members of the MoPH, some of its partners, the financial organizations of the survey and the Directorate of KSPH. It provided overall leadership for the survey. The second committee was made up of members of the Division of the National Health Information System (DNHIS) and the Department of Disease Control (DDC) of the MoPH, the KSPH Directorate and the technical investigation team. This committee ensured the effective implementation of the investigation.

#### 3.3.1 Health facilities targeted by the survey

The SPA DRC 2017-2018 was conducted in all tertiary level hospitals, provincial hospitals and general referral hospitals, as well as in a sample of health centers and other types hospitals in the country's 26 provinces. In these selected health facilities, the managers and health

services providers were interviewed. Healthcare providers and patients / clients for specific services such as Antenatal care (ANC), Family Planning (FP) and consultation for sick children under-five years old were observed during these various consultations. Exit interviews were conducted with patients / clients whose consultations were observed.

### 3.3.2 Description of data collection tools

The SPA DRC 2017-2018 used four types of data collection tools, namely:

- (1) An inventory questionnaire,
- (2) A questionnaire for healthcare providers interview,
- (3) Observation Protocols for Antenatal care (ANC), Family Planning (FP) and consultation of sick children under-five years old, and
- (4) Exit interview questionnaires for ANC, FP clients and care-takers of sick children under-five years old in which consultations were observed.

The inventory questionnaire and the one for the healthcare providers' interview were the ones we used in this present study. The inventory questionnaire was designed to collect information on the overall capacity of health facilities to provide health services, as well as information on specific services. This includes information on infrastructure, equipment, staff, facilities for the comfort of patients, as well as the environment of the services of services, support system components (e.g., logistics and management), and availability specific equipment and materials, their location and operating condition. An inventory questionnaire was completed for each health facility visited. In this study the inventory questionnaire helped to have

information on facilities identification and some sociodemographic characteristics related to the provider like the type of his/her health facility and area of residence.

The questionnaire for healthcare providers' interview was designed to provide information on the qualification of each care provider and on the type of services they provide in the Health Facility (HF). In addition, it collects recent information on supervision and continuous training that the providers have received in connection with the services they provide, working conditions in facility as well as their experience of provision of evaluated services.

The number of providers to interview depended on the size of the facility and categories of providers in the latter. Depending on the number of providers available on the day of the survey, this questionnaire was applied to all available providers or to a sample of them.

At the start of the day, the data collection team asked the HF manager for a list of all providers present on the day of the survey. In large facilities where it was not possible to provide this list, a list of providers was established by the data collectors at the time of the visit to each service.

### 3.3.3 Inclusion and exclusion criteria

For this survey, a health care provider was considered to be any person who provided patients with at least one of the following services: consultation, education or counseling, history, curative care, and laboratory services. Health workers who only took anthropometric and vital signs measurements and / or recorded them were not considered as providers and therefore were not interviewed. Were considered to be laboratory personnel, only those who actually performed the tests in the laboratory. Staff working in pharmacies was not registered on the list, and therefore was not interviewed.

When there were eight providers or less, the data collection team interviewed all of those who were present on the day of the investigation. In the HF where there were more than eight providers, the instruction was to interview a minimum of eight and a maximum of 15. Those to be interviewed were chosen according to the service and service they provided. All providers whose practice was observed were obligatorily interviewed.

Usually in each health facility included in the study, the data collection team had to interview at least one provider of the following services: ANC, FP, child health (care for sick children, vaccination or growth monitoring), childbirth and HIV / AIDS care. If a provider worked in different departments within the same health facility, he was registered and chosen to be interviewed only once.

### 3.4 Sampling of health facilities

The MoPH, through the DNHIS, had provided the KSPH with a list of 12,050 Health Facilities, excluding health posts (HPs). Indeed, at the request of the MoPH, the HPs were excluded from the final sampling frame since they are optional care structures.

From the list provided, 1,412 Health Facilities were selected by probability sampling, averaging about 50 HFs per province to be part of the survey in the 26 provinces of the country. The distribution of the exact number of HFs by province depended on the weight of the province (overall number of HFs). During the survey, 1,380 Health Facilities were surveyed out of the 1,412 selected, for a response rate of 98%. The main reason why the remaining 32 HFs were not visited was the insecurity (Figure 1).

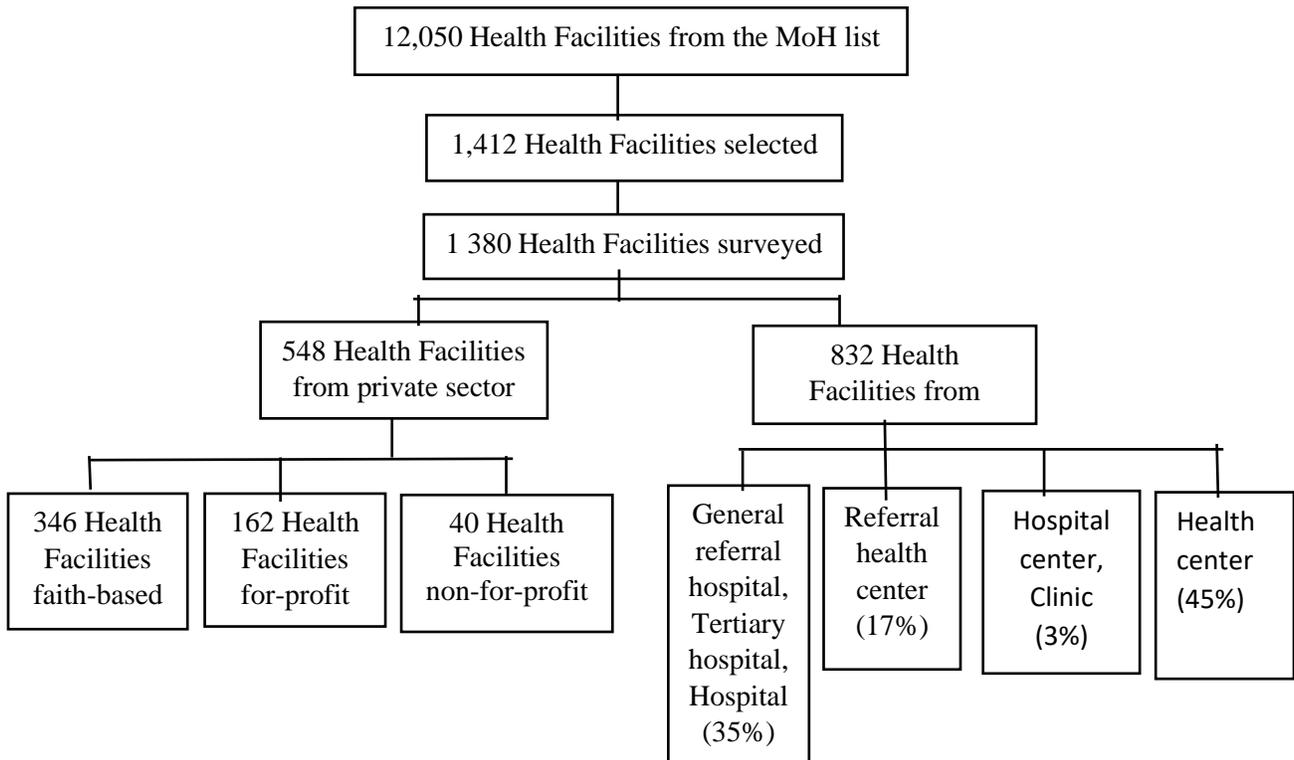


Figure 2: Selected health facilities

Out of the total of 9262 health providers interviewed in the whole country, 5,404 providers were from the public sector. 952 providers among them are doctors who represent the sample of our study (Figure 2).

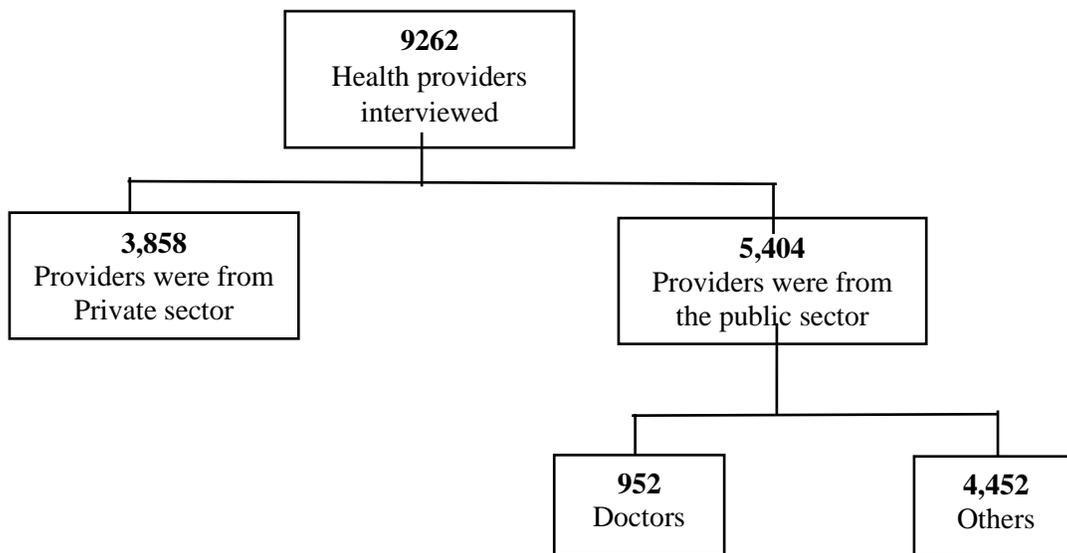


Figure 3: Selected subjects

### 3.5 Variables of the study

#### 3.5.1 Dependent Variable

##### Job Satisfaction

In this paper, doctors were considered as satisfied with their job (“Yes”) if they answered that:

1. They had opportunities for promotion, and

2. They received supplement salary, and
3. They received other non-monetary incentives.

Doctors were dissatisfied with their job (“No”) if they missed one of those three above.

### 3.5.2 Independent Variables

#### *Socio-demographic variables*

1. Gender,  
Refers to male or female doctors.
2. Qualification of the doctor  
Doctors’ qualification refers to general practitioner or specialist.
3. Work experience  
Work experience refers to the difference between the year of interview and the year the doctor started working in his/her working health facility.
4. Type of Health facility,  
Refers to Tertiary/Provincial Hospital, Referral General hospital, Hospital and Hospital Center, Referral Health Center and Clinic, and Health Center.
5. Area of residence,

Area of residence refers to urban or rural area.

6. Management position

Management position refers to the current position of a doctor as a manager/in-charge (“Yes”) or not (“No”) for any clinical services in the health facility.

*Working conditions variables*

1. Average hours worked each week (Workload)

Doctors were considered as overloaded if they gave service to more than 45 hours within a week (Journal Officiel, 2002).

2. In-service training opportunity

In this study, in-service training refers to training on some topics a doctor has received related to his work since he/she started working in the facility. The training topics covered were related to general training, youth/adolescent friendly service, malaria, diabetes, cardiovascular diseases, chronic respiratory diseases, cancers or chronic kidney diseases.

A doctor was considered to have had an in-service training opportunity when he/she have received at least 1 of any in-service trainings, training updates or refresher trainings listed above within past 24 months.

3. Supervision support

Supervision support refers to a technical support or supervision a doctor has personally received in the past 6 months from a supervisor in or outside his/her working facility.

#### 4. Availability of a written job description

A doctor was considered to have a written job description when he/she reported it as available even though that could be observed or not.

### 3.6 Implementation of the Survey

#### 3.6.1 Training of field staff

Thirty people, all doctors, were recruited and trained over three weeks as data collectors for the city province of Kinshasa, capital of the DRC. The training consisted of two phases: a theoretical and a practice in HFs. The objective of the practices in the HFs was to allow data collectors to familiarize themselves with collection techniques and tools. This practical phase made it possible to identify possible technical and logistical issues which were all discussed and corrected during the training.

At the end of the training, all the data collection procedures were pre-tested in HFs of the city of Kinshasa not being part of the sample. During the pre-test, which lasted four days, the interviewers first collected the data on paper questionnaires and then entered the data collected on tablets in order to mimic what was going to be done in the field (SPA DRC, 2019).

At the end of the training, 26 interviewers out of the 30 trained were retained to collect data for Kinshasa. After this data collection, 24 top efficient data collectors were selected and received the training of trainers for the organization of the survey in provinces. Indeed, these data collectors who became supervisors led the training of investigators in the provinces

according to the same procedures as those of Kinshasa. They also supervised data collection in these provinces.

### 3.6.2 Organization of data collection

Data collection throughout the DRC was carried out by 280 people with either a doctor's degree or a nursing degree. These people were divided into 70 teams and each team consisted of a team leader and three data collectors. Data collection in the city of Kinshasa was fully covered before the teams were deployed in the other provinces. It ran from October 16 to November 24, 2017. In the provinces, collection began on January 8, 2018 and ended on April 20, 2018.

### 3.6.3 Data processing and statistical analysis

In order to ensure permanent control of data quality, information was entered in the field using tablets. A list of errors and inconsistencies has been generated by the application for correction before the data is transmitted to a central server via the Internet. These data files were then recorded, compiled and processed on a central computer located at KSPH. The paper questionnaires were also forwarded and entered into the KSPH. For each HF, the data entered in the field and those entered at the KSPH were compared to look for any discrepancies with a view to their correction. A single audited data file was created once the files of all the HFs were validated. Data entry, control and compilation were coordinated by two full-time IT specialists. The processing of data from the SPA RDC 2017-2018 was carried out at the KSPH

using the CPro software. Errors related to inconsistency were verified using cross tabulation and other data exploration methods. The results were presented in narrative, tables, and graphs.

In our study, data from SPA DRC 2027-2018 were then exported to SPSS version 26 for analysis. Furthermore, logistic regression, specifically bivariate and multivariate analysis were used to identify factors related to doctor's job satisfaction. Those variables which were significant during bivariate analysis at  $P\text{-value} \leq 0.2$  were taken to multivariable logistic regression analysis. The adjusted odds ratios together with their corresponding 95% confidence intervals were computed.  $P\text{-value} \leq 0.05$  with 95% confidence interval were considered to declare a variable as statistically significant with the dependent variable.

## 5 RESULTS

### 5.1 Sociodemographic Characteristics of Study Participants

Out of 952 doctors working in public sector involved in this study, the majority 810 (85.1%) of doctors were Males against 142 (14.9%) of females. The majority 936 (98.3%) of them were general practitioners and 741 (77.8%) work in Referral General hospitals. 626 (66.5%) of them work more than 45 hours on average each week, and the mean of their hours of work was 49.8 hours ( $SD = \pm 15.5$ ). Almost all doctors 938 (98.5%) have less than or equal to 15 years of work experience, and the mean of their work experience was 3.7 years ( $SD = \pm 3.87$ ). More than half 603 (63.3%) of doctors were managers or in-charge for any clinical services and 598 (62.8%) of them were in rural area. (**Table 1**).

**Table 1. Socio-demographic characteristics of job satisfaction of doctors working in public health facilities, democratic republic of Congo, 2018**

<b>Variables</b>	<b>Total (N=952) N / MEANS</b>	<b>% / SD</b>
<b>Gender</b>		
Male	810	(85.1)
Female	142	(14.9)
<b>Qualification</b>		
General practitioner	936	(98.3)
Specialist	16	(1.7)
<b>Average hours worked each week</b>		
Mean	49.8	(15.5)
≤ 45 hrs.	316	(33.5)
> 45 hrs.	626	(66.5)
<b>Work experience</b>		
Mean	3.7	(3.87)
≤ 15 yrs.	938	(98.5)
> 15 yrs.	14	(1.5)
<b>Management position</b>		
Yes	603	(63.3)
No	349	(36.7)
<b>Facility type</b>		
Tertiary/Provincial Hospital	41	(4.3)
Referral General hospital	741	(77.8)
Hospital, Hospital Center,	42	(4.4)
Referral Health Center, Clinic	118	(12.4)
Health Center	10	(1.1)
<b>Area of residence</b>		
Urban	354	(37.2)
Rural	598	(62.8)
<b>TOTAL</b>	<b>952</b>	<b>(100.0)</b>

## 5.2 Type of job Satisfaction

Overall, 204 (23.0%) of the doctors interviewed were satisfied with their work, 371 (39.0 %) declared they have received promotional opportunities, 754 (79.2 %) declared they received salary supplements, and 519 (54.5%) received non-monetary incentives.

Male doctors had the highest percentages, regardless of the type of satisfaction, compared to female doctors. These percentages were lowest among general practitioners, except for non-monetary incentives where the specialists had the lowest percentage. The overloaded doctors (> 45 hrs./week) had the highest percentages, regardless of the type of satisfaction, compared to doctors working less than 45 hrs./week. Those doctors working experience less than or equal to 15 years of experience had the highest percentages of satisfaction, except for promotional opportunities where doctors with more than 15 years of work experience had the highest percentage. The percentages of job satisfaction were highest among doctors in management position or in charge for any clinical services in the health facility regardless of type of satisfaction, compared to doctors who were not in a management position. Doctors who work in rural area had the highest percentages, regardless of the type of satisfaction, compared to those of urban area. The percentages of the overall satisfaction in different type of facilities, from highest to lowest, are presented in this way: Health Center (40.0 %), Referral Health Center (24.8 %), Referral General hospital (24.0%), Tertiary/Provincial Hospital (10.0%) and Hospital/Hospital Center/Clinic (8.1%). Finally, doctors who benefited the supervision support, those who had or reported to have a written job description and those who received an in-service training had the highest percentages, regardless of type of satisfaction, except for a salary supplement where there is a slightly low percentage regarding in-service training opportunity (**Table 2**).

Basic Characteristics		Total (N=952)	Having promotional opportunities (%)	Receiving salary supplement (%)	Receiving non- monetary incentives (%)	Being satisfied with their current work <sup>1</sup> (%)
<b>Gender</b>	Male	<b>810</b>	43.5	79.8	55.9	24.7
	Female	<b>142</b>	31.8	76.1	46.5	13.2
<b>Qualification</b>	General practitioner	<b>936</b>	41.5	79.1	54.6	22.9
	Specialist	<b>16</b>	64.3	87.5	50.0	28.6
<b>Average hours worked each week</b>	≤ 45 hrs.	<b>316</b>	37.7	74.4	50.0	20.3
	> 45 hrs.	<b>626</b>	43.7	81.3	56.7	23.9
<b>Work experience</b>	≤ 15 Yrs.	<b>938</b>	41.4	79.3	54.6	23.1
	> 15 Yrs.	<b>14</b>	69.2	71.4	50.0	15.4
<b>Management position</b>	Yes	<b>603</b>	52.6	83.3	57.5	30.5
	No	<b>349</b>	22.6	72.2	49.3	9.7
<b>Facility type</b>	Tertiary/Provincial Hospital	<b>41</b>	37.5	82.9	46.3	10.0
	Referral General hospital	<b>741</b>	42.5	78.8	54.8	24.0
	Hospital, Hospital Center, Clinic	<b>42</b>	35.1	81.0	52.4	8.1
	Referral Health Center	<b>118</b>	40.4	78.8	56.8	24.8
	Health Center	<b>10</b>	50.0	90.0	50.0	40.0
<b>Area of residence</b>	Urban	<b>354</b>	33.5	77.4	48.3	14.7
	Rural	<b>598</b>	46.8	80.3	58.2	28.0
<b>Supervision support</b>	Yes	<b>616</b>	45.3	82.3	60.9	27.2
	No	<b>336</b>	35.1	73.5	42.9	14.9
<b>Written job description</b>	Yes	<b>443</b>	48.7	83.3	60.7	31.3
	No	<b>508</b>	35.7	75.6	49.0	15.5
	Yes	<b>533</b>	50.4	79.1	60.6	29.9

<sup>1</sup> Doctors declared that they had opportunities for promotion, and that salary supplements were received, and that they received other non-monetary incentive.

<b>In-service training opportunity</b>	No	<b>417</b>	30.8	79.3	46.8	14.2
<b>TOTAL</b>		<b>952</b>	<b>371 (39.0%)</b>	<b>754 (79.2%)</b>	<b>519 (54.5%)</b>	<b>204 (23.0%)</b>

Table 2. Job satisfaction among doctors: Among the doctors interviewed, the percentages of those who declared being satisfied with their work, by certain characteristics, Democratic Republic of Congo SPA 2017-2018.

### 5.3 Factors associated with job satisfaction

In the bivariate analyses Gender, Management position, Facility type, Area of residence, Supervision support, Availability of a written job description, and In-service training opportunity met the variable selection criteria ( $P\text{-value} \leq 0.2$ ) and were taken to multivariable logistic regression analysis. After fitting multivariate logistic regression model variables including management position, written job description and in-service training opportunity were identified as significant factors for the satisfaction of doctors on their job. By the analysis adjusted for confounding factors, Gender, Facility type, Area of residence, Supervision support were controlled.

Doctors who were in management position or in charge of any clinical services in the health facility were 2.789 times more likely to get satisfied with their job compared to those who were not (AOR = 2.789, 95% CI (1.798, 4.325)). The ones who had or declared to have a written job description were 1.697 times more likely to get satisfied with their job compared to the counterpart (AOR = 1.697, 95% CI (1.184, 2.431)). Those who have received at least one in-service training, training updates or refresher trainings within past 24 months were 1.90

times more likely to get satisfied with their job compared to their counterpart (AOR = 1.90, 95% CI (1.32, 2.73)) (Table 3).

Variables	Job satisfaction		Crude OR	95% CI	Adjusted OR	95% CI	P-value COR*	P-value AOR#
	Satisfied (N=204) N (%)	Dissatisfied (N=683) N (%)						
<b>Gender</b>	Male	187 (24.7)	571 (75.3)	1				
	Female	17 (13.2)	112 (86.8)	0.463	(0.271 – 0.792)	0.684	(0.384 – 1.217)	0.005 0.197
<b>Qualification</b>	General practitioner	200 (22.9)	673 (77.1)	1				
	Specialist	4 (28.6)	10 (71.4)	1.346	(0.418 – 4.338)			0.619
<b>Average hours worked each week</b>	≤ 45 hrs.	61 (20.3)	239 (79.7)	1				
	> 45 hrs.	138 (23.9)	439 (76.1)	1.232	(0.877 – 1.730)			0.230
<b>Work experience</b>	≤ 15 yrs.	202 (23.1)	672 (76.9)	1				
	> 15 yrs.	2 (15.4)	11 (84.6)	0.605	(0.133 – 2.751)			0.515
<b>Management position</b>	No	31 (9.7)	288 (90.3)	1				
	Yes	173 (30.5)	395 (69.5)	4.069	(2.697 – 6.139)	2.789	(1.798 – 4.325)	0.001 0.001
<b>Facility type</b>	Tertiary/Provincial Hospital	4 (10.0)	36 (90.0)	1				0.047 0.149
	Referral General hospital	166 (24.0)	525 (76.0)	2.846	(0.998 – 8.113)	1.192	(0.390– 3.642)	0.050 0.758
	Hospital, Hosp Center, Clinic	3 (8.1)	34 (91.9)	0.794	(0.165 – 3.812)	0.257	(0.050– 1.306)	0.773 0.101
	Referral Health Center	27 (24.8)	82 (75.2)	2.963	(0.966 – 9.090)	1.109	(0.331– 3.711)	0.057 0.867
<b>Area of residence</b>	Health Center	4 (40.0)	6 (60.0)	6.000	(1.172 – 30.725)	1.887	(0.341– 10.461)	0.032 0.467
	Urban	49 (14.7)	285 (85.3)	1				
	Rural	155 (28.0)	398 (72.0)	2.265	(1.588 – 3.232)	1.334	(0.891 – 1.998)	0.001 0.161
<b>Supervision support</b>	No	45 (14.9)	257 (85.1)	1				
	Yes	159 (27.2)	426 (72.8)	2.132	(1.479 – 3.072)	1.359	(0.911 – 2.028)	0.001 0.133
<b>Written job description</b>	No	73 (15.5)	398 (84.5)	1				
	Yes	130 (31.3)	285 (68.7)	2.487	(1.798 – 3.440)	1.697	(1.184 – 2.431)	0.001 0.004
<b>In-service training opportunity</b>	No	55 (14.2)	331 (85.8)	1				
	Yes	149 (29.9)	350 (70.1)	2.562	(1.817 – 3.613)	1.898	(1.319 – 2.731)	0.001 0.001

\*COR: Crude Odds Ratio

#AOR: Adjusted Odds Ratio

Table 3. Association between Factors and Job Satisfaction among Doctors Working in Public Health Facilities in DRC.

## 6 DISCUSSIONS

### 6.1 Discussion

Being the degree of favorableness with which the employees view their work, job satisfaction is an issue that affects the lives of all workers including doctors. It is also a factor that determines whether an employee will remain in a position or seek work elsewhere. Furthermore, job satisfaction can influence the quality of work produced (Yami et al., 2011). On the other hand, job dissatisfaction among doctors resulting in turnover and migration would exacerbate the current shortage and results in serious understaffing of health care facilities. This has the potential to have a negative impact on the delivery of patient care (Fridkin et al., 1996). Job satisfaction among doctors is of major concern as it directly affects patient safety and health service quality (Wallace, Lemaire and Ghali, 2009).

This cross-sectional study consisted in determining the job satisfaction and its associated factors among doctors working in public health facilities in Democratic Republic of the Congo. The study found out that job satisfaction of doctors working in public sector in the Democratic Republic of the Congo was 23.0%. This study revealed that the job satisfaction is lower than studies conducted in Karachi (Khuwaja et al., 2004) and Sri Lanka (Rodrigo et al., 2013) which have shown the proportion of satisfied doctors to be 32% and 43.6% respectively. In Iran Job satisfaction, for instance, was as 42.1% (Jabbari et al., 2014; Motlagh et al., 2011) while in a study carried out among physicians of Armed Forces Medical College, Pune the

proportion of job satisfaction was 40% (Chaudhury and Banerjee, 2004). Also, studies conducted in Eastern India (59.6%) (Bhattacharjee et al., 2016), and among doctors of Chandigarh (74%) (Sharma et al., 2014), and among doctors in a tertiary care teaching hospital in India was 69.5 % (Nirpuma, 2008) revealed that the job satisfaction in our study is lower. Studies done in developing and developed countries have shown difference in job satisfaction. In a study covering ten nations of the European Union, it was found that only a quarter of the doctors were dissatisfied. (Bensing et al., 2013; Yu et al., 2018).

This discrepancy might be because of the operational definition of job satisfaction used in this study have influenced in some level the overall satisfaction. But if the result appears to be very low, it reveals the importance of human resources motivation issues in the country as depicted in the National Health Development Plan (Ministry of Health, 2018). This study has an exception as other similar studies have not yet been undertaken in a nation level in the country.

Whilst job satisfaction contains some universal dimensions, it is also affected by several predictors that vary across worker groups and settings. Regarding factors associated with job satisfaction, this study identified that management position, written job description and in-service training opportunity were identified as significant factors for the satisfaction of doctors on their job. Doctors who were in management position or in charge of any clinical services in the health facility were 2.789 times more likely to get satisfied with their job compared to those who were not (AOR = 2.789, 95% CI (1.798, 4.325)). This finding is in line with the study carried out at health centers in Vientiane Capital and Bolikhamsai Province, LAO PDR. (Khamlub et al., 2013). Those who had or declared to have a written job description were 1.697 times more likely to get satisfied with their job compared to the counterpart (AOR = 1.697, 95% CI (1.184, 2.431)). A study carried out in rural Shandong Province, in China found the same association (Gu et al., 2019). Moreover, those doctors who have received at least one

in-service training, training updates or refresher trainings within past 24 months were 1.90 times more likely to get satisfied with their job compared to those who have not (AOR = 1.90, 95% CI (1.32, 2.73)). In Germany, a Cross-National Study shows opportunities for continuing education as a factor that determines job satisfaction (Janus et al., 2008).

Concerning the gender, the qualification, Average working hours each week, Work experience, Area of residence and supervision support of the doctors, even though they were not identified as predictor variables in the multivariate analysis, we can see the following situations. In this study, male doctors (85,1 %) found to be more than female doctors (14,9 %), this is likely due to the effect of the earlier part of the 20th common belief that women were physically unable to perform the rigors of a medical practice. It is contrary to the recent observation of the increase in the numbers of women joining Medical Schools; this lead to slight dominance of females representing the total medical force. (Suliman et al., 2017b).

The influence of gender on job satisfaction has previously been the focus of academic research (Jackson et al., 2018), showing that male doctors scored higher than female doctors on all items in general practitioners, which is similar to the present study. Male doctors were more (24.7%) satisfied with their job than their female colleagues (13.2%). Similar result was found in a study conducted among junior doctors working at teaching hospitals in River Nile State in Sudan, the female doctors showed lower job satisfaction and this could be due to family commitment, duties in childbearing and rearing (Suliman et al., 2017b). same situation was found in a study among doctors from Jiangsu Province in China, job satisfaction which was highest in male doctors over female doctors ( $P < 0.05$ ) (Yu et al., 2018).

The contrary was found in the study conducted in India, 58.8% for male doctors and 61.8% for females (Bhattacharjee et al., 2016). As in other studies, females were found to be more satisfied than their male colleagues: female 94.2 % Males 63.1% (Nirpuma, 2008), 41.35%

for male , 43.11% for females (Jabbari et al., 2014). In this study the gender was not associated with job satisfaction as in one study carried out in Pakistan (Atif, Khan and Maqbool, 2015) and in rural Shandong, in China (Gu et al., 2019).

However, our study showed that specialists were more (28.6%) satisfied than general practitioners (22.9%). This result is similar with the overall degree of job satisfaction of specialists which was higher than that of general practitioners in Jiangsu, China (Yu et al., 2018). Also, there is a satisfaction difference, even though minimizable, between doctors with  $\leq 45$  hours of service each week (20.3%) with those (23.9%) working  $> 45$  hours (Overloaded) (Journal Officiel, 2002). This result corroborate with the study conducted in Norway (Rosta, Aasland and Nylenna, 2019). Also, a study conducted in Lahore (Atif, Khan and Maqbool, 2015) reported that working hours are not associated to job satisfaction. This is in line with our study. Doctors who were serving in the institution for  $\leq 15$  years were more (23.1%) satisfied with their job compared to  $> 15$  years-of-service doctors (15.4%).

Contrary to our study which did not show an association between work experience and job satisfaction, a study conducted among doctors at a tertiary care hospital in Lahore showed an association (Atif, Khan and Maqbool, 2015). As the seniority promotes job satisfaction, this discrepancy justifies even the fact that the DRC) experiences numerous strikes within the medical profession. The claims of these doctors are essentially financial and statutory (Ravez et al., 2019). Rural doctors (28.0%) were more satisfied than urban doctors (14.7%), and they were 1.334 times more likely to get satisfied with their job compared to those living in urban area (AOR = 1.334, 95% CI (0.891, 1.998)). This is in line with a study conducted among Physicians in California (Luman, Zweifler and Grumbach, 2007). Doctors (27.2%) who received a technical support or supervision in the past 6 months from a supervisor in or outside his/her working facility were more satisfied compared to the counterpart (14.9%). They were 1.359 times more likely to get satisfied with their job compared to the counterpart (AOR =

1.359, 95% CI (0.911, 2.028)). Although no association has been found with job satisfaction in our study, the contrary was found in a study in Pakistan and in a cross-sectional study at University of Gondar Referral Hospital, Northwest Ethiopia (Gedif et al., 2018; Kumar et al., 2013). This discrepancy is due to the fact that supervision and the role that each supervisor gives to himself is a simple metonymy (Médard Donzo, 2008).

The quality of health services could be improved, medical staff motivated and young people encouraged to enter this important, difficult and responsible profession, providing deep satisfaction to both doctors and patients.

## 6.2 Strengths and Limitations of the Study

### 6.2.1 Strengths of the Study

The instrument developed in the SPA DRC 2017-2018 survey was adequately validated and the structural validity of the questionnaire was assessed, and there is no doubt on its reliability and validity. The generalization of this research to the whole doctor workforce in the DRC could be guaranteed because of high response rate and representativeness in all country's provinces. However, no study of this magnitude conducted nationwide on doctor's job satisfaction exists in the country.

### 6.2.2 Limitations of the Study

In this study the variable "Age" was not included in the questionnaire so that we were not able to study the relation between job satisfaction and age group of the doctors. Hence, future

studies should be conducted where the variable “Age” will be taken into account. The operational definition of job satisfaction used in this paper may have influenced the overall satisfaction among doctors working in public sector in DRC, and the fact that there are no historical data in the country did not help for comparison of the job satisfaction of doctors.

## **7 CONCLUSION**

According to the operational definition used in this paper, our study revealed that only one-fourth of the doctors working in public sector in the DRC were satisfied with their work. Management position, written job description and in-service training opportunity were identified as important predictors of job satisfaction. Furthermore, they were identified as factors that affect job satisfaction level of the study population.

The concerned bodies should develop strategies on the identified factors to enhance the job satisfaction level of doctors working in public sector in the DRC. It is suggested that these overriding factors which impact doctors job satisfaction to be addressed to improve the quality of healthcare in public health policy making process. Policymakers should develop strategies on the identified factors to enhance the job satisfaction level of doctors working in public sector in the DRC. Consequently, boosted satisfaction at work will warranty better health care delivery and patient welfare, which is the utmost goal of every health care institution.

## APPENDICES

### APPENDIX A: letter of confirmation to use the SPA DRC 2018 - 2018 dataset.



Apr 15, 2021

Gerse Lucide MUNDUKU  
Yonsei University  
Korea Democratic People's Republic of  
Phone: +821048676234  
Email: gocmund@gmail.com  
Request Date: 04/15/2021

Dear Gerse Lucide MUNDUKU:

This is to confirm that you are approved to use the following Survey Datasets for your registered research paper titled: "Factors Influencing Job Satisfaction among medical doctors in Public health facilities, Democratic Republic of the Congo.":

#### **Congo Democratic Republic**

To access the datasets, please login at: [https://www.dhsprogram.com/data/dataset\\_admin/login\\_main.cfm](https://www.dhsprogram.com/data/dataset_admin/login_main.cfm). The user name is the registered email address, and the password is the one selected during registration.

The IRB-approved procedures for DHS public-use datasets do not in any way allow respondents, households, or sample communities to be identified. There are no names of individuals or household addresses in the data files. The geographic identifiers only go down to the regional level (where regions are typically very large geographical areas encompassing several states/provinces). Each enumeration area (Primary Sampling Unit) has a PSU number in the data file, but the PSU numbers do not have any labels to indicate their names or locations. In surveys that collect GIS coordinates in the field, the coordinates are only for the enumeration area (EA) as a whole, and not for individual households, and the measured coordinates are randomly displaced within a large geographic area so that specific enumeration areas cannot be identified.

The DHS Data may be used only for the purpose of statistical reporting and analysis, and only for your registered research. To use the data for another purpose, a new research project must be registered. All DHS data should be treated as confidential, and no effort should be made to identify any household or individual respondent interviewed in the survey. Also, be aware that re-distribution of any DHS micro-level data, either directly or within any tool/dashboard, is not permitted. Please reference the complete terms of use at: <https://dhsprogram.com/Data/terms-of-use.cfm>.

The data must not be passed on to other researchers without the written consent of DHS. However, if you have coresearchers registered in your account for this research paper, you are authorized to share the data with them. All data users are required to submit an electronic copy (pdf) of any reports/publications resulting from using the DHS data files to: [references@dhsprogram.com](mailto:references@dhsprogram.com).

Sincerely,

*Bridgette Wellington*

Bridgette Wellington  
Data Archivist  
The Demographic and Health Surveys (DHS) Program

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