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ASSESSMENT OF INCENTIVE PACKAGES FOR FRONTLINE HEALTH WORKERS AND JOB SATISFACTION IN SELECTED COVID-19 ISOLATION CENTRES IN GREATER ACCRA, GHANA

BY

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DECLARATION

I, Adikie Akpene Puplampu, hereby declare that with the exception of references to other people's work, which have been duly acknowledged, this research work is my own work done under supervision. I also declare that this research work, partly or in whole, has not been submitted to any University for the award of any degree.

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DEDICATION

I dedicate this work to my parents Mr. Obahi Buertey Puplampu and Mrs Olivia Afi Blewudzi Puplampu and siblings Adikwor Ewoenam Puplampu and Dzifa Adimle Puplampu for their support and prayers in my pursuit of higher education.

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LIST OF ABBREVIATIONS

BECE	Basic Education Certificate Examination
CHW	Community Health Worker
EYA	Ernest and Young Advisory
GARH	Greater Accra Regional Hospital
GIDC	Ghana Infectious Disease Center
GOG	Government of Ghana
GHS	Ghana Health Service
HCW	Health Care Workers
MOH	Ministry of Health
PPE	Personal Protective Equipment
UHC	Universal Health Coverage
WASSCE	West African Senior School Certificate Examination
WHO	World Health Organization

DEFINITION OF TERM

Epicenter- the central point of something

Pandemic- a disease prevalent over a whole country or the world

Incentive – a thing that motivates or encourages someone to do something

Satisfaction- fulfilment of one's wishes, expectations or needs.

Surveillance- the careful watching of a person or place

ABSTRACT

Background: Healthcare workers, particularly frontline healthcare workers, have been at the forefront of helping in contact tracing, treating, and administering of vaccines with the emergence of the novel coronavirus in 2020. Thus, governments across the globe have taken initiatives to motivate healthcare workers, particularly those at the frontline. There is however limited empirical evidence on how these incentives motivated healthcare workers to serve at the frontline and how this influenced job satisfaction. This study sought to assess incentive packages for frontline healthcare workers and the perceived job satisfaction in selected COVID-19 Isolation Centres in Greater Accra, Ghana.

Method: This was a mixed-method study involving both quantitative and qualitative methods with 178 participants. A survey was conducted among 165 health workers using a self-administered questionnaire to collect data on job satisfaction and the effect of incentives on health workers' job satisfaction. In-depth interviews were also conducted among 13 health workers to elicit their perspectives of frontline health workers on appropriate incentive packages for frontline health workers in future pandemics. Descriptive and inferential statistics and thematic content analysis were used to analyze the quantitative and qualitative data respectively.

Results: Overall, 60.1% acknowledged personal receipt of incentives provided by government which included training (54%), financial incentives (49%), logistics (41%) and salary increase (31%). Among the 60.1% who received incentives, 48% rated them as bad/poor while 37% rated them good and the remaining 15% were indifferent. Of those who received COVID-19 incentives, older participants were more likely to be satisfied with their jobs compared to their younger counterparts (AOR: 7.19; 95% CI= [1.20-43.12], p=0.031). Also, participants who worked at the Ghana Infection Disease Center were more likely to be satisfied with their jobs compared to participants at the other isolation centers (AOR: 5.59; 95% CI= [1.77- 17.71], p=0.003).

Furthermore, participants who received training as part of their incentive package were more likely to be satisfied with their jobs compared to those who did not receive any training (AOR: 3.18; 95% CI= [1.20-8.45], p=0.020).

Conclusion: Though more than half of health workers were satisfied with their jobs, incentives provided by government to frontline health workers in the fight against COVID-19 was rated by majority of respondent as poor. Generally, healthcare workers were not satisfied with these incentives due to factors such as inconsistencies in the delivery of incentives and the fact that their risk was not equally matched with incentives. Major stakeholders directly involved in mitigating strategies of pandemics and outbreaks should ensure the provision of acceptable incentive packages and identify more welcoming methods of distribution.

CHAPTER ONE

INTRODUCTION

1.1 Background to the study

The novel coronavirus (COVID-19) is an ongoing global pandemic, which is inevitably a major health crisis with reoccurring challenges in other socio-economic sectors. Recent statistics showed that there were 574,526,267 confirmed cases and 6,395,382 deaths reported as at July 31, 2022 (World Health Organization (WHO), 2022). Africa had a cumulative case of 9,213,803 with 174,044 deaths as of July 31, 2022 (WHO, 2022). The World Health Organization (WHO) made recommendations on containment, including widespread testing, quarantine of cases, contact tracing, and social distancing, which were adapted and implemented by countries.

In Ghana, the recording of the first two imported cases of COVID-19 on March 12, 2020, was handled with mitigation and containment strategies of contact tracing and testing for potential cases to help reduce the spread of the infectious disease in line with WHO directives championed by the Ghana Health Service (myjoyonline.com). As of July 31, 2022 the country had recorded 168,127 COVID-19 confirmed cases and 1457 deaths (WHO, 2022). So far, the country has gone through three main phases of regulating COVID-19: first, through public health sensitisation; second, lockdown and a ban on social gatherings; lastly, through advocacy for COVID-19 protocols (Lake, 2020). To date, the country has experienced almost all the waves of this pandemic. In February 2021, Ghana received vaccines through the

COVAX initiative (600,000 doses of Oxford -Astra Zeneca vaccine) (Amponsah et al., 2021). In light of the scale and spread of the corona virus, healthcare workers, particularly frontline healthcare workers have been at the forefront of helping in contact tracing, treating, and administering of vaccines (Ministry of Health (MOH) / Ghana Health Service (GHS), 2020). In addition, the WHO has identified healthcare workers (HCWs) in particular as being exposed to COVID-19 as well as over 10% of global infections (WHO, 2020; Afulani et al.,

2021). In Africa, about 10,000 HCWs across 40 countries had contracted COVID-19 as of July 1, 2022 (WHO, 2020; Afulani et al., 2021). Studies on the mental health of healthcare workers during the pandemic showed increased levels of anxiety, depression, stress, and insomnia (Khanal et al., 2020; Ofori et al., 2021). The widespread of the coronavirus coupled with inadequate training, protocols, knowledge, and personal protection equipment (PPE), as well as weak health systems, slow national responses, and poor political leadership have had a massive toll on health workers' job satisfaction (WHO, 2020; Guest, del Rio & Sanchez, 2020; Suleiman et al., 2020).

Given the above, Governments have taken initiatives to cushion healthcare workers, particularly those at the frontline (MOH/GHS, 2020). In the South East Asia region, community health workers (CHW) played an integral role during the COVID-19 pandemic and had monetary and non-monetary incentives though not standardized (Bezbaruah et al., 2021). In the case of Serbia, the government provided incentives in three main forms of employment programs, COVID-19 bonuses (one-time financial assistance, salary increase) and training opportunities (Ćulafić et al., 2021). In addition, the government of Japan also motivated its health workers and identified it as an important motivation factor in managing a pandemic (Morishita et al., 2021).

Likewise, in the case of Ghana, the Government of Ghana (GoG) recruited 45,107 health workers out of which 10,000 were temporary contact tracers with the promise of financial and non-financial incentives (MOH/GHS, 2020; Asamani et al., 2022). Contact tracers were to receive a daily allowance of GHS150 (Amponsah et al., 2021). Additionally, frontline health workers were to receive a 50% of their basic salary as an allowance. A life insurance cover of GHS 350,000 to a frontline health worker testing positive or dying as a result of COVID-19 was promised (MOH/GHS, 2020; Amponsah et al., 2021; Asamani et al., 2022).

In essence, the widespread and evolving nature of COVID-19 has far-reaching implications for all countries. Regardless of the unique existential realities, healthcare workers are a significant factor, which affects the sustainability of the health system. This study, therefore, sought to critically assess the Ghanaian government's response to COVID-19 specifically, the (financial) incentives given to cushion frontline workers and job satisfaction from an incentive theory of motivation perspective and its outcome on managing the pandemic. Hence, the study assessed the incentive packages for frontline healthcare workers and perceived job satisfaction in selected COVID-19 Isolation Centre in Greater Accra, Ghana.

1.2 Problem Statement

Pandemics over the years, including COVID-19, have put healthcare workers (HCW) at increased risk of infections, mental disorders, and mortalities (Khanal et al., 2020; Ofori et al., 2021; Sethi et al., 2020). These impacts challenged the resilience of the health system and its capacity to respond to the pandemic (Asamani et al., 2020). In addition,

healthcare professionals experienced an unprecedented increase in their roles and responsibilities (Sethi et al., 2020; Cal et al., 2020), which adversely affected their well-being (Semo & Frissa, 2020).

Specifically, the quest to limit the importation of the virus into the country resulted in enhanced contact tracing and surveillance, HCW were trained on Infection Prevention and Control (IPC) and appropriate use of Personal Protective Equipment (PPE) (Amponsah et al., 2021, Sarkodie et al., 2021, Sarpong et al., 2020). Through all these, people who tested positive for the virus were provided with adequate care. HCW attended and treated COVID19 patients regardless of the risk of getting infected as well as putting their families at risk (Kayiga et al., 2021). McConnell (2020) states that it was ethical to abstain from work (24% and 26% of physicians and nurses respectively at a university hospital survey) to protect themselves or their families during the pandemic. HCW were at the forefront and spent long hours rendering various treatments and care to the sick (Morishita, 2021). Ofori et al., (2021), observed that there were increased numbers of HCW who tested positive for the virus and some lost their lives. HCW who were at high risk of COVID-19 exposure were referred to as 'frontline' (Asamani et al., 2022 p.6). The resultant effect was observed through a restrained capacity of healthcare workers to contain and combat the disease.

In Ghana, 7.6% (3656) of confirmed COVID-19 infections were experienced by healthcare workers at the end of October 2020 (GHS, 2020; Asamani et al., 2022). The widespread of the virus necessitated the GoG to cushion the health system through three main identified approaches of mass employment of unemployed but qualified health

personnel to engage in enhanced contact tracing at a fee; financial incentives, specifically by waiving income taxes (3-month tax waive) on salaries of health personnel in the public sector, in addition, to a 50% basic salary increase to frontline health workers; and an insurance cover of GHS 350,000 and a final approach on the provision of PPEs and training to ensure the safety and protection of the health worker (Ernest and Young Advisory (EYA), 2020; Asamani et al., 2022).

The Ministry of Health (2020) explains that a frontline 7health worker 'is any health worker(s) who is directly involved in triaging, isolation, laboratory testing, ambulance service, holding centres, treatment centres, surveillance and contact tracing for COVID-19' (see Petetsi, 2020; Asamani et al., 2022 p.6). In summary, a frontline healthcare worker was any health worker who was at a high risk of COVID-19 exposure.

Despite Ghana's precarious economy and pressing social needs, the Government managed to set up a temporary motivational system to cushion healthcare workers, particularly frontline health workers (Asamani et al., 2022). However, there were discrepancies and fragmented conclusions in the categorisation of frontline workers, which subsequently, affected the way the promised incentives were disbursed (myjoyonline.com 2022). In addition, there were reported challenges of frequency and duration (myjoyonline.com 2022).

There is no doubt that incentives played an essential role in mobilising healthcare workers for emergency response (Morishita, 2021). Other studies showed that the increase in COVID-19 infections ensued because of poor financial motivation coupled with increased workload resulting in some healthcare workers disregarding the use of COVID-19

protocols and not properly wearing PPE due to stress and fatigue (Ilesanmi et al., 2022; Agwu et al., 2022; Afulani et al., 2021).

The overwhelming number of cases recorded had a psychological impact (anxiety, depression among others) on health workers who were directly involved with the patient, this affected performance of work (Ofori et al., 2021).

1.3. Objectives of the study

1.3.1. General Objective

The general objective of the study is to assess incentive packages for frontline healthcare workers and how it influences perceived job satisfaction in selected COVID-19 Isolation Centres in Greater Accra, Ghana.

1.3.2. Specific Objectives

The specific objectives of the study are;

1. To describe the range of incentive packages for frontline health workers in selected COVID-19 Isolation Centres in the Greater Accra, Ghana.
2. To determine the level of job satisfaction among frontline health workers in selected the COVID-19 Isolation Centres in the Greater Accra, Ghana.
3. To assess the perceived influence of incentive packages on health workers' motivation and job satisfaction as COVID-19 front-line workers.
4. To explore the perspective of frontline health workers of appropriate incentive packages for frontline health workers in future pandemics.

1.4 Research Questions

1. What incentive packages were provided for frontline health workers in selected COVID-19 Isolation Centers in the Greater Accra?
2. What is the level of job satisfaction among frontline health workers in the selected COVID-19 Isolation Centers in Greater Accra, Ghana?
3. What is the perceived influence of incentive packages on the frontline health workers' motivation to work as COVID-19 front-line workers?
4. What incentive packages are deemed appropriate for frontline health workers in COVID-19 Isolation Centers in Greater Accra, Ghana?

1.5 Justification of the Study

The COVID-19 infection, the recurrent global pandemic has affected the health system, especially in the African continent, which has the potential to affect progress toward attaining universal health coverage (UHC) (Amos et al., 2021, Amino et al., 2021). To achieve the UHC, an equitable and well-performed workforce is crucial (Cometto et al., 2020). HCWs' contributions in this pandemic cannot be underestimated. Though on ethical basis, some stayed off work to protect themselves and vulnerable family members (McConnell, 2020), others stayed on at the fore front in spite of the risks (in preparation, knowledge, containment and prevention) (Kayiga et al., 2021).

Globally, various forms of incentives were provided to mitigate the situation (Morishita et al., 2021). Morishita et al. (2021) argued that the incentives provided motivated frontline healthcare workers to give off their best. Most studies on incentives do mention

(financial) incentives but do not give exact details (Bezbaruah et al., 2021; Morishita et al., 2021).

In Ghana, details of (financial) incentives promised were well spelt out (Ernest and Young Advisory (EYA), 2020; Asamani et al., 2022). A study on the experiences of frontline health workers seeks to examine the distribution, frequency, and experiences of the (financial) incentives promised, fill the knowledge gap, and inform structured and standardised guidelines for future outbreaks.

The findings of this study will give stakeholders and decision makers, the needed information and new insight that will help in designing a more tailored response, a well-structured and timely incentive system to cushion and retain the health work force especially during infectious disease outbreak.

1.6 Outline of thesis

This thesis is structured into six main chapters. This current chapter has provided the background to the study, the problem statement which informed the research questions and research objectives as well as the justification of the study. The next chapter, which is chapter two presents a synthesis of the literature on the research topic as well as the conceptual framework; Chapter three describes the study design, study population, data collection, and analysis; Chapter four presents the key results from both the quantitative and qualitative component of the study; Chapter five compares the study's primary findings to the body of literature already in existence before concluding. The major findings from the study are presented in chapter 6, along with suggestions for future research, practice and, policy.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presents a review of the literature on (financial) incentives, job experiences (satisfaction), and health outcomes during the peak of COVID-19 in Ghana with a focus on frontline healthcare workers in the Greater Accra Region. The literature review focused on the theoretical and empirical review of related studies and relevant theories as well as their innovative combination in building up an understanding of how (financial) incentives influenced the outcome of work, particularly in managing a pandemic in a developing country. Macnee and McCabe (2018), define a literature review as a combination of the literature that described what is known or has been studied regarding a research question or purpose. The literature based on this subject was acquired from journals, books, articles, published related research works, and internet sources.

2.2. Managing COVID-19 Pandemic

The recording of the first two imported cases of COVID-19 on March 12, 2020, brought about a lot of mixed signals to Ghanaians (MOH/GHS, 2020). The Ghana Health Service (GHS) held meetings on mitigation and containment strategies (contact tracing and testing) for potential cases to help reduce the spread of the infectious disease (Sarpong & Obeng, 2020; myjoyonline.com, 2020). The number of COVID-19 confirmed cases with four different waves (peaks) stood at 168,127 and 1457 deaths as of July 31, 2022, in Ghana (WHO, 2022). Ghana was recorded among the top ten (10) countries (after South Africa, Egypt, Morocco, and Algeria) with the highest number of COVID-19 cases on the African continent (WHO, 2020).

As part of measures to control the spread of the virus in connection with WHO directives (WHO, 2020), the Government of Ghana (GoG) on the 30th of March, 2020 announced the closure of its borders and imposed a partial lockdown in the hotspots (Accra, Kasoa and Kumasi) of COVID-19 infections for three weeks to prevent the potential importation and subsequent community spread of the virus in line with the Imposition of Restrictions Act, 2020 (Act 1012) (MOH, 2020).

The GoG also placed a nationwide ban on social gatherings by closing down educational institutions, religious activities and provided stringent directives on the use of public transport. In addition, there was the preparedness of the airports and land borders to screen all entrants into the country, the designation of quarantine facilities as well as the delineation of isolation centers in regional hospitals (Kenu et al., 2020; Sarpong & Obeng, 2020).

The capacity of two main research institutions, the Noguchi Memorial Institute for Medical Research and the Kumasi Centre for Collaborative Research to investigate and confirm or otherwise, identify suspected cases of Coronavirus infections (Kenu et al., 2020; Sarpong & Obeng, 2020). The GoG further raised $100 million in a public-private partnership to expand infrastructure, procure materials, and most importantly, educate the public (Kenu et al., 2020). Again, the GoG called for the suspension of international travel unless in cases of critical assignments. The GoG called for an all-inclusive approach to combating the virus, especially the media houses to work with the MoH (the body in charge) of disseminating information about the virus. More importantly, pharmaceutical companies were also engaged to produce logistics required to help combat the virus, as

well as practising health workers and qualified health workers but the unemployed were recruited to manage the spread (infection prevention) of the virus (GHS 2020).

The GoG reviewed public gathering advisories and stated seven (7) main directives; all public gatherings, including conferences, churches, and mosques were suspended for four (4) weeks. With limited numbers of not exceeding 25, citizens were allowed to hold private burials, and all schools from crèche to university were to be closed from Monday, March 16, 2020, till further notice except for BECE and WASSCE candidates who observed all protocols as they prepared for their transitory exams (GHS 2020).

The Ministry of Education and Communications was to roll out distance learning programmes. A ban on international travel, businesses, and other workplaces with the necessary measures was put in place. Also, establishments such as restaurants, shopping malls, night clubs among others, should provide running water and soap and hand sanitizers. The transport industry was also not left out as they ensured the observation of enhanced hygiene conditions and finally, the Ministry of Local Government and Rural Development coordinated, with the Metropolitan, Municipal, and District Assemblies, ensured conditions of hygiene in markets across the country. The President also asked for the cooperation of its citizens as health personnel undertook contract tracing measures which reduced community spread (Kenu et al., 2020).

The unique existential realities present in a low-income country like Ghana coupled with the lockdown, and the concomitant social and physical distancing further deepened poverty and hunger, particularly among the poor. Gyasi (2020) highlights other social

challenges such as the sudden separation of older people from loved ones, shortage of living supplies, loss of freedom, and uncertainty over disease status. Other challenges were health and economic challenges, which particularly affected health workers who were at the epicentre of combating the disease at the expense of their lives and that of their family members.

Despite the associated challenges, the approach adopted by the GoG to manage the COVID19 disease was intended to achieve five (5) key objectives – 'limit and stop the importation of the virus; contain its spread; provide adequate care for the sick; limit the impact of the virus on social and economic life; and inspire the expansion of our domestic capability and deepen our self-reliance' (GHS, 2020; Sarkodie et al., 2021).

2.3. Frontline Health Workers during the COVID-19 pandemic

The healthcare worker, specifically the frontline healthcare worker who was found at the epicenter of the COVID-19 pandemic was exposed to psychological stress, occupational burnout, and mortalities (Ofori et al., 2021; Sethi et al., 2020; Semo & Frissa 2020). The Ministry of Health, Ghana defines a frontline healthcare worker as 'any health worker(s) who was directly involved in triaging, isolation, laboratory testing, ambulance service, holding centres, treatment centres, surveillance and contact tracing for COVID-19' (Petetsi, 2020, Asamani et al., 2022 p.6). Other scholars generalise the group to include health workers who were in close proximity to the disease (Anderson et al., 2020; Sekowski et al., 2021).

The sudden and unprecedented spread of COVID-19 increased the roles and responsibilities of healthcare workers who were at a greater risk of infection. The World Health Organization

(WHO) estimated that 10% of health professionals were infected by the virus. Likewise, in Ghana, 7.6% (3656) of confirmed COVID-19 infections were experienced by healthcare workers at the end of October 2020 (GHS, 2020; Asamani et al., 2022).

Alrawashdah et al. (2021) showed that 57.7% of physicians experienced occupational burnout ensuing from working at highly loaded hospitals, working for long hours, having inadequate access to PPEs, and testing positive for COVID-19 in Jordan. Rana et al. (2022) noted that medical healthcare providers as employees in a hospital experienced occupational challenges during the COVID-19 pandemic.

Notably, mental healthcare planning and management of medical healthcare professionals were vital to ensure the availability of health services (Rana et al., 2022). Khanal et al. (2020) examined the mental health of health workers during the early phase of the pandemic and identified that 41.9% of health workers suffered symptoms of anxiety as they had to be away from their families and risk their lives to treat other people in Nepal. In addition, other health workers feared they could transmit the virus to other family members as they moved in between their homes and workplaces. In the same study, 37.5% of health workers suffered from depression and 33.9% also suffered from insomnia coupled with the stigma associated with higher odds of getting infected.

Similar studies in Ghana showed that over 40% of health workers had fear, 21% depression, 27.7% anxiety, and 8.2% suffered stress (Ofori et al., 2021). Furthermore, Afulani et al. (2021) confirmed that 16.3% of health workers suffered stress and 37.4% also experienced occupational burnout. The plethora of challenges faced by health workers in

most jurisdictions, including Ghana and Nigeria were further compounded by low salaries and poor working conditions, which resulted in lower job satisfaction (Alrawashdah et al., 2021; Agwu et al., 2022).

2.3.1 Job satisfaction among frontline health workers.

Job Satisfaction is the employee's total positive feeling about the job and job environment, including general well-being, work stress, control at work, homework interface, and working Conditions (Tomazevic & Seljak, 2014; John, Varghese, & Varghese, 2020). A study established that perceived job satisfaction was a mediating variable that affected the relationship between performance appraisal and reinforcement on performing job tasks among medical healthcare professionals during COVID-19 (Rana, Mukhtar, & Mukhtar, 2022). The variables used to measure job satisfaction have been presented below.

John, Varghese, and Varghese (2020) showed that there was the existence of a clear link between employees' job satisfaction, but with pretty weak intensity. John et al. (2020) observed that job satisfaction plays a vital role in the success of every organisation. Arguably, noted that perceived job satisfaction mediated the relationship between performance appraisal and reinforcement in their assigned frontline or non-frontline job tasks during the COVID-19 pandemic (Rana et al., 2022). Adamopoulos and Syrou (2022) revealed that during the COVID-19 pandemic, global financial crisis, job insecurity, decreased salaries, and social instability where working conditions changed, risk factors were affected, risk increased, and interpersonal working relationships had a particular impact under the period of the pandemic, especially for health professionals who were in the frontline.

A study analysed how leadership, job satisfaction, organisational commitment, and work environment were configured together to generate a good level of performance of health professionals during the times of COVID-19 and revealed that leadership and commitment were the two key drivers of performance (Yáñez-Araque, Gómez-Cantarino, GutiérrezBroncano, and López-Ruiz (2021). Yáñez-Araque et al. (2021) suggested that in the case of less satisfied workers, linking leadership and commitment would be a sufficient condition. A study gauged employees' job satisfaction while working from home and indicated that 87.1% were satisfied with working from home; however, the work performance, measured through the availability of ICT peripherals, showed a dismaying 53.7% (Hashim, Bakar, Noh, & Mahyudin, 2020).

2.4. Factors associated with job satisfaction among frontline health workers

This section presents an analysis of factors associated with job satisfaction among frontline health workers using the socio-demographic characteristics and organizational (COVID-19 incentive packages) factors as presented below.

2.4.1. Organisational Factors and Job Satisfaction among Frontline Health Workers during COVID-19 pandemic

The organisational factors that are considered in this study are based on the COVID-19 incentive packages for frontline health workers. These have been grouped into both financial benefits (one-time salary increase, tax benefits, 50% salary increase, insurance cover) and non-financial benefits (awards of recognition of hardworking staff, provision of PPEs, recruitment of additional staff to ease the workload, provision of psychological services and the periodic training of staff on IPC) as explained below.

Financial benefits

Studies have shown that financial rewards are likely to increase workers' job satisfaction, and health professionals are no exception. Some of these financial benefits have been explained below.

One-time salary increases

In Serbia, the government provided a one-time financial assistance and salary increase to its frontline health workers (Ćulafić et al., 2021)

Non-financial benefits

Earlier researchers suggested that non-financial benefits have the chance to enhance job satisfaction of workers, especially health workers. Some of these non-financial benefits have been explained below.

Provision of PPEs

A study by (MOH/GHS, 2020; Amposah et al, 2021; Asamani et al.,2022) indicated that the availability of PPEs to enhances the performance of services rendered.

There was various training done to better inform and prepare frontline health workers to better manage the pandemic (Ćulafić et al., 2021, GHS 2020

The widespread infection of the COVID-19 virus and its replicating challenges pushed most national governments to cushion their health workers who risked their lives to combat the virus (McConnell, (2020). Under such dire circumstances, incentives for healthcare workers involved in the potentially long-term battle against COVID-19 can be a critical factor in their willingness to continue to engage in COVID-19 related work,

especially as studies in the UK had argued that it was ethical for healthcare workers to bow out if their health was threatened (McConnell, 2020).

In Serbia, the Ministry of Finance proposed three main forms of incentives – an employment programme, salary increase, and COVID-19 bonuses as well as training opportunities (Ćulafić et al., 2021). In Japan, the government provided a supplementary budget to cushion health workers in financial and non-financial forms such as the provision of PPEs (Morishita, 2021). In Ghana, the GoG incentivised the health system through four main approaches of mass recruitment of qualified but unemployed health workers, financial incentives (tax waivers, 50% increment on basic salary of frontline health workers, and an insurance cover of GHS 350,000) and the provision of PPEs and training (GHS, 2020; Asamani et al., 2022; Ernest & Young Advisory, 2020).

Incentives over the years in any organisation have proven to have a positive outlook on job satisfaction (Ćulafić et al., 2021; Muthuri et al., 2020). Studies on incentivizing workers reiterate the benefits of incentives during the COVID-19 pandemic. In Japan, Morishita et al. (2021) argued that about 85% of frontline health workers agreed that the incentives received during the pandemic motivated them to combat and manage the disease. In Serbia, frontline workers posited that the salary increase and additional recruitment reduced the work burden and motivated them to work (Ćulafić et al., 2021). Similarly, in Ghana, East Africa, and Southeast Asia, both monetary and non-monetary incentives were given to cushion frontline health workers even though not standardised was equally crucial to motivating the frontline health workers to give off their best (Bezbaruah et al., 2021; Asamani et al., 2022; Amponsah et al., 2021; Muthuri et al., 2020).

Despite the coherence on the benefits of incentives to cushion frontline health workers, the inability to adequately provide both material and non-material incentives still increased the stress levels of frontline health workers. Specifically, in Nigeria, studies showed that the already existing poor conditions in most health facilities coupled with corruption did not increase the motivation of the health workers who were even given incentives (Ilesanmi et al., 2021; Agwu et al., 2022).

2.5. Appropriateness of COVID-19 Incentive Packages for Frontline Health Workers

The incentive packages provided to cushion frontline health workers on all fronts have a convergence on the essentiality of these benefits (Morishita et al., 2021; Asamani et al., 2022; Ćulafić et al., 2021; Muthuri et al., 2020). Incentive packages come in various forms, some of these incentives include financial benefits such as a one-time salary increase, tax benefits, a

50% salary increase, and insurance coverage. Other non-financial benefits include awards (recognition of hardworking staff), provision of PPEs, recruitment of additional staff to ease the workload, provision of psychological services, and the periodic training of staff on IPC to ensure a reduction in the spread of the virus to the barest minimum (Sarkodie et al., 2021).

Despite the convergence on the appropriateness of incentive packages for frontline health workers, other studies indicate that motivating only frontline health workers was not appropriate (Agwu et al., 2022). For example, in Nigeria, some studies argued that incentives should be given to all health workers since they equally took risks to still attend

to the health needs of the populace with the probability of getting infected even if they were not frontline health workers (Ilesanmi et al., 2021).

2.6 Theoretical Foundation: The Incentive Theory of Motivation

The incentive theory of motivation posits that work motivation is a complex psychological process (Tella et al., 2007) driven by external and internal organisational culture, management, and personality traits (Koraynski, 2013). Motivation further expands to cover the job itself, advancement, and responsibility, which is observed through the individual's positive feelings about the job, achievement, recognition, and responsibility. The theories of motivation emerged in the 1950s and 1960s with a focus on cognitive and behavioural mechanisms that drive employees to make an effort to get the job done.

Prominent theories on motivation are Maslow's hierarchy of needs, which argues that to satisfy the needs of a higher order, it is necessary to satisfy basic needs such as safety needs before self-esteem needs (Maslow, 1943 Ćulafić et al., 2021).

Secondly, Herzberg's (2008) two-factor theory identifies two factors of hygienic factors and motivators. Herzberg (2008) argued that the motivation factors, which expanded to include achievement, recognition, growth, and work itself determined either the presence or absence of employee satisfaction. The hygienic factors on the other hand include salary, working conditions, company policy, relationship with the manager, job security, and interpersonal relationship, which influence the presence or absence of dissatisfaction (Herzberg, 2008). Herzberg (2008) concludes that dissatisfied employers will have low

productivity, while satisfied employees on the other hand will have greater efficiency and commitment to work

(see Lekić et al., 2014). Latham (2012) argues that the relationship between work achievement and satisfaction is a reciprocally conditioned process, and that satisfaction can be both a cause and a consequence.

In relating the theory of incentive motivation to healthcare, which has been identified as the highest priority in managing the COVID-19 pandemic, strengthening the healthcare system is no doubt a driving force that can influence universal healthcare (Muthuri et al., 2020). Primarily, health systems should make provision for the economic and psychological needs of healthcare workers to promote the health needs of society (Lorincová et al., 2019). In essence, the effectiveness of the health sector depends on the motivation of healthcare workers (WHO, 2018).

To increase motivation, rewards must be meaningful, useful, and valued these can be in the form of intangible and tangible rewards (material rewards), in fixed or variable amounts (Van Eerde, 2015). Intangible rewards include job challenges, respect, status in the organization, opportunities for growth, and the development of an individual. The sustenance of a motivational system should represent the optimal combination of financial and non-financial rewards (Papac et al., 2020). The failure to motivate health workers in recent times has increased the migration of health personnel, which threatens the resilience of health systems particularly in developing countries (Ćulafić et al., 2021; Dempster & Smith, 2020).

Ever since the WHO declared COVID-19 a global pandemic, there has been a plethora of studies on the spread, its impact on health systems and other sectors of the economy with lessons for future pandemics (Afulani et al., 2021; Asamani et al., 2022; Ofori et al., 2021). However, the sustenance (motivation) of healthcare workers who are at the epicenter of this pandemic has been tackled but with fragmented conclusions (Amponsah et al., 2021; Ćulafić et al., 2021; Morishita 2021; Asamani et al., 2022).

Additionally, there are pending gaps in specificities and the perspective (experience) of the healthcare worker. A few studies highlight the importance of both material and non-material incentives as crucial for sustaining the healthcare workers in managing COVID-19 at their own risk (Amponsah et al., 2021; Morishita 2021). The researcher has identified a knowledge gap in the motivational system set up to ensure the sustenance of healthcare workers during the pandemic in developing countries, specifically Ghana amidst their unique existential realities. Some studies showed that the Ministry of Health vetted health workers' claims and identified 10001 health workers who qualified and were receiving the 50% top-up allowance

(Asamani et al., 2022). In all, the Government is estimated to have paid GHS 16.93million monthly as COVID-19 response incentives to the defined 10001 health workers, which translated into US$35 million by the end of 2020 (Asamani et al., 2022).

However, there are reports, that counter the frontline health workers receiving their promised incentives (myjoyonline.com 2022), particularly, the details into the specificities such as determining whether the right people received their incentives as

promised (right amount, all months received, frequency and timeliness) and how that incentive based on its deliverables influenced their work experience is missing.

In essence, this makes the study on (financial) incentives and health workers' experience within the context of a developing country very significant because it sought to bridge the knowledge gap on (financial) incentives promised to Frontline Healthcare workers in Ghana (Greater Accra Region) with a focus on the policy, its delivery, frequency and duration and how it affected health outcomes, experiences (job satisfaction) and the management of the pandemic that can serve as a blueprint for future pandemics.

2.7. Conceptual Framework of COVID-19 Incentives for Frontline Health Workers and Job Satisfaction

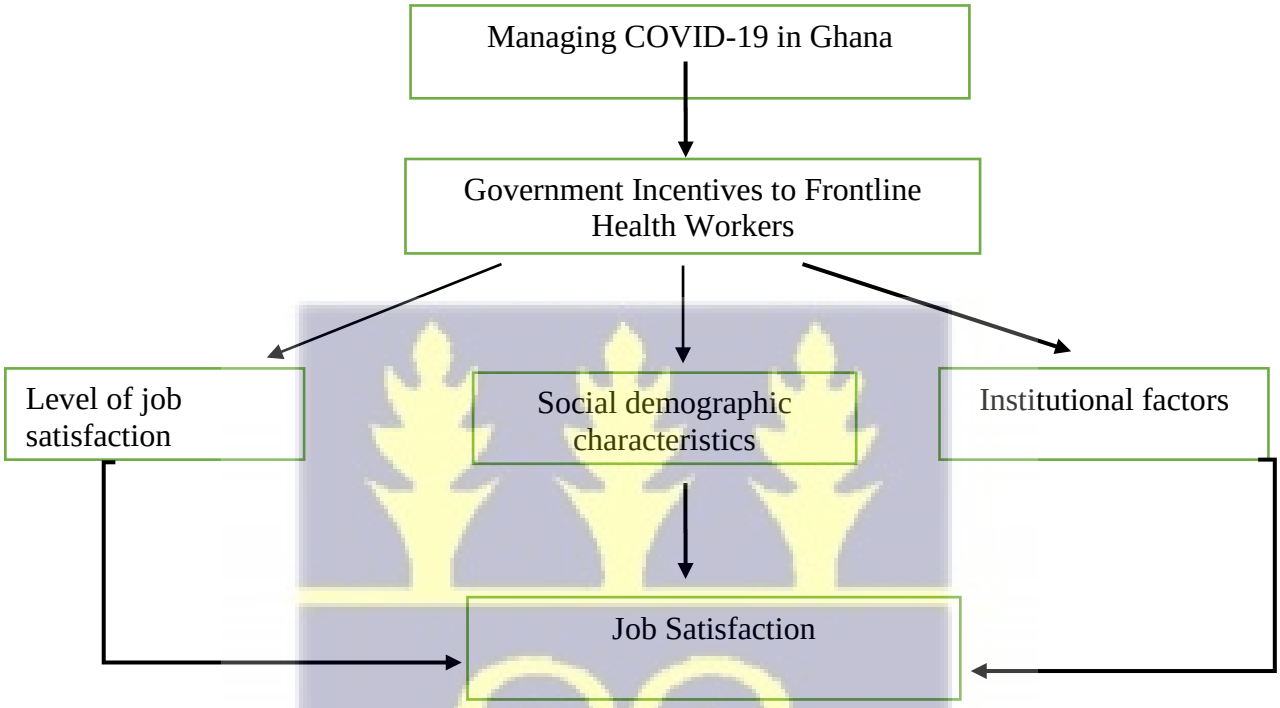

Figure 2.1: Conceptual Framework of COVID-19 Incentives for Frontline Health Workers and Job Satisfaction

The conceptual framework in Figure 2.1 explains how the GoG managed the COVID19 pandemic in Ghana through the lens of the incentive theory of motivation and the outcome on job satisfaction of frontline health workers in the Greater Accra Region. The risk and the rapid spread of COVID-19 influenced the GoG to incentivize frontline health workers in four (4) main ways to cushion and motivate the health workers to combat and manage the containment of the virus. The four (4) main ways expand to cover employment/ recruitment, provision of PPEs, financial incentives, and training.

To commence with the recruitment of practising health workers and the employment of qualified but unemployed health workers, the government in all, employed 45,107 frontline health workers out of which 10,000 were temporary contact tracers. The frontline health workers comprised nurses, medical doctors, clinical psychologists, laboratory technicians and ambulance operators.

Secondly, the GoG cushioned the health workers through the provision of PPEs. The PPEs comprised of facemasks, hand sanitizers, face shields, gloves, goggles, boots, coveralls, gowns, and rubber aprons.

In addition, the risk and the uncertainty in managing the COVID-19 disease further influenced GoG's decision to provide financial incentives, which comprised of GHS 150 per day for contact tracers, a 50% basic salary increase, a tax waiver and a GHS 350,000 insurance cover for infections and in the case of death.

The fourth incentive to cushion health workers was periodic training to update them on new ways and techniques required for handling COVID-19 cases and infections. The pieces of training mainly focused on Infection Prevention Control (IPC). A prominent training organized by the COVID-19 National Case Management Team in collaboration with the Ghana Health Service (GHS) with support from the USAID RISE (Reaching Impact,

Saturation and Epidemic Control) was on 'Basic Critical Care Training'.

The above incentives are underpinned by the incentive theory of motivation, which posits that people are motivated by a drive for incentives and reinforcement, which has a positive outlook on job satisfaction. In essence, this conceptual framework will guide the researcher to assess how these incentives either motivated or demotivated the health workers, the positives and the challenges to highlight the benefits as well as the challenges to inform policy on how to manage future pandemics.

2.8. Summary of the chapter

This chapter has presented an analysis of studies on the key concepts and theoretical foundation underlying the current study. The analysis has helped to show the gaps in knowledge of the field of incentives and their influence on health workers' job satisfaction. The next chapter presented the methods that were applied in the collection of data for the current study.

CHAPTER THREE

METHODS

3.0. Introduction

This chapter presents the research methods consisting of the study area, research paradigm, research design, target population, sample size and sampling techniques, research instruments, procedure, data collection methods, data analysis, and ethical considerations (Hyllegard et al., 2011). The methods show the reason for the study and take into consideration the systematic process or procedures that the researcher went through to achieve the aim and objectives of this study.

3.1 Philosophical Perspective

The philosophical perspective underlying the design of the research methods of this study is pragmatism (Back, 1969). The philosophy of pragmatism interprets meaning and knowledge in terms of the role they play embedded in experience, with an emphasis on problem-solving and adjustment (Back, p.515, 1969). Thus, it allows researchers to use both quantitative and qualitative data to provide adequate comprehension of the phenomena under study (Creswell, 2014).

The philosophy of pragmatism adopts a pluralistic approach that allows a researcher to combine subjective and objective knowledge to explain a phenomenon or a constructivist, and positivist paradigm to explain what works, for who and under what circumstances, and the how (Creswell, 2014). Both qualitative and quantitative methods are used where either the use of qualitative or quantitative research is insufficient to explain a research problem or in a situation when researchers need to provide a statistical explanation of a

qualitative problem, among others. Guided by a pragmatic perspective, a researcher can adapt the following mixed method research designs, which include concurrent triangulation, this is where the researcher collects both qualitative and quantitative data within the same time frame. Other designs are sequential exploratory, this is where qualitative data collection and analysis precedes quantitative data collection and analysis (Creswell, 2014).

3.2. Research design

A cross-sectional quantitative study using questionnaire was used to study sample size with the intention of generalizing. A case- study was employed for the qualitative study to give a detailed insight.

Therefore, this study employed a mixed method research strategy specifically a concurrent triangulation based on a descriptive framework that examined the relationship between incentives and frontline health workers' job satisfaction during the COVID-19 pandemic in the Greater Accra Region, which was both the hotspot and had a greater share of health facilities designated to manage the pandemic. A study explained that mixed methods research combines elements of quantitative research and qualitative research in to answer the research question(s) (Tegan, 2021). Tegan (2021) posits that mixed methods can help to gain a more complete picture than a standalone quantitative or qualitative study, as it integrates the benefits of both methods.

Creswell (2013) argues that a researcher who uses a mixed method approach should show purpose and rational. Mixed methods research is often used in the behavioural, health, and social sciences, especially in multidisciplinary settings and complex situational or societal research (Tegan, 2021). Researching into the complex phenomena of financial

incentives, health outcomes and experiences in the Greater Accra Region required a method that allowed for triangulation which established objectivity and helped unravel the complexities - this made the mixed method approach ideal.

3.3. Study Area

The study setting took place in three selected health facilities in the Greater Accra Region (GAR) of Ghana: the Ga East Municipal Hospital, Ghana Infectious Disease Centre (GIDC) and the Greater Accra Regional Hospital (Ridge) in the Greater Accra Region of Ghana.

3.3.1 Study Sites

The study was conducted in three selected health facilities in the GAR. The choice was made based on certain considerations. At the Ga East Municipal Hospital, approximately 100 health workers were recruited as frontline health workers out of their staff population. At the Ghana Infectious Disease Centre (GIDC), approximately 88 health workers were recruited as frontline health workers out of their staff population. At the Greater Accra Regional Hospital, about 43 health workers were recruited as frontline health workers out of their staff population. On the national front, 45,107 frontline workers were recruited by the GoG out of which 10,000 were temporary contact tracers. In addition, the Greater Accra Region had the highest number of recruited health personnel for managing COVID-19 (Sarkodie et al., 2021). These selected health facilities have been described in the following sections.

Ga East Municipal Hospital

The Ga East Municipal Hospital three months after it was set to begin operations in the Ga East Municipality became the pivotal hospital in Ghana's combat to the spread of COVID-19. The hospital was designated as the National COVID-19 treatment centre in March 2020 (Crankson et al., 2022; Oduro Mensah et al., 2021; Sarkodie et al., 2021). The facility has a 100-bed capacity with a staff strength (frontline) of 141. In addition, the hospital hosted the construction of Ghana's first-ever Infectious Disease Centre, three months into managing

COVID-19 through a private sector fund to complement the management of COVID-19 (http://gema.gov.gh). After a year (20 March, 2020-21st March 2021), the hospital has managed 2,600 patients with staff inclusive with 39 recorded deaths (http://gema.gov.gh).

Ghana Infectious Disease Centre (GIDC)

Ghana Infectious Disease Centre (GIDC) is a 100-bed capacity hospital built by private sector funds in a record time of 100 days built to aid in managing COVID-19 (Anaafo et al., 2021; Sarkodie et al., 2021). GIDC is the first infectious disease centre in Ghana. The frontline health workforce was 88.

Greater Accra Regional Hospital

The Greater Accra Regional Hospital (GARH) is a leading hospital in Ghana that provides tertiary services. During the spread of the COVID-19 virus, the hospital dedicated a 5-bed capacity and recruited about 43 health staff as frontline to manage COVID-19 patients (Sarkodie et al., 2021).

3.4. Study population

The study population consisted of all the elements from which the sample was drawn and had similar characteristics (Mugenda & Mugenda, 2009). The population of this study consisted of frontline health workers in GA-East Hospital, Ghana Infectious Disease Centre, and the Greater Accra Regional Hospital in the Greater Accra Region of Ghana.

3.4.1. Inclusion Criteria

The study included all frontline health workers working at Ga East Municipal Hospital, Ghana Infectious Disease Centre, and Greater Accra Regional Hospital.

3.4.2. Exclusion Criteria

The study excluded all frontline health workers who worked at Ga East Municipal Hospital, Ghana Infectious Disease Centre and Greater Accra Regional Hospital during the pandemic but had been recalled back to their initial health facilities.

3.5. Sampling technique and sample size

This section presents how the sample size was determined and the selection methods.

3.5.1. Sample size calculation for quantitative survey

The sample size for the study was determined using the

formula; $n = \frac{N}{1 + Ne2}$

where, n= sample size N= population

size e= the level of precision/ margin

using 5%. N= 43+88+141=272

$$n = \frac{N}{1+Ne^2}$$

$$n = \frac{272}{1 + 272(0.05)^2}$$

$$n = \frac{272}{1.68}$$

n = 161.90 = 161.90 ~ 162 exterminators

The study used a sample size of 162 for the quantitative survey.

However, considering a 10% non-response. The final sample size was 179.

3.5.2. Sampling Technique for Quantitative Study

A multi-stage sampling method was applied to recruit participants in the quantitative study as explained below.

Stratified random sampling

A stratified random sampling, which involved the categorisation of study respondents into stratums was used.

The study respondents were classified into nurse stratum, medical doctor stratum, clinical psychology stratum, laboratory technician stratum, and ambulance operator stratum).

Simple random sampling

A simple random sampling method was employed

The researcher selected health workers at random from a sampling frame using random numbers.

The study recruited 179 frontline health workers for the quantitative survey.

3.5.3. Sampling technique for the qualitative study

The researcher employed a purposive sampling technique in the selection of frontline health workers for the qualitative study.

Twenty (20) well-informed frontline health workers were purposively selected for the study which helped gained insight into promised incentives, their delivery, and its influence on their job experiences (satisfaction) in managing the COVID-19 pandemic in the Greater Accra Region of Ghana. Even though the researcher proposed the use of 20 respondents, the number of respondents was not cast in stone as the data collection process was guided by saturation point.

3.6. Study variables

The variables measured in the quantitative study have been described as dependent and independent as below.

3.6.1. Dependent variable

The dependent variable was job satisfaction.

3.6.2. Independent variables

The independent variables measured in the study were;

1. Level of job satisfaction.
2. Socio-demographic characteristics: Sex, age, educational status, rank/profession, years of work experience.
3. Institutional (incentive packages) factors:

3.7. Data Collection Tools and Techniques

Data for the study was collected in January 2023. The collection of both qualitative and quantitative data, in-depth interviews, and questionnaires were used as the key data instruments for gathering data as shown in Figure 3.1 and explained below.

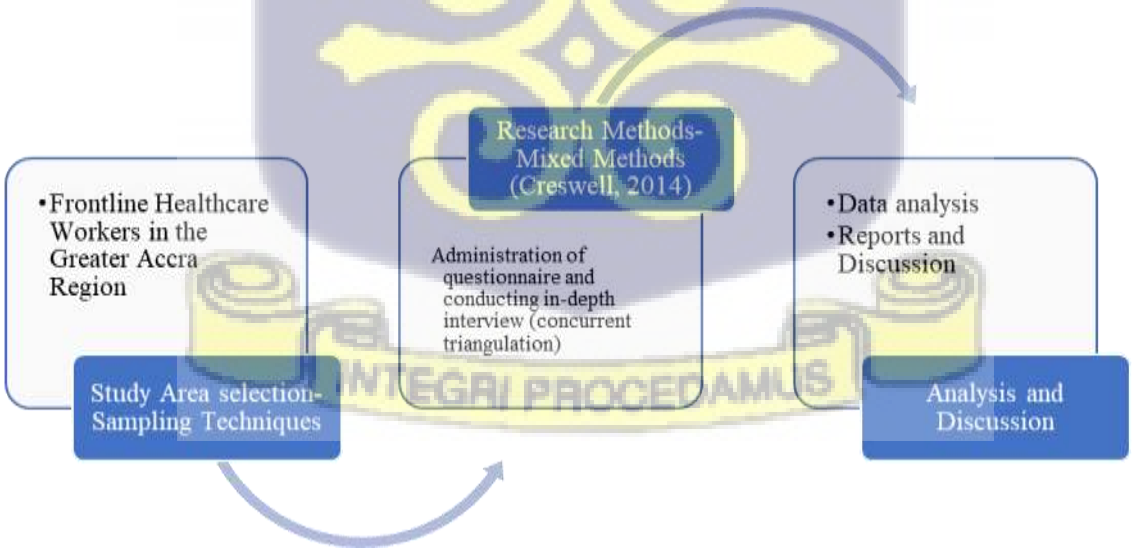

Figure 3.1: Methodological Framework for Measuring COVID-19 Incentives on frontline health workers.

3.8.1. Qualitative Data: In-depth Interviews

The researcher applied interviews in the collection of qualitative data for analysis in the study. Participants included 20 frontline health workers purposively selected from among those who took part in the quantitative study as well as members of the management teams of the selected hospitals. The semi-structured interview guide was framed within the context where the following question was addressed as 'What is the perspective of frontline health workers of appropriate incentive packages for future pandemics in the Greater Accra Region, Ghana?'. A semi-structured interview guide, field notebook, observations, and an audio recorder were used to record the data. The interviews were conducted at locations convenient to the participants. Each interview lasted between 10 and 20 minutes based on revealing issues (Appendix B shows the semi-structured interview guide).

3.8.2. Quantitative Data: Questionnaire Design and Administration

In the collection of quantitative data, a structured designed questionnaire was used as the key data instrument for gathering data. The structured questionnaire was administered to 179 respondents in the three study sites. Creswell (2014) argues that this approach enables the researcher to work with a large data set which enables generalizations of results. The questionnaire was an adapted version of a previously validated one which was designed into sections. Section A sought data on socio-demographic characteristics such as sex, age, educational status, rank/profession, and years of work experience. Section B collected data on incentive packages such as describing the incentive packages received. Section C sought data on the job satisfaction indicators such as describing your experience as a health worker. The questionnaire was set using Likert scale type questions and

answered where 1 = strongly disagree to 5 = strongly agree. The questionnaires were administered by two research assistants who used a self-administered strategy. The study was conducted at locations convenient to the participants and each lasted within 15 to 30 minutes. The researcher supervised and monitored the research assistants and ensured that they administered the questionnaires correctly (Appendix B shows the questionnaire).

3.8.3. Quality assurance

The necessary procedures were applied to ensure that the data collected met the required standards as presented below.

3.8.4 Training of research assistants

Training of research assistants focused on respective facilities taking into consideration the objective of the study, the processes, and the tools involved.

3.8.5 Pre-testing

Piloting of the study tools and instruments was carried out after training for quality assurance purposes.

3.9. Data management and analysis

This section presents how the data collected was managed and analysed. The quantitative data was processed using STATA version 17 and the qualitative data used content analysis (NVIVO 12.0) as described in the methodological processes have been outlined in Figure 3.1.

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3.9.1. Quantitative data analysis

Quantitative data collected were analysed using STATA version 17 (StataCorp, 2019). Univariate analysis of background characteristics was conducted and reported in frequencies and percentages. Additionally, data on assessing incentives received by participants and job satisfaction were also presented as frequencies and percentages.

Job satisfaction was created as a composite variable from 8 variables. For each variable, there was an option to depict satisfaction and another for dissatisfaction. Responses that showed satisfaction, a score of 1 was assigned and 0 if otherwise. Thus, a scale from 0 to 8 was created, with 0 being the lowest score and 8 being the highest score. The Shapiro-Wilk test was used to test for the normality of the knowledge scores. The test yielded a p-value of 0.00004 signifying the scale was not normally distributed. Therefore, the median (6) was used as the cutoff value to distinguish between dissatisfaction (scores below the mean [0-5]) and satisfaction (scores from 6-8). Chi-square/Fisher's Exact where appropriate was used to determine the relationship between socio-demographic characteristics, incentives, and job satisfaction. P-values less than 0.05 were considered statistically significant. Multivariate logistic regression was used to determine factors associated with job satisfaction Based on this, a dichotomous variable was created "0" (dissatisfied) and "1" (satisfied). The outcome of interest was satisfied. Strengths of association between independent variables and adequate knowledge were determined using crude odds ratio. Variables with p-value of <0.05 in the unadjusted logistic regression model (COR) were considered for inclusion into the multivariate logistic regression analyses, adjusted logistic regression (AOR). P-values less than 0.05 were considered statistically significant.

3.9.2 Qualitative data analysis

For the qualitative analysis, transcripts were analysed using Haase's adaptation of Colaizzi's method in Nvivo12. Transcripts were assessed for familiarization, to gain an understanding of meanings conveyed, identify vital phrases, formulate and validate meanings, identify and organize themes, sub-categories, and categories and develop descriptions of themes.

Afterward, similar responses were grouped and assigned codes. The individual theme's structure and content were then interpreted. Names of study participants were not used during analysis or report writing, but verbatim reporting was done where it was necessary to underline key points or provide meaning to the respondents' actual words during in-depth interviews. Concerning demographic details of the interview participants, descriptive statistics were reported.

3.10 Ethical considerations

The required ethical issues involved in studies using human subjects were followed in the conduct of the study as explained below.

3.11 Ethical clearance

Ethical approval was sought from the Ethics Review Committee of Ghana Health Service, Research and Development Division, Accra before the conduct of the study.

3.11.1 Permission from study sites

Permission was sought from the Medical Superintendents and the Central Administration of the three study sites. An introductory letter from the School of Public Health, College

of Health Sciences, University of Ghana, Legon, was sent to authorities of the hospitals to guarantee that the research was for academic purposes only.

3.11.2 Consenting Process

All frontline health workers in the three studies were briefed about the study. After the briefing and rationale of the study had been discussed, a formal written (typed) consent was issued to study respondents with sufficient time given for questions or clarifications. Study questionnaires and interviews were only administered and conducted respectively after the full informed consent had been signed by the study respondent (see Appendix A for the participant consent form).

3.11.3 Potential risk

The researcher did not encounter any risks to the respondents in the study at the three sites. In addition, the researcher outlined measures in the confidentiality and privacy section which ensured that data gathered were stored securely and only accessible to the researcher, no personal information (which is traceable) such as name was included in the data collected.

3.11.4 Confidentiality and Privacy

Respondents' confidentiality was strictly held in the trust of the researcher and the Ghana Health Service Ethics Review Committee / Institutional Review Board (IRB). This confidentiality is extended to cover any study information relating to respondents. In addition, no personally identifying information was collected. Study respondents were given a unique study ID, which was used on the survey, and pseudo identities in the in-

depth interviews. The study protocol, documentation, data, and all other information generated were held in strict confidence. No information concerning the study or the data was released to any unauthorized third party without the prior written approval of the GHS-ERC/IRB.

3.11.5 Benefits of the study

There will be no immediate direct benefit of this research to the study respondents. However, it is anticipated that their participation could help the researcher understand more about how to appropriately incentivized health workers which will motivate them to give off their best within such circumstances and for improved management of healthcare during future pandemics.

3.11.6 Voluntary consent and withdrawal

Participation in the study was entirely voluntary and participants were free to refuse or leave at any time.

3.11.7 Conflict of interest

The researcher certified that there were no financial considerations that compromised the researcher's ethical judgement in conducting or reporting the findings of the research.

3.11.8 Cost of participation

Study participants did not incur any direct financial cost for taking part in the study.

3.12 Source of funding

The Principal Investigator is the primary funder for this study.

3.12.1 Compensation

Participants were not compensated for participating in this study.

3.13 Conducting research under COVID-19

The researcher observed all the COVID-19 protocols during data collection. These comprised the wearing of nose masks, frequent use of hand sanitizers, and observed social distancing at all study sites.

3.14 Data security and storage

The researcher has stored the data collected in an electronic format which is password protected.

3.14. Chapter Summary

This chapter has presented the methods that were applied to collect data for analysis. The chapter has explained the reason for the choice of research design. The next chapter will seek to present the results obtained from the current study.

CHAPTER FOUR

RESULTS

4.1 Introduction

This section provides key results from both the quantitative and qualitative components of the study. The results are presented to answer the study objectives.

4.2.1 Sociodemographic Characteristics of Quantitative Respondents

One hundred and sixty-five health workers were recruited for the quantitative aspect of this study (Table 4.1.1). The mean age of the respondents was 33.4(SD=5.37) years with more than half being in the age group 30-39 years (58.2%) and a few aged above 40 years (14.5%).

Most (63.6%) of the health workers in this study were females, had undergraduate education (57.6%), and were Christians (90.9%). 47.9% were from the Ga East Municipal Hospital while others were from the Ghana Infectious Disease Centre (32.1%) and the Greater Accra Regional Hospital (20.0%). A larger proportion (60.0%) were workers in the ward, 17.6% worked in the emergency unit and 6.7% in the laboratory. The majority were clinicians (92.7%), and 70.3% were professional nurses and rated their risk of exposure to COVID-19 to be high (76.4%).

Table 4.1.1 Sociodemographic characteristics of quantitative respondents

Characteristic	Frequency	Percentage
Age(years) Mean (SD)= 33.4 (□5.37) 20-29	45	27.3
30-39	96	58.2
40+	24	14.5
Sex		
Female	105	63.6
Male	60	36.4
Education		
Secondary/SHS	8	4.8
Diploma	34	20.6
Undergraduate	95	57.6
Post Graduate	28	17.0
Religion		
Christianity	150	90.9
Islam	10	6.1
No religion/Free thinker	3	1.8
Others	2	1.2
Isolation centre		
Ga East Municipal Hospital	79	47.9
Ghana Infectious Disease Centre	53	32.1
Greater Accra Regional Hospital	33	20.0
Unit of Isolation		
Ambulance station	11	6.7
Emergency	29	17.6
Laboratory	11	6.7
Pharmacy	2	1.2
Reception	3	1.8
Ward	99	60.0
Others (HDU, Records, Home Isolation)	10	6.0
Health worker category		
Clinician	153	92.7
Non-clinician	12	7.3
Profession		
Auxiliary nurse	4	2.4
Doctor	10	6.1
EMT	14	8.5
Lab personnel	13	7.9
Professional nurse	116	70.3
Others (Anaesthetist, Physiotherapist, Physician assistant, Pharmacists)	8	4.8

Work experience (years)		
< 5	64	38.8
5-10	56	33.9
> 10	45	27.3
COVID-19 Risk exposure		
Very Low	9	5.4
Moderate	30	18.2
High	126	76.4

4.2.2 Sociodemographic Characteristics of Qualitative Respondents

Table 4.1.2 summarized the background characteristics of healthcare workers. In all thirteen (13) healthcare workers were interviewed. Most (10) of them were females and aged between 30 - 40 years (9), eight were married and five were single at the time of the study. Also, more than half (7) had more than 5 years of working experience.

Table 4.1.2. Background Characteristics of Health Workers

Participant	Age (years)	Religion	Work experience
Female (10)	<30 (3)	Single (5)	< 5 (6)
Male (3)	30 – 40 (9)	Married (8)	>5 (7)
	<30 (1)		

4.3 Assessment of incentives received by health workers.

Health workers in the quantitative arm of this study were asked about of incentives provided by the government in their work as frontline health workers against COVID-19 (Figure 4.1). Figure 1, panel A, summarizes the respondent's awareness of incentives provided by the government. These included training sessions (57%), financial incentives (55.2%), logistics (43.0%), provision of PPE/safety logistics (42.0%), increase in salaries (32.7%), insurance packages (21.8%) and counselling sessions (9.7%). Additionally, out

of the one hundred and sixty-five respondents in the survey, 60.6% revealed they had benefitted from these incentives (Figure 1, panel B). Out of this proportion, 54% stated they received training, 31% reported having received an increase in their salary and only 2% stated they received insurance packages (Figure 1, panel C). Overall, among those who received the incentives, 48% rated them as poor, 37% stated it was good and the remaining 15% were indifferent (Figure 1, panel D).

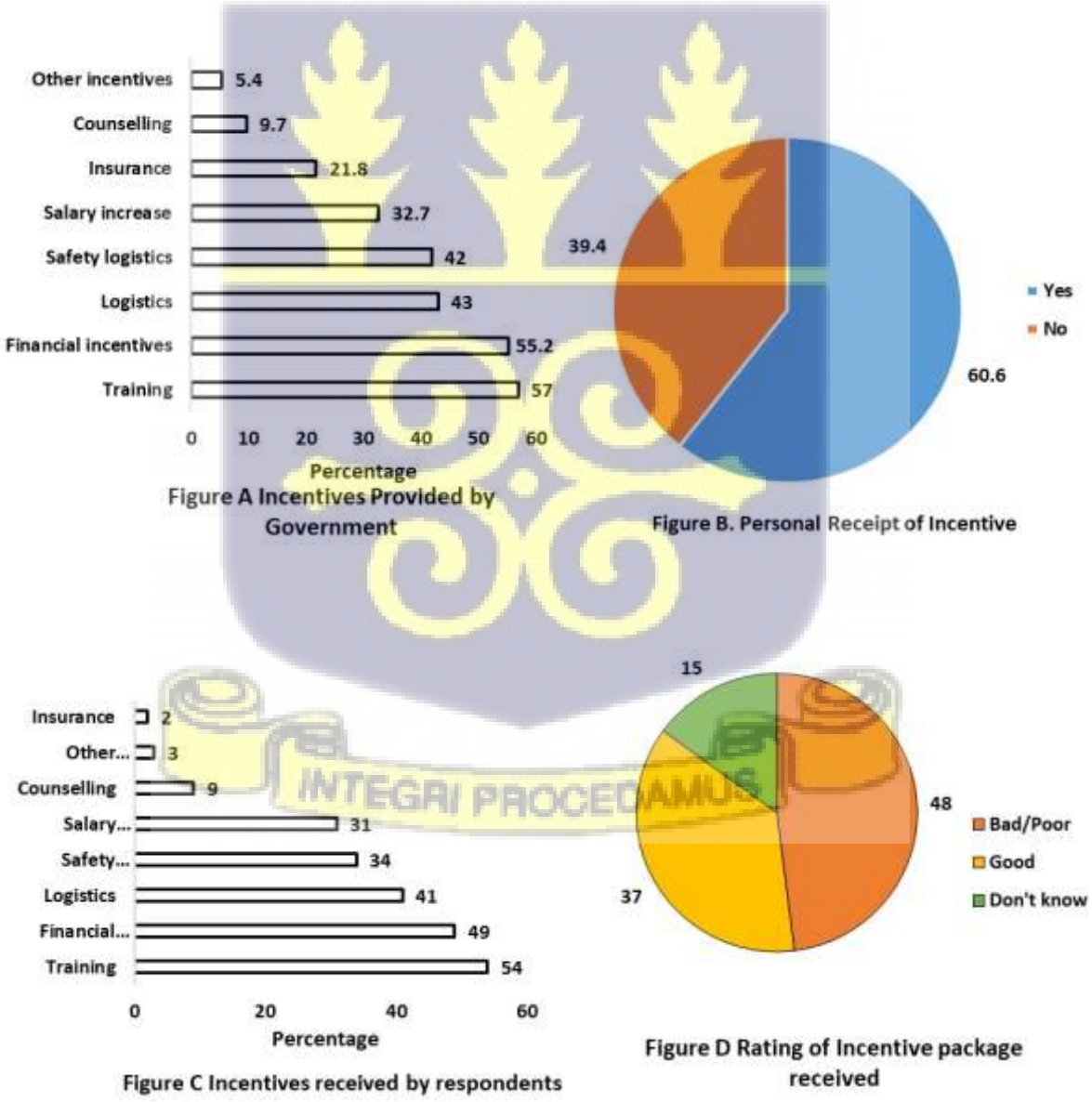

Figure 4.1 Assessment of incentives

4.4 Incentive and Job Satisfaction of Respondents

Out of the 31 health workers who reported an increase in their salaries over the period of data collection, 48.4% rated this increment as poor/unsatisfactory and 41.9% stated it was good (Table 2). Similarly, among the 49 who received financial incentives, 42.9% were poorly satisfied while 53.1% stated it was good. Almost all (96.4%) of the 54 who received training as an incentive were satisfied. More than a third (38.2%) of the health workers disagreed the COVID-19 management was supportive of them while 39.4% thought otherwise. 64.2% agreed they received the right amount of guidance from their supervisor, 73.9% agreed they received the required training for the job, 78.2% also agreed they were provided with consumables needed to work with, 70.3% agreed the working environment was conducive while 41.2% strongly disagreed the incentives assured them and were provided were adequate. In terms of how respondents were recruited into the frontline response team, 29.1% of respondents reported they were nominated by hospital authorities and 12.7% stated the reason for being frontline health workers was because they were promised incentives, and 6.7% also revealed the promise of employment influenced their decision to be frontline health workers. The health workers in this study described their experiences as frontline health workers in many ways: anxious (3.0%), disappointing (18.2%), and fulfilling (31.5%). Others remarked they were psychologically stressed (27.9%) and had work burnout (17.0%). Furthermore, more respondents (58.8%) indicated the isolation centres were somewhat equipped for patient care and 38.2% said they were fully equipped. Based on the number of daily working hours, 80% reported having worked 12 hours daily and 6.1% stated they worked more than 12 hours.

Table 4.2 Reported Incentives received and Job Satisfaction of respondents.

	Satisfaction with incentive received			
Incentive	**Very poor n(%)**	**Poor n(%)**	**Good n(%)**	**Very good n(%)**
Salary increments (N= 31)	1(3.2)	15(48.4)	13(41.9)	2(6.5)
Financial incentives (**N**=49)	1(2.0)	21(42.9)	26(53.1)	1(2.0)
Training, (**N**=54)	1(1.8)	1(1.8)	34(63.0)	18(33.4)
Provision of consumables (**N**=41)	2(4.9)	1(2.4)	22(53.7)	16(39.0)
Provision of safety logistics (**N**=34)	1(2.9)	1(2.9)	15(44.1)	17(50.0)
Counselling support (**N**=9)	0(0.0)	0(0.0)	8(88.9)	1(11.1)
Insurance packages (**N**=2)	0(0.0)	1(50.0)	1(50.0)	0(0.0)
	Job Satisfaction			
Statement	**Strongly disagree**	**Disagree**	**Agree**	**Strongly agree**
The COVID-19 Management is supportive of me	33(20.0)	63(38.2)	65(39.4)	4(2.4)
I receive the right amount of guidance from my supervisor	14(8.5)	38(23.0)	106 (64.2)	7(4.2)
I am provided with the required training for this job	6(3.6)	22(13.3	122(73.9)	15(9.1)
I am provided with a clear job line description	11(6.7)	33(20.0)	105(63.6)	16(9.7)
I am provided with consumables needed to work with	3(1.8)	12(7.3)	129(78.2)	21(12.7)
Incentives assured me are provided adequately	68(41.2)	58(35.2)	35(21.2)	4(2.4)
The working environment is conducive	8(4.8)	27(16.4)	116(70.3)	14(8.5)
I am provided with safety items needed for the job	3(1.8)	18(10.9)	127(77.0)	17(10.3)

Variable	**Frequency**	**Percentage**
Reason for being a frontline worker		
The promise of employment	11	6.7
Passion for the health profession	104	63.0
Nominated by hospital authorities	48	29.1
Promised incentives	21	12.7
Others	16	9.7
Experience as a frontline health worker	5	
Anxiety		3.0
Disappointing	30	18.2
Fulfilling	52	31.5
Psychologically stressed	46	27.9
Work burnouts	28	17.0
Others	4	2.4
State of isolation centres Fully equipped	63	
		38.2
Somewhat equipped	97	58.8

Not equipped	5	3.0
Daily working hours		
< 12	22	13.3
12	133	80.6
>12	10	6.1

4.5 Overall job satisfaction among respondents

Overall, 55.2% of the health participants in this study indicated they were satisfied with their jobs during the COVID-19 pandemic. However, 44.8% stated otherwise (Figure 4.2)

Figure 4.2 Job Satisfaction among Participants

4.6 Association between job satisfaction and independent variables

A Pearson chi square test showed isolation center (p=0.013) and receiving training as an incentive(p=0.004) during the COVID-19 pandemic were significantly associated with

job satisfaction. The percentage of job satisfaction was significantly higher among participants who worked at the Ga East Municipal Hospital and Ghana Infectious Disease Centre (41.8%) compared to those at the Greater Accra Regional Hospital (16.4%). Additionally, the proportion of job satisfaction of participants who received training was significantly higher than their counterparts who did not (65.6% vs 34.4%).

Table 4.3: Frequency and Percentage distribution of factors associated with job satisfaction among frontline health workers.

	Job satisfaction		
Variable	**Not satisfied n(%)**	**Satisfied n(%)**	**p-value**
Age(years)			
20-29	25(33.8)	20(22.0)	
30-39	40(54.1)	56(61.5)	0.233
40+	9(12.2)	15(16.5)	
Sex			
Female	44(59.5)	61(67.0)	0.315
Male	30(40.5)	30(33.0)	
Education			
Secondary/SHS	5(6.8)	3(3.3)	
Diploma	15(20.3)	19(20.9)	0.764
Undergraduate	41(55.4)	54(59.3)	
Post Graduate	13(17.6)	15(16.5)	
Isolation centre			
Ga East Municipal Hospital	41(55.4)	38(41.8)	
Ghana Infectious Disease Centre	15(20.3)	38(41.8)	0.013*
Greater Accra Regional Hospital	18(24.3)	15(16.4)	
Category			
Clinician	66(89.2)	87(95.6)	
Non-clinician	8(10.8)	4(4.4)	0.115
Rank			
Junior	25(37.3)	25(28.4)	0.240
Senior	42(62.7)	63(71.6)	

Work experience			
< 5	29(39.2)	35(38.5)	
5-10	24(32.4)	32(35.2)	0.925
> 10	21(28.4)	24(26.4)	
Risk exposure			
Very Low	1(2.7)	7(7.7)	
Moderate	13(17.6)	17(18.7)	0.352
High	59(79.7)	67(73.6)	
Salary increment			
No	26(66.7)	43(70.5)	0.687
Yes	13(33.3)	18(29.5)	
Financial incentive			
No	24(61.5)	27(44.3)	0.092
Yes	15(38.5)	34(55.7)	
Training			
No	25(64.1)	21(34.4)	0.004*
Yes	14(35.9)	40(65.6)	
Logistics incentive			
No	26(66.7)	33(54.1)	0.213
Yes	13(33.3)	28(45.9)	
Safety Incentives			
No	24(61.5)	42(68.8)	0.451
Yes	15(38.5)	19(31.1)	
Counselling incentive			
No	38(97.4)	53(86.9)	0.072
Yes	1(2.6)	8(13.1)	
Insurance incentive			
No	38(97.4)	60(98.4)	0.747
Yes	1(2.6)	1(1.6)	

***Statistically significant at p-value < 0.05**

4.7 Factors Associated with job satisfaction.

A logistic regression model was used to predict factors associated with job satisfaction (Table 4.4). The model predicted age, isolation centre, and receiving training to be

significant factors associated with job satisfaction. Older participants were more likely to be satisfied with their jobs compared to younger participants (AOR: 7.19; 95% CI= [1.20-43.12], p=0.031). Also, participants who worked at the Ghana Infection Disease Centre were more likely to be satisfied with their jobs compared to other participants at the other isolation centres (AOR: 5.59; 95% CI= [1.77-17.71], p=0.003). Furthermore, participants who received training were more likely to be satisfied with their jobs compared to those who did not receive any training (AOR: 3.18; 95% CI= [1.20-8.45], p=0.020)

Table 4.4: Bivariate and Multivariate analysis of factors associated with job satisfaction among frontline health workers.

	Adjusted OR (95% CI) p-value	OR (95% CI) p-value
Variable		
Age(years)		
20-29	1	1
30-39	1.75(0.86-3.58) 0.125	1.83(0.52-6.35) 0.343
40+	2.08(0.76-5.74) 0.156	7.19(1.20-43.12) 0.031*
Sex		
Female	1	
Male	0.72(0.38-1.36) 0.315	
Education		
Secondary/SHS	1	
Diploma	2.11(0.43-10.29) 0.355	
Undergraduate	2.19(0.49-9.72) 0.300	
Post Graduate		
Isolation centre		
Ga East Municipal Hospital	1	1
Ghana Infectious Disease Centre	2.73(1.30-5.74) 0.008	5.59(1.77-17.71) 0.003*
Greater Accra Regional Hospital	0.90(0.40-2.03) 0.789	1.12(0.32-3.940 0.852
Category	1	1
Clinician	0.38(0.11-1.31) 0.126	0.30(0.03-3.070 0.310

Non-clinician		
Rank		
Junior	1	
Senior	1.5(0.76-2.96) 0.241	
Work experience		
< 5	1	
5-10	1.10(0.53-2.27) 0.787	
> 10	0.94(0.44-2.03) 0.889	
Risk exposure		
Very Low	1	
Moderate	0.37(0.07-2.10) 0.265	
High	0.32(0.06-1.62) 0.171	
Salary increment		
No	1	
Yes	0.84(0.35-1.98) 0.687	
Financial incentive		
No	1	1
Yes	2.01(0.89-4.57) 0.094	1.69(0.64-4.5) 0.288
Training		
No	1	1
Yes	3.40(1.47-7.89) 0.004	3.18(1.20-8.45) 0.020*
Logistics incentive		
No	1	
Yes	1.69(0.74-3.91) 0.214	
Safety incentives		
No	1	
Yes	0.72(0.31-1.68) 0.452	
Counselling incentive		
No	1	1
Yes	5.73(0.69-47.79) 0.106	4.18(0.43-40.39) 0.126
Insurance incentive		
No	1	
Yes	0.63(0.04-10.42) 0.749	

***Statistically significant at p-value < 0.05**

4.8 Qualitative findings

4.8.1 Description of Themes, Categories, and Subcategories for Adolescents

In this study, there was a total of 47 new codes. These codes emerged under three (3) themes and seven (7) sub-themes. The themes were incentive appropriateness, type of incentive and perceived incentive impact. Under the type of incentive, compensation, health insurance, logistics, and hot meal/food emerged as sub-themes. Under perceived incentive impact/effect, satisfaction, motivation, and inadequate effect emerged as sub-themes.

In this current study, the incentive appropriateness theme was defined as the perception of health workers on the suitability of available incentives during the pandemic. Further, the type of incentive was defined as the various incentive packages provided during the COIVD19 pandemic. On the other hand, perceived incentive impact was defined as healthcare workers perceived effect of incentives during the COVID-19 on their work at isolation centres.

Table 4.6. Description of themes, sub-themes and examples

Theme	Sub-theme	Example
Type of incentive	Compensation	*I know of the 50% increment in their salary* *I knew of the GHS 150 a day for those who were working on COVID*
	Health insurance	*I know of the 50%* *I know about that one and then the insurance package too I heard about that one too* *hmmm, I think the life, the health insurance. I think that was what we were supposed to have received and the what do we call it, there was a transportation allowance and erm yeah, yeah* *oooh I learnt when you are on the field of work and you are being infected there is an insurance package for you I think that what I know. That was all that I heard*
	Logistics	*The PPE, yes that we were given, erm I think that is basically it. Yes, the PPEs.*
	Meal/food emerged	*I know of food, that's all I know …* *… food too was given as motivation, they serve us breakfast, lunch and then supper, that is all the few I can remember.* *the incentive I can say I was able to feel was the fact that food was be given to us.*
Incentive appropriateness		*oooh it wasn't adequate and then how they even appear* *I think it was fair, was fair, it wasn't encouraging though, but at least it was fair. ok so talking about the incentive, I think eerm fine it was intended to motivate us to work, but I think in some way things were not done in the right way so though there were good things, they thought about it go as initial plan, they could have done better, yes.* *Ok so I think it was protective enough, it gives us form of protection* *I think it was a good idea it was a very good motivation because it was a very though period and we were all putting our lives at risk so it was a good initiative …*
Perceived incentive impact/effect	Level of satisfaction	

	okay so for me I personally wanted to do COVID because I though just like it was happening in the foreign countries it was going to get very worse so I was happy working during the COVID time so that at least if there's a member of my family sick or I could even help the nation as a whole so that we could stabilize the whole thing, so for me I really wanted to be part of COVID.
	the risk you know we believe in occupational, for every occupation though we have hazards, so ones you have the exposure, we were thinking, risk allowance will be given us in addition to our petty cash given, if risk allowance was given it would have been appropriate but none of such was given.
	in comparison with then risk no but I was satisfied for at least they thought about us to give us something but as to compare it to the risk that we were facing, no it wasn't
	I think I was very satisfied because had every, we had enough protective erm you know PPEs equipment to make sure we were well protected and I think I also, there was availability for like as I said a psychotherapy which you had to take advantages of …
	erm, not sufficient, not sufficient, I mean with com, due to the I mean the infectiousness nature of the the pandemic yes, I don't think is sufficient for the work that we did, yes.
	My satisfaction was not coming, my 'satis', me being satisfied was not coming based on the incentive was coming based on the fact that I see people that were sick and they were recovering.it was risk, but erm we were able to get erm people the PPIs so with that we try to like, try to as much as possible to see if you can protect yourself also with the PPI and certain precautions that were being given to us.

Motivation	*hmmm, ok, for me I will say that at least it was motivation for us it kept us moving it kept us going to attend to are patients irrespective of erm how seriously everybody was seeing COVID and then you also know that at the end of a long day's work you have some money to pick some car home even though it was late so it was good.* *like I said am sure mmm for those that received it am sure it was a good motivation for them and it sorted out a lot of things for them as well so 'compen' it was good compensation more or less 'giggling' because at the time everyone was trying to run away from the situation but for some, those of us who didn't receive, we really can't relate but we are glad were there to help.* *... it didn't entirely affect our work but I think it contributed to the way we also worked, it affected us positively I mean an incentive is a way of encouragement, so it positively affected us* *mmm, I think yeah, it was a little bit of motivation, cos at least we know that we are entitle to something so yeah it was a little bit of motivation to us.*
Inadequate effect	*... for me I think they could have done better like getting the accurate number of hours we work and all because some were like it was slash down so were not given what I think we deserved, because the work was quite hectic.* *... ok so I think it, in some way, I will say 10 to 20% motivate us to do over work but thinking about the other way round they were things that were around the sharing of the incentive that also actually made people not to work at all.* *erm, I don't think it has any effect prior to the fact that erm it wasn't like something that was pushing the work forward, it's not an incentive to push the work forward, it was just there so that at least, is a support, that since you are you can eat and then not like you enter, you go out to look for food so, this is how I see it so I don't really see is more of incentive yeah, just a support like oooh you came to work and you were given to eat from the government, that is all.*

4.8.2 Type of incentive

In this current study, four main types of incentive were identified during the COVID-19 pandemic, including compensation, provision of health insurance, logistics and timely hot meals. With regards to compensation, healthcare workers mentioned 50% increment in salary by the Government of Ghana. Further, others mentioned daily allowance of about 150 cedis was provided. Also, insurance and logistic incentives with free medical treatment and provision of PPEs were provided respectively. Some of the healthcare workers also mentioned that food incentives were provided by respective healthcare facilities. Typically, they said;

> ***I know of the 50% increment in their salary …***
>
> ***I knew of the GHS 150 a day for those who were working on COVID***
>
> ***… food too was given as motivation, they serve us breakfast, lunch and then supper, that is all the few I can remember.***

4.8.3 Incentive appropriateness

Most of the healthcare workers perceive COVID-19 incentives inappropriate. This inappropriateness was geared towards method of incentive distribution and insufficiency/inadequateness of available incentives. However, few thought although it was not adequate, it was appropriate/fair since it motivated them. Typically, some of the healthcare workers said;

… to me it wasn't appropriate, because we were promised so many stuffs, ermm I was thinking probably our health was a stake so they could have given for our security as well and then they could have given an incentive for security and then our health is as well at stake

Well, some people had all the months they worked for, others too had just a month or two, so it wasn't adequate …

Further, one healthcare worker perceived incentives (PPEs) to be appropriate since it offers protection and reduce risks. To her, this type of incentive was appropriate and should be recommended. Typically, she said

Ok so I think it was protective enough, it gives us form of protection I think it was a good idea it was a very good motivation because it was a very though period and we were all putting our lives at risk so it was a good initiative …

4.9 Perceived incentive impact

4.9.1 Satisfaction

In this study, level of incentive satisfaction was not encouraging. Most of the healthcare workers who perceived these incentives to be inappropriate were not satisfied with them. Their satisfaction was caused by unavailability of incentives and for the fact that, their risk was not equally matched with provided incentives. However, few, who mentioned logistics such as PPEs were satisfied. This is because, the act protected them from infection and protected their health. They illustrated;

I think I was very satisfied because, we had enough protective erm you know PPEs equipment to make sure we were well protected …

was not satisfied at all, that why initially I said it was inadequate, you know working in an ICU you are really exposed or let's say high dependency, you are really exposed so it didn't match what was supposed to have come to us as an incentive, not at all. I Just saw it as just doing my work because I didn't get the incentive, it was not forth coming but I had to work to save lives so it was not something that I was looking at because it was not coming and I had to work …

4.9.2 Motivation

This study found motivation as a major effect of incentive on providing healthcare services on patients. Although some healthcare were neither satisfied with provided incentives nor see them appropriate, it was a major source of motivation to them. These incentives compelled them to continue working despite the risk involved. Some of them illustrated;

hmmm, ok, for me I will say that at least it was motivation for us it kept us moving it kept us going to attend to are patients irrespective of erm how seriously everybody was seeing COVID and then you also know that at the end of a long day's work you have some money to pick some car home even though it was late so it was good …

like I said am sure mmm for those that received it am sure it was a good motivation for them and it sorted out a lot of things for them as well so

'compen' it was good compensation more or less 'giggling' because at the time everyone was trying to run away from the situation but for some,

those of us who didn't receive, we really can't relate but we are glad were there to help …

4.9.3 Inadequate effect

Despite these incentives provided motivation, some health workers perceive no effect on motivating them. To them, they were only motivated because, they want to contribute to the fight against COVID-19 and at the same do their civil responsibility

… like I said earlier on, it was just for two months, so to me it was just like doing, it didn't really add anything, any value to, let say my working as a nurse, it didn't add any value or made any change, I was just doing my work, because it didn't come as it was supposed to be, so it was just, I don't think it really had any impact or effect on what I was doing …

… we did our work regardless, because most of the things we were already providing it for ourselves irrespective of being giving to us or not because you eat, yeah …

CHAPTER FIVE

DISCUSSION

5.1 Assessment of incentives received by health workers.

The results of this study provide important insights into the incentives and support provided to frontline health workers during the COVID-19 pandemic in Ghana. Despite the risks and challenges faced by these essential workers, the data indicates that many felt the incentives they received were inadequate. Only 60.6% of respondents reported benefiting from government incentives, with training being the most common form of support. Financial incentives were limited, with just 31% receiving a salary increase. Very few received additional assistance like insurance or counseling. This aligns with research in other low- and middle-income countries, where health workers reported insufficient financial and psychosocial support during the pandemic (McMahon et al., 2022; Hodorogea et al., 2022). Critically, among those receiving incentives, nearly half rated them as poor. This finding echo results from Nigeria, where frontline workers expressed dissatisfaction with hazard pay and insurance provisions from the government (Oleribe et al., 2021). The perceived inadequacy of incentives likely contributes to the 48.5% of respondents in this study who reported unwillingness to report to work during an infectious disease outbreak.

To better support health workers during public health emergencies, the WHO recommends financial incentives, paid sick leave, mental health resources, flexible work arrangements, and responsive management (World Health Organization, 2020). Evidence from past outbreaks suggests such investments improve retention, performance, and psychosocial wellbeing of health workers on the frontlines (Ranney et al., 2020; Maunder et al., 2006). As Ghana continues to

combat COVID-19 and prepare for future outbreaks, enhancing incentive structures will be critical to maintaining a motivated, protected, and effective health workforce.

5.2 Incentives and job satisfaction

In evaluating incentives and job satisfaction of respondents, most of the health workers who received an increase in their salaries indicated it as poor. In a qualitative meta-analysis, the researchers reported this to be the complaint of several healthcare workers across the globe. According to their findings, healthcare workers received considerably low amounts of financial incentives, and others were refused pay when they came down with the disease (Billings et al., 2021).

Majority of the health workers who received some form of financial incentive other than salary increment indicated it as good. Consistent with this finding, healthcare workers in Japan were reported to have stayed motivated throughout all the four waves of COVID-19 the country experienced (Morishita et al., 2022).

Respondents who received training as health workers to combat COVID-19 were satisfied with the training they received, with majority indicating they received the required training.

Because of the nature of the pandemic, healthcare workers who were selected as frontline workers had to be trained personnel (Morishita et al., 2022). Consequently, health worker satisfaction identified in this study due to training can be attributed to the fact that training enhances preparedness for combating the pandemic (Afulani et al., 2021, Ali et al., 2020). Although majority of the respondents indicated that the COVID-19 management was not supportive of them, they reported receiving adequate guidance from their supervisors. Konlan et al. (2022) agrees to the impact of adequate guidance from supervisors in preventing burnout and stress among healthcare workers.

Majority of the frontline health workers involved in this study reported that the incentives assured them and provided were inadequate, although they were satisfied with the working environment. In a Japanese study that evaluated the motivating factors for frontline healthcare workers during the pandemic, financial and other incentives played a major role (Morishita et al., 2022). Participants were reported to have been highly motivated, an indication of adequate incentives, as opposed to the findings of this study. The diversities in findings can be attributed to the difference socioeconomic statuses of the two geographic locations.

Respondents indicated several reasons for their decision to be frontline health workers during COVID-19, including, but not limited to the promise of employment and incentives, and most notably, the passion for the health profession. Generally, healthcare professionals are dedicated to their job to provide support and assistance to the health status and well-being of individuals in ill health (Konlan et al., 2022), consistent with the finding of passion identified in this study.

In describing their experiences as frontline health workers, respondents indicated being psychologically stressed, experiencing burnouts, feeling anxious and disappointed, with some indicating the experience as being fulfilling. Burnouts, sleep deprivation, and being emotionally labile were some experiences shared by some healthcare workers in Accra, Ghana (Konlan et al., 2022).

Respondents indicated to have worked about 12 hours per day during the period in facilities where isolation centers were somewhat equipped to cater for patients who came down with COVID-19. Similarly, in a Norwegian study, nurses were noted to have had their schedules changed due to the pandemic, from working longer than 8 hours per shift, having fewer days off work, more night shifts, and having few days in between work shifts (Djupedal et al.,

2022).

5.3 Frontline health workers' perception of incentive packages appropriateness

Healthcare professionals (HCWs), who were on the forefront of the COVID-19 pandemic, treated COVID-19 patients for more than a year while dealing with a variety of stressors. Incentives may be a crucial external motivating factor for healthcare workers managing the pandemic. This current study explored the various incentive packages appropriate for frontline health workers in Accra. In this study, four thematic incentive packages emerged, thus compensation, provision of health insurance, logistics and timely hot meals. These packages align with the announcement made by the government of Ghana on 5th April 2020, to provide waiver on income taxes on health workers salary. Along with providing PPEs, training on infection prevention and control, and a life insurance policy with a maximum payout of GHS350,000 (roughly US$60 345 per front-line health worker) against COVID-19 infection and death, the government also promised to pay front-line health workers an additional 50% base salary bonus (Asamani et al. 2021).

Compensation during the pandemic resonates globally in developed and developing countries. For example, in some developing countries, health professionals received monetary compensation for income loss through programs created especially for the healthcare industry or through general self-employment schemes. They were further provided with additional COVID-19-related expenses, such as personal protective equipment (PPE) and reimbursements and majority of financing for compensation comes from health budgets, with emergency funds coming from government revenue (Waitzberg et al. 2020). The UK further provided an adaptable framework to compensate healthcare workers; compensation and hazard paid commensurate the injury sustained and risk and burden assumed, respectively. The framework ensures injuries, risks, and responsibilities are equal to those experienced by members of the military, as such healthcare provides received the same amount of compensation and hazard pay (McConnell & Wilkinson

2021). However, in some developing countries like Nigeria, there was constant advocacy for psychosocial support and adequate provision of material and financial support (Okediran et al. 2020). Despite acknowledgement of these major compensations in this study, most of the healthcare workers in this study perceive COVID-19 incentives inappropriate mainly due to method of distribution and insufficiency. However, few thought although it was not adequate, it was appropriate since it motivated them. This was similar in other studies where it was identified that for HCWs to remain motivated during the second and fourth waves of the COVID-19 pandemic, external motivational elements like money and other incentives were crucial (Morishita et al. 2022). In another study, it was reported that, healthcare workers believed they were not paid enough for their work and financial reward is the primary factor in motivating work during the pandemic (Gavric et al., 2019).

5.4 Satisfaction with work

According to the findings of this study, majority of the frontline health workers were satisfied with their work during the pandemic. Similarly, a cross-sectional study conducted in China provided evidence that frontline health workers experienced relatively decent satisfaction (Yu et al., 2020). On the contrary, a study conducted among a different section of healthcare workers in Ghana reported high levels of dissatisfaction (Afulani et al., 2021).

5.5 Factors associated with job satisfaction

A significant association between receiving training and incentives and job satisfaction. Specifically, the results identified that frontline health workers at a particular isolation center and those who had received training were more likely to be satisfied with their job. Similarly, a logistic regression model identified that age, isolation center and receiving treatment are significantly

associated with job satisfaction of frontline health workers. Specifically, older participants, those who received training, and those who worked at a particular isolation center were more likely to experience job satisfaction. In agreement with these findings, Afulani et al. (2021) advocated for the inclusion of trainings, and the provision of increased and timely pay, as well as incentives as a means of increasing the job satisfaction of frontline health workers. Further, similar to the findings of this study, job satisfaction among healthcare workers was found to be associated with the age of healthcare workers (Diakos et al., 2022).

5.6 Effect of incentive packages on health workers' motivation to work in COVID-19 Isolation Centres

Performances of sustainable health workers during the COVID-19 epidemic were crucial for hospital services. Hospital administration globally maintained the physical and mental fitness of the medical staff so that they could retain their spirits and performances while tending to a large number of patients through myriad strategies. In this study, three major themes emerged as perceived impact of incentive packages on motivation to work; thus, levels of job satisfaction, increased motivation levels to work and perceived inadequate effect of incentive packages. Typically, healthcare providers illustrated that, although incentive packages were not sufficient, it was a major source of motivation to them. This was similar to a study conducted in Serbia, where it was observed that, incentives have the strongest effect on the motivation of health workers and the sustainability of the healthcare system (Ćulafić et al. 2021) In a global review, adverse working conditions such as poor standards of compensations affected healthcare worker turnover due to low levels of job satisfaction (Poon et al. 2022). The final theme identified that, generally, level of incentive satisfaction was not encouraging and most of the healthcare workers who perceived these

incentives to be inappropriate were not satisfied with them. Their unsatisfaction was caused by unavailability of incentives and for the fact that, their risk was not equally matched with provided incentives.

5.7 Study Limitation

This study has some limitations that should be considered when interpreting the results. Recall bias was possible among some participants when reporting on past incentives received and job satisfaction. Additionally, some frontline health workers who served during the peak of the COVID-19 pandemic were unavailable for participation since they had returned to their home facilities. Their perspectives may have provided additional insights. Finally, the sensitive nature of inquiring about compensation and job satisfaction may have led some participants to be reluctant to share full details. Also, the study did not interview policy actors or health managers (national or regional level) to confirm some of the findings frontline health workers mentioned. However, steps were taken to maximize the validity and reliability of the findings. The survey instrument was piloted and refined to use clear, non-leading language to minimize recall bias. Participant anonymity and confidentiality were maintained to encourage open responses about sensitive topics. The mixed-methods design allowed for data triangulation between the qualitative and quantitative findings. The isolation centers were purposively sampled for diversity across different geographic districts. Finally, a high response rate was achieved, suggesting the sample was representative of frontline workers who served at the selected isolation centers. While the limitations may have introduced some biases, the thoughtful study design and execution aimed to obtain a comprehensive understanding of health worker incentives and job satisfaction amidst the COVID-19 response in Ghana. The mixed-methods approach enriched the data and allowed for

cross-validation of the results. Overall, the findings provide valuable insights to inform policies on health workforce support and retention during public health emergencies.

CHAPTER SIX

CONCLUSION AND RECOMMENDATION

6.1 Summary of key findings from the study

This chapter presents the main conclusion for the study titled 'assessment of incentive packages for frontline health workers in selected COVID-19 Isolation Centres in Greater Accra, Ghana' and outlines key findings and recommendation to inform policy and practice for future pandemic and research.

The present mixed- methods study yielded important insights into the provision and impact of incentive packages for frontline health workers during the COVID-19 response in Ghana. Quantitative results revealed that training, financial incentives, logistics support and PPE provision were the most prevalent incentives, aligning with government policy directives.

However, a sizeable portion of the sample (39.4%) reported receiving no incentives, pointing to deficiencies in distribution of the and coverage. Among those incentivized, dissatisfaction prevailed with nearly half rating the incentives as poor

Dissatisfaction stemmed largely from the perceived unfairness and insufficiency of the incentives relative to occupational risk. Indeed, exposure risk emerged as a significant predictor of dissatisfaction in regression analyses. Qualitative accounts further illuminated these sentiments, reiterating the need for equitable, proportional compensation during outbreaks. Nevertheless, incentive did appear to bolster motivation, congruent with theories linking reward valuation to work performance. But for many intrinsically motivated and duty-driven health workers, the

incentives had negligible impact on their work ethic, reflecting the complex interplay of internal and external motivators.

Beyond incentives, predictive modeling identified older age and facility type as significant factors associated with health worker satisfaction. Older workers' greater satisfaction may be attributable to their accumulated experience and self-efficacy in managing disease outbreak.

The site variations point to localized differences in workplace dynamics and available resources. Ultimately, the low satisfaction coupled with unwillingness to report for work reflects the need for improved incentive structures to uphold the health workforce during health crises.

6.2 Conclusion

Notwithstanding the Government of Ghana's efforts, COVID-19 incentive package for frontline health workers were limited in availability and impact. While offering some motivation, the incentives were predominantly rated as dissatisfying and inadequate for the risks and challenges endured. Moving forward, Ghana must learn from these experiences to develop more responsive, empowering incentive systems to satisfy and retain the health workforce during infectious disease outbreaks. As the COVID-19 response transitions to an endemic phase, the gaps revealed by this study can instruct policies to strengthen pandemic preparedness and response.

6.3 Recommendations

6.3.1 For Policy

The Ministry of Health should develop a national policy and protocol detailing the differentiated incentives and support to be provided to health workers in infectious disease outbreaks, complementing the Integrated Human Resource Policy Framework.

This policy should include provision for risk-based compensation, paid leave, insurance coverage, and psychosocial support. Additionally, human resource information systems must be strengthened to identify and rapidly deploy health workers according to need during health emergencies.

6.3.2 For Practice

At the health facility level, practical recommendations include providing training, mentorship and safety resources to frontline workers as inexpensive forms of support.

Management should be attuned to health worker perceptions, ensuring transparency, equity and timeliness in allocating financial and non-financial incentives to improve satisfaction.

6.3.3 For Further Research

Additional research is needed to inform optimal health worker incentive frameworks for disease outbreaks. Perspectives of health administrators and policymakers should be explored regarding feasible and effective incentives from a health systems standpoint.

Intervention studies could delineate the most impactful packages and delivery mechanisms to improve motivation, satisfaction and retention. Finally, researchers should examine the effects of an improved system of incentives on the quality of care delivered and patient outcomes during public health crises.

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APPENDIX A: PARTICIPANT INFORMED CONSENT FORM

Title of study: Assessment of Incentive Packages for Frontline Health Workers in Selected COVID-19 Isolation Centres in Greater Accra, Ghana.

Introduction

Dear respondent, my name is Adikie Akpene Puplampu, a student of the School of Public Health, University of Ghana, Legon. I am with the department of Health Policy, Planning and Management.

Background and purpose of research

The research seeks to assess incentive packages for frontline health workers in selected COVID-19 Isolation Centres in Greater Accra, Ghana. This study seeks to identify the discrepancies in dispensation of incentives packages to frontline health workers on job satisfaction, towards the gap in knowledge by assessing the experiences of frontline health workers with COVID-19 incentives in the Greater Accra region.

Nature of research

This study seeks to assess the experiences of frontline health workers job satisfaction resulting from incentive packages provided. This will help the researcher understand the provision of incentive package and job satisfaction. In this, ethical clearance will be sought from Ghana Health Service Ethics Review Committee. This study will provide findings that would help policy makers and management of health institutions to address the influence of incentives on the provision of quality healthcare among health workers. The study will involve one hundred and fifty-nine participants from the selected COVID-19 Isolation Centre.

Participants' involvement

Duration/what is involved: This study will be using a mixed (qualitative and a quantitative) methods approach to collect data from the patients on their individual (socio-demographic characteristics) factors and the COVID-19 incentive packages that determine their job satisfaction with health care services. The questionnaire administration will last for not more than 15minutes per participant. The period for the entire research will last for five months starting from October, 2022.

Benefits of the Study

You will have no direct benefit from participating in the study. You will not receive payment for participating. However, the results of this study will be an added value for all stakeholders to revise their strategies on incentive packages to enhance job satisfaction at the Isolation Centres in particular and health sector in general.

Risk of the Study

There are no direct risks associated with this study except that, participants may share some personal or confidential information or they may feel uncomfortable talking about some of the issues outlined.

Cost

The principal investigator (PI) will bear the cost of transporting research assistants to the study site as well as the cost of printing the questionnaire.

Confidentiality

All information provided in this study will be secured in a file cabinet and saved on a personal computer. The results will also be available on the University of Ghana's online repository. Other

researchers may find and use the data. However, participant's name or any other identifying information will be removed from the data to conform to confidentiality.

Compensation

There will be no compensation packages for respondents or participants, except the benefits to be derived as stated above.

Voluntary participation/Withdrawal

Participation in this study is voluntary and participants may withdraw at any time without any penalty. Participants can decide not to participate or to respond to any individual question or all the questions. Participants will be reliably informed, or their legal representatives would be informed in a timely manner on any available information provided when need be for their continuation or withdrawal. Participant's participation may be terminated if they feel too uncomfortable talking about the subject, become tired, or find the study too intrusive.

Outcome and Feedback

The findings from the study will be shared with management of the health facilities.

Feedback to Participant

Participants who wants the findings from the study will provide their email address and the findings will be sent to them.

Funding information

The principal investigator is the primary funder for this study.

Sharing of participant Information/Data

The data generated will be owned by the PI. However, the organization and participants who will be interested in the data can request for it.

APPENDIX B: CONSENT FORM PARTICIPANTS

Participant's Statement

I have read or have had someone read all the above, asked questions, received answers regarding participation in this study, and I am willing to give my consent to participate in this study. I will not have waived any of my rights by signing this consent form (i.e. withdraw from the research) even after I have signed. I have voluntarily agreed to be a participant.

Name of participant……. Signature ……. Or Thumb print ……

Date …….

Interpreters Statement

I interpreted the purpose and content of the Participants' Information Sheet to the afore named participant to the best of my ability to his/her proper understanding. All questions, appropriate clarification sort by the participants and answers were also duly interpreted to his/her satisfaction.

Name of Interpreter …….

Signature of Interpreter ……. or Thumb Print …….

Date…….

Statement of Witness

I certify that the nature and purpose, the potential benefits, and possible risks associated with participating in this research have been explained to the above individual. I confirm that he/she was given the opportunity to ask questions/seek clarification and same were duly answered to his/her satisfaction before voluntarily agreeing to be part of the research.

Name ……

Signature …… or Thumb Print …….

Date ……....

Investigators Statement and Signature

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

Researcher's name…….

Signature ……

Date …….

Interviewer's signature ……..

Date…… Address……

Contact for Additional Information

If you have any additional questions or complaints, please contact:

Adikie Akpene Puplampu

Department of Health Policy, Planning and Management

School of Public Health, College of Health Sciences, University of Ghana

P. O. Box LG 13 Legon –

Accra.

Mobile Number: 0246539164

Email Address:|| adkpopes@gmail.com

In case of any concern on ethical issues, you can contact the Ethics Administrator (Nana Abena Apata), Ghana Health Service on 0503539896.|| ethics.research@ghs.gov.gh

APPENDIX C: QUESTIONNAIRE FOR ASSESSMENT OF INCENTIVE PACKAGES FOR FRONTLINE HEALTH WORKERS IN SELECTED COVID-19 ISOLATION CENTRES GREATER ACCRA, GHANA

Introduction

I am a student of the School of Public Health, College of Health Sciences, University of Ghana, Legon, conducting a study to assess incentive packages for frontline health workers in selected COVID-19 Isolation Centres in Greater Accra, Ghana. I will be grateful if you could spend a little of your time to complete or help answer the questions in this questionnaire. There are no right or wrong answers. Any information provided is private and confidential. This study is only for academic purposes. Your participation in this study is entirely voluntary. You are free to withdraw from the study whenever you feel pleased – it will not affect your access to health care in this facility. However, I would be glad if you contribute to the success of the study. Thank you.

Section A: Socio-demographic characteristics

Date of interview……

Code: ☐

1.What is your Age (in completed years)?

☐

2. What is your Sex?
(a) Male
(b) Female
(c) others

3. What is your educational level?
(a) Primary/ Basic
(b) Middle School/JHS
(c) Secondary/SHS
(d) Diploma
(e) Tertiary
(f) Post Graduate
(g) Others

4.Which religion are you affiliated to?

(a) Islam
(b) Christianity
(c) No religion/ Free thinker
(d) Traditional
(e) Others
5. Name of Isolation Centre?
(a) Ga East Municipal Hospital
(b) Ghana Infectious Disease Centre (c) Greater Accra Regional Hospital 6. Unit of the Isolation Facility?
(a) Pharmacy
(b) Ward
(c) Emergency
(d) Reception
(e) Laboratory
(f) Others
7. What category do you belong to?
(a) Clinician
(b) Non clinician
(c) N/A
8. What is your profession?
(a) Doctor
(b) Professional Nurse
(c) Auxiliary Nurse
(d) Pharmacists
(e) Records
(f) Lab Personnel
(g) Accountants
(h) Catering staff
(i) Physician Assistant
(j) Others
9. What is your working experience in years?

9b. What is your Rank?
(a) Junior
(b) Senior
10. Rate your level of risk or exposure to COVID-19?
(a) Very low
(b) Somehow
(c) Very high

Section B: Assessment of incentives

11. Choose which incentives were provided by Government whether or not you received or receive some (Tick as many that apply)
(a) Salary increase

(b)Financial incentives
(c) Training
(d) Logistic provision
(e) Provision of safety logistics
(f) Counselling support
(g) Insurance packages
(h). I know of other incentives not stated above
12.Do you receive any incentive?
(a) Yes
(b) No
13. Choose any of these incentives you receive (tick as many as apply)
(a) Salary increment
(b) Financial incentives
(c) Training
(d) Logistic provision
(e) Provision of safety logistics
(f) Counselling support
(g) Insurance packages
(h) I receive more others than stated here
14. State any other incentives that you received but not stated in the list above

15. How would describe the package received?
(a) Good
(b) Bad/poor
(c) Don't know

Section C: Rate the level of satisfaction for each incentive received

16. Salary increment
Very poor Poor Good Very good N/A
17.Financial incentives
Very poor Poor Good Very good N/A
18. Training
Very poor Poor Good Very good N/A
19. Provision of consumables
Very poor Poor Good Very good N/A
20. Provision of safety logistics (PPE, Gloves, etc)
Very poor Poor Good Very good N/A
21. Counselling support
Very poor Poor Good Very good N/A
22.Insurance Packages
Very poor Poor Good Very good N/A

Section D: Job Satisfaction

23. The COVID-19 Management is supportive of me

Strongly disagree Disagree Agree Strongly agree
24.I receive the right amount of guidance from my supervisor
Strongly disagree Disagree Agree Strongly agree
25. I am provided with required training for this job
Strongly disagree Disagree Agree Strongly agree
26. I am provided with clear job line description
Strongly disagree Disagree Agree Strongly agree
27. I am provided with consumables needed to work with
Strongly disagree Disagree Agree Strongly agree
28.Incentives assured to me are provided adequately
Strongly disagree Disagree Agree Strongly agree
29. working environment are conducive
Strongly disagree Disagree Agree Strongly agree
30. I am provided with safety items needed for the job. Strongly disagree Disagree Agree Strongly agree 31. Why did you opt to be a frontline healthcare worker?
(a)The promise of employment
(b) Passion for the health profession (volunteered/ offered)
(c) Nominated by hospital authorities
(d) Promised incentives
(e) Others, please specify
32. How will you describe your experience as a frontline health worker?
(a) Fulfilling
(b) Disappointing
(c) Psychologically stressed
(d)Work burnouts
(e) Anxiety
(f) Please specify
33. what was the state of the isolation centres for managing COVID-19
(a) Fully equipped
(b) Somewhat equipped
(c) Not equipped
34.How many hours were you spending at work per day?

SECTION E: Perceived Effect of Incentive Packages 35. I am satisfied with my old job than this current job?

(a)Yes
(b)No
36.The incentives I have received so far?
(a) Has positive effect on me to continue the job
(b)Has negative effect on me to discontinue the job
(c)Has negative effect on me to discontinue but I won't due to my passion

(d)Has no positive nor negative impact on me
(e)N/A
37.The incentive I receive is
(a) Better than my old job
(b) Poor than my old job
(c) Is somewhat ok
(d) N/A
38. I would recommend others to join since incentives promised are given
(a)Yes
(b)No
39. Did the promised incentives motivate you to work in your facility?
(a)Yes
(b)No

APPENDIX D: SEMI-STRUCTURED INTERVIEW GUIDE FOR ASSESSMENT OF INCENTIVE PACKAGES FOR FRONTLINE HEALTH WORKERS IN SELECTED COVID-19 ISOLATION CENTRES IN GREATER ACCRA, GHANA

Introduction

I am a student of the School of Public Health, College of Health Sciences, University of Ghana, Legon, conducting a study to assess incentive packages for frontline health workers in selected COVID-19 Isolation Centres in Greater Accra, Ghana. I will be grateful if you could spend a little of your time to complete or help answer the questions in this questionnaire. There are no right or wrong answers. Any information provided is private and confidential. This study is only for academic purposes. Your participation in this study is entirely voluntary. You are free to withdraw from the study whenever you feel pleased – it will not affect your access to health care in this facility. However, I would be glad if you contribute to the success of the study. Thank you.

SECTION A: BACKGROUND CHARACTERISTICS

1. Age
   (a) 21-30
   (b) 31-40
   (c) 41-50
   (d) 50 above

ii. Marital status
(a) Married
(b) Single
(c) Cohabiting
(d) Widow/widower (e) Separate/Divorce iii. Religion? (a) Islam
(b) Christianity
(c) No religion/ freethinker
(d) Traditional
(e) Others iv. Name of isolation Centre?

   (a) Ga East Municipal Hospital
   (b) Ghana Infectious Disease Centre

(c) Greater Accra Regional Hospital

v. Which unit do you work in at the facility?

vi. Educational level

(a) Certificate

(b) Diploma

(c) Degree

(d) Masters

(e) Specialist vii. Working experience

SECTION B: APPROPRIATENESS OF INCENTIVES AND JOB SATISFACTION.

1. What incentives do you know are to be given to frontline workers working at COVID19 isolation centers?
2. Have you ever received any incentives?
3. Can you tell us from time to time the incentives that you have received before?
4. What do you think about the incentive that you receive currently?
5. What are the effects of the incentive packages given to you/ the other frontline workers?
6. Explain how satisfied you are working as a frontline worker in light of the incentives given to you and the risk you are exposed to.
7. Kindly recommend what should be given in the future

APPENDIX E: ETHICAL APPROVAL LETTER FROM GHANA HEALTH SERVICE

GHANA HEALTH SERVICE ETHICS REVIEW COMMITTEE

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

Research & Development Division
Ghana Health Service
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My Ref. GHS/RDD/ERC/Admin/App 123/085
Your Ref. No.

6th February, 2023

Adikie Akpene Puplampu
School of Public Health
College of Health Sciences
University of Ghana
Legon –Accra.

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

GHS-ERC Number	**GHS-ERC: 021/12/22**
Study Title	Assessment of Incentive Packages for Frontline Health Workers in Selected COVID-19 Isolation Centres in Greater Accra, Ghana
Approval Date	6th February, 2023
Expiry Date	5th February, 2024
GHS-ERC Decision	**Approved**

This approval requires the following from the Principal Investigator

- Submission of a yearly progress report of the study to the Ethics Review Committee (ERC)
- Renewal of ethical approval if the study lasts for more than 12 months.
- Reporting of all serious adverse events related to this study to the ERC within three days verbally and seven days in writing.
- Submission of a final report after completion of the study
- Informing ERC if study cannot be implemented or is discontinued and reasons why
- Informing the ERC and your sponsor (where applicable) before any publication of the research findings

You are kindly advised to adhere to the national guidelines or protocols on the prevention of COVID -19

Please note that any modification of the study without ERC approval of the amendment is invalid.

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

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

SIGNED.....
Dr. Naa-Korkor Allotey
(Ag. Head, Ethics & Research Management Department)

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