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EFFECTS OF JOB CHARACTERISTICS, WORK CONTEXT AND JOB ATTITUDES ON WORK MOTIVATION: A STUDY AMONG LEVEL SIX HOSPITALS IN NAIROBI WITHIN THE CONTEXT OF COVID-19 RESPONSE

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MBA/122819/2019

A Dissertation Submitted in Partial Fulfilment of the Requirements for the Degree of Master of Business Administration at Strathmore University

JUNE 2021

DECLARATION

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

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APPROVAL

This thesis of Agnes Karume has been reviewed and approved for examination by:

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Date: 19/03/2021

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ABSTRACT

Motivation has been widely studied but aspects of job characteristics and job attitudes and how they relate to workforce motivation continue to generate interest more so regarding how they play out in different work contexts. Consequently, with the dynamic and currently challenging nature of health service provision, occasioned by varying emergencies and epidemics such as the recent COVID-19 pandemic, how job characteristics and job attitudes interact and how they influence motivation will be of interest to health care managers, strategists and policy makers. The study sought to determine the effect of job characteristics, work context and job attitudes on work motivation in level six hospitals in Nairobi within the context of the COVID-19 response. In particular, we test whether and how procedural constraints as a unique characteristic of the employee's work context affects work motivation through their influence on the antecedents of work motivation. We also assess the effect of these important antecedents – job goal difficulty, job goal specificity and self-efficacy, on work motivation. We provide stronger empirical support for a theoretical framework that can guide future research on work motivation. The study adopted a descriptive cross-sectional design. A random sampling of healthcare workers at level six hospitals- Kenyatta National Hospital and Aga Khan University Hospital was done with a total of six hundred and nine (609) health care workers taking part (96%,94% response rates). Data was collected using online questionnaires (Google form) and consequently inferential statistics were used to establish the relationship between the objectives under study with an adherence of 0.05 significance levels. Job goal difficulty and job goal specificity was found to have a significant positive relationship on work motivation. Self-efficacy was also seen to mediate the effect of job goal difficulty on motivation. However, procedural constraints had a significant negative relationship on work motivation through the negative effect on self-efficacy. It moderated the effects of job goal difficulty and self-efficacy. Additionally, the study found statistically significant higher job specificity scores in AKUH compared to KNH. However though hypothesized to be contextually different given their private –public nature, the difference in work context's effect on motivation was not statistically significant at 95% significant level. There were higher procedural constraints experienced by respondents who were in direct patient care instead of those in managerial/supervisory roles and a significant positive relationship found between years of experience and self-efficacy. As such, the study has important implications for human resource in health. The study concludes that though there are challenges faced in the health sector, the balance between the work context, job characteristics, and job attitudes, maintaining high efficacy levels will ensure that the workers remain motivated. Finally, effective strategies that focus on training and capacity building on specific skills to build on experience, provision of the necessary equipment required for the tasks and practice of autonomy that reduces bureaucracies and 'red tape' for faster decision making and care processes, will need to be put in place to motivate employees even beyond the pandemic period.

Keywords: Work motivation, Job difficulty, self-efficacy, Job goal specificity, Job characteristics

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1. CHAPTER ONE

INTRODUCTION

1.1.Background to the study

Motivation is the ability to stay interested, engaged and continually energized to achieve a goal. In work settings, it refers to the direction, intensity, and persistence of work-related behaviours desired by the organization. Such drive to do something is occasioned by either intrinsic or extrinsic factors (Deci & Ryan, 2010). Intrinsic motivation refers to inherent interest while extrinsic has more to do with the outcome (Bellemare et al., 2016). Job motivation and job satisfaction are closely linked concepts and impact on each other though they do not necessarily mean the same thing (Cerasoli et al., 2014).Satisfaction is the feeling that appears from the job's perception to enable material and psychological needs and has been shown to impact on employees' motivation and productivity (Aziri, 2011).

Research and practice interest in job satisfaction and motivation is because they have been shown to have a direct impact on business strategy execution and implementation (Ruiz-Palomino et al., 2013). Manzoor (2011) asserts that a highly-motivated workforce is more likely to follow through with task execution and hence better performance. According to Buchanan and Huczynski (2007), a motivated workforce has high levels of satisfaction and performance which leads to achievement, recognition, responsibility, advancement and growth. A motivated and productive workforce will encourage recruitment and retention (Daneshkohan et al., 2015). Work motivation is assessed through how individuals are involved in their work (direction) and how hard they work (intensity). However, the extent to which employees are motivated is largely influenced by various factors key among them job characteristics, the work context and job attitudes.

Although motivation has been widely studied, aspects of job characteristics and job attitudes and how they relate to workforce motivation continue to generate interest more so regarding how they play out in different work contexts (Wright, 2004). Part of the reasons for the continued interest in the study of motivation could be due to the different lenses that could be applied to the understanding of motivation and the absence of an overarching theory of motivation. Attrition of health workers with resignation being one of the main reasons is still high (Chankova et al 2009; Roka et al., 2017: Kenya National Bureau of Statistics- KNBS 2020). Resignation or rather exit of

employees from organizations has been theoretically and empirically linked to job motivation (Dobre, 2013). Consequently, with the dynamic and currently challenging nature of health service provision, occasioned by varying emergencies and epidemics such as COVID-19 pandemic, the interaction between job characteristics and job attitudes and how they influence motivation are going to be of interest to health care managers, strategists and policy makers (Gilbert et al., 2020).

1.1.1 Job Characteristics, Work context, Job Attitudes

Job characteristics encompasses the specific aspects of a job such as knowledge, skills, mental and physical demands that enable the objectives of the work to be met. Two key factors that may influence the extent to which employees are motivated to meet demands of their jobs are job goal difficulty and job goal specificity (Fang et al., 2004; Nalla et al., 2015).

Work-context refers to the experiences and environment within which individuals work and can be described by different concepts. It may lead to differences in employees' motivation, job satisfaction and performance and may explain the variation in motivation in the different sectors. According to (Manolopoulos, 2008) an important aspect of the work context is procedural constraints that may make it difficult to pursue goals and achieve performance measures (Wright, 2004).

Job attitudes is the evaluations of one's job in terms of ones' feelings toward, beliefs about and attachment to ones' job (Khan et al., 2016). Self- Efficacy which is the extent to which the employees feel confident in handling/carrying out their tasks is one of the key aspects of job attitudes. It is ones' belief in their capacity to achieve the set goals (Bandura, 1977). How confident one feels in carrying out tasks may be influenced by the context within which one works and the nature of the job characteristic in terms of how difficult or specific the goal is. This in turn has an influence on motivation (Wright, 2004).

1.1.2 Level Six Hospital

According to the Kenya Essential Package of Health Services (KEPHS) and the Kenya Health Sector Strategic and Investment Plan (KHSSP) a level six hospital refers to a tertiary/ national hospital whose core mandate is offering specialized curative services. As such it is equipped both structurally and human resource-wise to receive referrals from lower level facilities as outlined by the Kenya Quality Assurance Model for Health and the Kenya Medical and Dentist Council. They

not only provide specialized care to a large number of patients and support to lower level facilities but also provide standards of treatment and spearhead training and research (World Health Organization).

1.2. Problem Statement

Part of the reasons for the continued interest in the study of motivation could be due to the different lenses that could be applied to the understanding of motivation and the absence of an overarching theory of motivation (Van Loon 2017, Nalla 2015). According to Chankova et al (2009) attrition of health workers with resignation being one of the main reasons is still high. This finding is mirrored by Roka et al., (2017) and Kenya National Bureau of Statistics- KNBS (2020). Resignation or rather exit of employees from organizations has been theoretically and empirically linked to job motivation (Dobre, 2013). Health systems in most sub-Saharan countries are fragile and new and re-emerging disease outbreaks such as the current COVID-19 pandemic pose a challenge to the economy and healthcare structures (Velavan 2020, Gilbert 2020). In particular, we test whether and how procedural constraints as a unique characteristic of the employee's work context affects work motivation through their influence on the antecedents of work motivation. We also assess the effect of these important antecedents – job goal difficulty, job goal specificity and self-efficacy, on work motivation. We provide stronger empirical support for a theoretical framework that can guide future research on work motivation. We test the model using both public and private sector workers in order to check for any differences between the sectors as is commonly hypothesized (Latham, G. P., & Pinder, C. C. (2005) Van Loon, N. M. (2017)). Second, we conduct the study within a hospital setting, where the challenges brought on by COVID-19 presented a unique opportunity in terms of modulating the level of procedural constraints that employees experience in the workplace. In brief we logically anticipate that on the back of a new and evolving situation such as COVID-19 and national and institutional responses thereto, any differences that exist in terms of pre-existing procedural constraints is likely to be magnified (Bajrami 2020, Zhang 2020, Munawar, 2020). Health care workers have been recognized to be at risk of emotional distress as a result of increased risk of exposure to the virus, concerns about infecting and caring for their loved ones , shortage of personal protective equipment (PPE), longer working hours and involvement in emotionally and ethically fraught resource- allocation decisions (Pfefferbaum, 2020; Shreffler, 2020; Martínez-López, 2020). Though at the forefront of the pandemic and hailed as today's heroes this has not prevented disgruntlement with reports of strikes and industrial action

(Cheng, 2021, Chima 2020) in the midst of the response. That said, the private sector being better resourced and less bureaucratic, implies that private sector workers may experience somewhat lower levels of procedural constraints as a result of their having access to better resources, or consequent to their job goals being made less difficult to achieve (Van Loon 2017). However there may be more similarities than disparities among healthcare professionals' motivation factors, regardless of hospital ownership as seen by Muthuri et. al, (2020).

1.2.1. Main Study Objective

The main objective of the study was to determine the effect of job characteristics, work context and job attitudes on work motivation within the context of COVID-19 response in level six hospitals in Nairobi.

1.2.2. Specific Study Objectives

i. To determine the effect of job characteristics on work motivation among level six hospitals in Nairobi

ii. To determine the effect of work context on work motivation through its effect on job characteristics and job attitudes among level six hospitals in Nairobi

iii. To determine the effect of job attitudes on work motivation among level six hospitals in Nairobi

1.3.Study Questions

The study sought to answer the following questions:

i. What is the effect of job characteristics on work motivation among level six hospitals in Nairobi?

ii. What is the effect of work context on work motivation through its effect on job characteristics and job attitudes among level six hospitals in Nairobi?

iii. To what extent do job attitudes affect work motivation among level six hospitals in Nairobi?

1.4. Scope of the Study

The study describes motivation in the health care sector and how job characteristics, work context and job attitudes influence motivation. These variables were measured using the constructs job

goal difficulty and specificity, procedural constraints and self-efficacy respectively. Locke' goal setting theory formed the theoretical basis of the study with drawings from Bandura's self- efficacy theory. The study involved the nurses, doctors, lab technologists/technicians and pharmacists/ pharm technologists working in Kenyatta National Hospital and Aga Khan University Hospital Nairobi. These are the health care professionals that have increased direct contact time with patients due to the nature of their work. The two hospitals are level six hospitals in Nairobi providing specialised care to large numbers of patients as well as serving as post-graduate training centres with established institutional research ethics review boards. The model was tested using both public and private sector workers in order to additionally check for any differences between the sectors as is commonly hypothesized.

1.5. Significance of the Study

The study intended to bring more in-depth knowledge and a better understanding on motivation in the changing face of health service provision. The findings of the study will also be beneficial to stakeholders in the healthcare sector. These include both the public and private sector health employers and managers who will put effective strategies to motivate employees even beyond the pandemic period.

The government through the ministry of health and policy makers will also be able to implement policies and fill the gaps that will enhance healthcare workers' motivation and hence high productivity and retention. Future researchers and academicians can use the study as a reference and build on it in their areas of study and research.

The study finding will also provide the additional material in the pool of knowledge in the healthcare sector for other researchers in the future.

CHAPTER TWO

LITERATURE REVIEW

Introduction

This chapter consists of the empirical and theoretical basis of the study and critically evaluates literature on job characteristics, work context and job attitudes in relation to motivation in the health sector. Locke's goal setting theory provides the theoretical background for this study with drawings from Bandura's self-efficacy theory. The chapter then presents the research gap and provides a conceptual framework that indicates the relationship between the variables.

2.1 Theoretical Review

Part of the reasons for the continued interest in the study of motivation could be due to the different lenses that could be applied to the understanding of motivation and the absence of an overarching theory of motivation (Van Loon, 2017; Nalla, 2015). In this paper, we draw on goal setting theory to assess the effect of goal clarity and goal specificity, to inform on the motivation of the health care workers. In particular, we test whether and how procedural constraints as a unique characteristic of the employee's work context affects work motivation through their influence on the antecedents of work motivation (Velavan, 2020; Gilbert, 2020). We also assess the effect of these important antecedents – job goal difficulty, job goal specificity and self-efficacy, on work motivation. We provide stronger empirical support for a theoretical framework that can guide future research on work motivation.

Lock and Latham assert that goal setting is essentially linked to task performance and that specific and challenging goals along with appropriate feedback contribute to higher and better task performance. Goals give direction regarding what needs to be done, and relatedly, give a sense of the level of effort required. According to Locke and Latham therefore, the willingness to work toward the attainment of a goal is the key factor in job motivation (Locke & Latham, 2006). For the goal-setting to be effective the goals need to be clear, specific and difficult yet reachable otherwise they will not motivate. Feedback to the employee also helps with clarification, insight and course correction thus directing employee behaviour and helping them work with greater involvement resulting in higher performance and greater job satisfaction. The environment and

work context within which the goals are executed also need to be conducive to achieve the desired effect (Hyvönen et al., 2010).

There are increasingly new insights on the relationship between the variables that influence motivation. For example, while money is a primary objective, it alone does not always motivate one to perform highly. Participation in decision making, job enrichment, behaviour modification and organizational development play a big part. Other concerns and limitations include conflict that is sometimes observed between employee and managerial/organizational goals. Goal setting theory assumes alignment between individual goals and organizational goals and vision, and the observation that in situations where the employee lacks the necessary skills and competences to perform the job, then performance will be weak and goals will not be attained. There is also limited empirical evidence that goal-setting improves job satisfaction. Despite these criticisms, Locke and Latham still argue that goal setting is straightforward and not only a better explanation for job motivation than other alternatives, but it may be the channel through which these others affect motivation (Locke & Latham, 2006).

On the other side of the argument is Bandura's self-efficacy theory that states that one's belief in their capacity to produce specific performance attainments influence behaviour including goals and the amount of energy expended towards goal achievement (Bandura, 1977). Unlike Locke's goal setting theory, he asserts that the performance goal set and the extent towards which an individual goes to achieve it is highly influenced by his or her self-efficacy levels. Perceived self-efficacy influences coping behaviour to deal with stress and challenges (Bandura, 1977; Nielsen et al., 2009). When one is driven to work through their challenges they gain positive experiences that enable them to have even more self-efficacy. Different from traditional psychological constructs self-efficacy depends on the environment and circumstances in which the behaviour occurs (Bandura, 2006). Those with high self-efficacy remain oriented to the task despite pressing situational demands and setbacks and press on to set challenging goals and performance achievement. However, if have self-doubts on their efficacy they would lower aspirations and thus less performance (Bandura, 2006).

The role of self-efficacy in association with goals and performance within specific contexts continues to be studied (Nielsen, 2009; Pfefferbaum, 2020). In some aspects, it has been seen as

mediating and it would thus provide an interesting insight on how it relates with job goal specificity, difficulty and procedural constraints to influence motivation (Li et al., 2010).

In this study, the Bandura's Self Efficacy Theory was preferred in assessing the degree to which health workers had to rapidly improve skill in order to be able to offer appropriate counsel and care to those infected and affected by COVID-19; and to assess whether and how comfortable they felt (self-efficacy) with regard to their newly and often rapidly acquired knowledge and skill, to offer such counsel and care. Perceptions of goal difficulty, goal specificity and task significance have been shown to have a strong influence on job satisfaction in a combined approach by (Nalla et al., 2015).

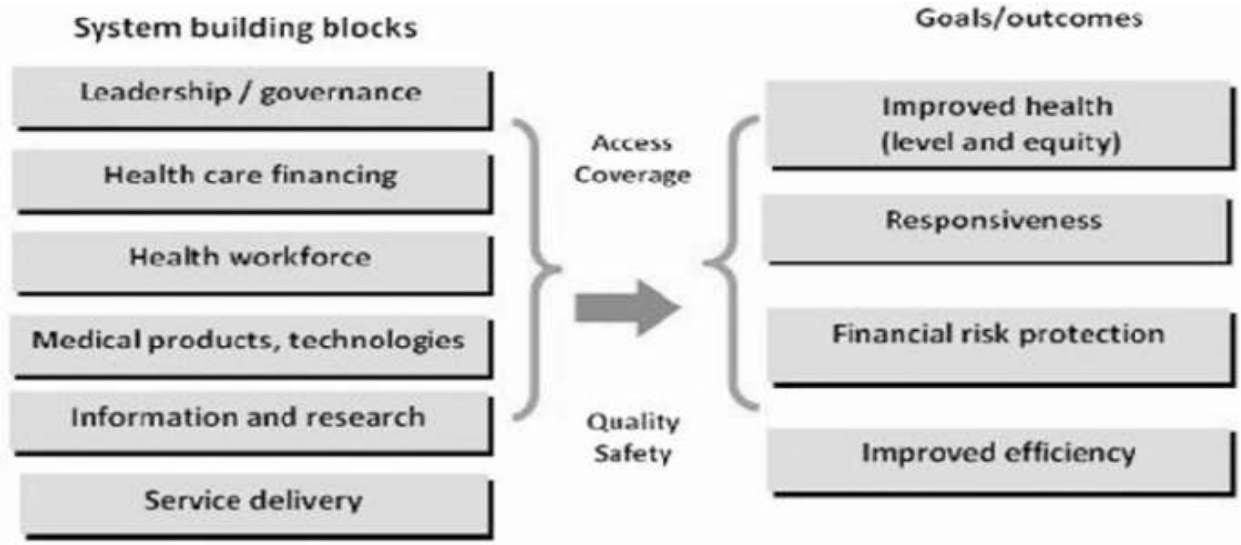
2.2 Empirical Review

Influences of work motivation depend on the work settings and may rank differently in terms of their importance to the employee. The relative importance of these influencers of motivation among health workers vary widely (Peters et al. (2010).

2.2.1 Context of the Study- Health sector

Healthcare human resources are key in healthcare provision and in the achievement of Universal Health Coverage as they determine how other available resources are used to achieve organisational goals (Daneshkohan et al., 2015). According to the World Health Organisation the mere availability of health workers is not sufficient. Theoretical coverage can only be translated to effective service coverage when the health care worker is motivated and empowered to deliver quality care (World Health Organization, 2008).

Figure 2.1: The WHO health systems framework



(WHO, 2010)

The healthcare system in Kenya has experienced significant growth over the past ten years with the Kenyan government refocusing its efforts on quality healthcare provision for its citizens. The Kenya Health Policy, 2014–2030 directs the country's efforts through the ministry of health, toward achievement of vision 2030 and Universal Health Coverage (Okech & Lelegwe, 2015). The aim is to have Kenya transformed into a newly industrializing, middle income country that provides high quality of life to all its citizens in a clean and secure environment Kenya Vision 2030. Health care is at the centre of the vision as it is key in improving quality of life considering its role in maintaining a healthy and skilled workforce that is necessary to drive the economy.

Notwithstanding the increased focus on healthcare and service provision, there still exists a gap in the ratio between the number of trained practitioners and the population that they serve. Kenya is amongst the countries that has not yet attained the 22.8 skilled health workers per 10,000 population as recommended by WHO (WHO, 2006-2013). According to Chankova et al, (2009) attrition of health workers with resignation being one of the main reasons is still high. This finding is mirrored by Roka et al., (2017) and KNBS (2020). Resignation or exit of employees from organizations has been theoretically and empirically linked to job motivation (Dobre, 2013).

The study is conducted within a hospital setting, where the challenges brought on by COVID-19 presented a unique opportunity in terms of modulating the level of procedural constraints that employees experience in the workplace. In brief the researcher logically anticipate that on the back of a new and evolving situation such as COVID-19 and national and institutional responses thereto, any differences that exist in terms of pre-existing procedural constraints is likely to be magnified (Zhang, 2020; Munawar, 2020).

Corona Virus Disease 2019 (COVID 19) is a new strain of Corona Virus that was first discovered in Wuhan China with no specific vaccines or treatment. Clinical trials are still on-going with health care workers globally and locally having to adopt and up-skill fast to not only provide answers to a demanding public but also the much-needed health services (World Health Organization, 2020). Trainings have had to be rapidly organized and health workers have been put at risk of infection through their service delivery activities and close patient contact, not to mention disruption of their lives because of the mitigation and response interventions.

In a study in China on attitude, practice and knowledge during the early response to COVID-19, those at the front- line showed more confidence in their ability to defeat the virus than non-frontline workers (Zhang et al., 2020). Also noted was that those workers with more years of experience were better able to adapt, a phenomenon attributed to particular skills and experience in handling epidemiological emergencies (Olum et al., 2020). Another study of health workers' motivation in a pandemic causing public health crisis in Japan identified that motivation to work was seen to be affected by anxiety about being infected, compensation, feelings of isolation and lack of trust on protection by the organization and government (Imai, 2020).

Kenya through the ministry of health announced the first confirmed COVID-19 case on the 12th of March 2020. Health care workers have been on the fore front of the pandemic response being hailed as todays' heroes. However this has not prevented disgruntlements with reports of strikes and industrial action due to perceptions of inadequate compensation and protection in the midst of the response also seen in other settings (Cheng, 2021, Chima 2020). Based on these findings it is therefore plausible that the interplay of job characteristics, work context and job attitudes will be key in the extent to which the health care workers will be motivated to deal with the pandemic.

2.2.2 Job Characteristics and work motivation

Job goal specificity refers to non-ambiguity of the goal and leans towards direction and attention. It is assessed by the workers clarity of their roles and tasks. Job goal difficulty on the other hand refers to achievability of the goal related to effort and arousal (Locke & Latham, 2006). The employees' perception of how difficult a goal is influences their attitude towards performance of specific tasks in their jobs having an effect on their efficacy that may influence their work motivation (Nalla et al., 2015).

This study assessed the effect of these important antecedents – job goal difficulty, job goal specificity on work motivation and provide stronger empirical support for a theoretical framework that can guide future research on work motivation.

Fang et al., (2004) in his study on the impact of job goal difficulty and goal specificity on selling behaviour among sales persons in China and the United States found that there were differing effects depending on the setting. The influence was either negative or positive depending on the aspect of working smart that was measured example adaptability. However, in this study job satisfaction was not overly emphasized. In a different study on managers' attitude to budgetary goal difficulty and clarity that was done by (Li, Nan, & Mo, 2010) in China, easily attainable goals were seen not to generate incentives for managers to pursue a higher-level performance as they failed to improve job satisfaction. According to Nalla et al. (2015), perceptions of goal difficulty, goal specificity and task significance strongly predict motivation. This study was conducted among security guards in Singapore whereby their work environment perceptions was also assessed with opportunities for better pay and promotions enhancing satisfaction. On the other hand, Coelho and Augusto (2010) in their study on job characteristics solely focus on the interaction of Hackman and Oldham job characteristics variables to enhance creativity and motivation. Whittington et al., (2004) agrees that goal setting and in essence difficult but achievable goals enhanced relationships between transformational leadership and both affective commitment and performance in a study amongst leaders.

On the flipside for the goals to be achieved they have to be perceived as attainable for them to be acceptable. Difficult goals may be appraised as either threats or challenges depending on the coping mechanisms available and if there is self-growth opportunity. When perceived as a challenge there is better adaptation to change under difficult goal conditions and better

performance (Wright, 2004). Thus, it is not in all situations that job goal difficulty will lead to motivation. Espedido and Searle, (2018), is of the same view whereby he notes that difficult goals, although categorized as a challenge stressor, can also be appraised as a hindrance and/or a threat although difficult goals have a positive impact on creative performance.

Fang (2004) stresses on goal specificity which he says is key for social capital and that achievement of a particular goal, such as satisfaction at work, requires but specifically structured networks of ties with a particular content. On a study on specificity conducted on students it was seen that providing students with nonspecific goals decreased cognitive load and, thus, enabled students to learn with less effort and that in order to foster learning students must be provided with goals that allow them to use a learning strategy (Wirth et al., 2009). Goal specificity has also been used in governance and environmental approaches where it has been positively associated with environmental outcomes through sustained efforts from collaborators. One notes however that the combined approach of goal difficulty and specificity would enhance results (Biddle & Koontz, 2014).

In the health sector a study carried out among health care professionals in Sweden, it was revealed that work motivation exists for professionals when their individual goals are aligned with the organizational goals and that clear goal direction is key for motivation (Kjellström et al.,2017). Walston and Chou (2006), also asserts that when it comes to changes within healthcare complex goals necessitate intense efforts and that the goals need to be specific in order to be accepted.

The importance of these two views is that the effect of job difficulty and specificity on motivation remains contentious, and consequently, the more studies done to assess this relationship, the greater the clarity that will be achieved. Also, of note is that many of these studies were done in Europe, China, America (Fang, 2004; Li, 2010; Coelho and Augusto, 2010) and were focussed on managers as well as frontline workers (Nalla et al., 2015; Li, 2010). These were done in a multiplicity of sectors and contexts for example (Fang, 2004) in sales, (Drach-Zahavy, 2002) in education and (Li, 2010) in banking sectors, but not in the health sector. Additionally, the majority addressed job goal difficulty as a singular concept rather than an integration of other important variables that may affect motivation such as the context within which the goals are applied. Moreover few, if any (none in our review) of these studies focused on the health sector in Africa, which culturally and contextually may be different (Naidu, 2009).

We thus assess the effect of these important antecedents – job goal difficulty, job goal specificity on work motivation and provide stronger empirical support for a theoretical framework that can guide future research on work motivation.

2.2.3 Work Context and work motivation

A key aspect of work context is procedural constraints which refers to the extent to which employees feel constrained by organizational rules and practices. It is work environment conditions such as red tape that may make it difficult to pursue goals and achieve performance measures (Wright, 2004; Manolopoulos, 2008).

Health systems in most sub-Saharan countries are fragile and new and re-emerging disease outbreaks such as the current COVID-19 pandemic pose a challenge to the economy and healthcare structures (Velavan 2020; Gilbert 2020). We conduct the study within a hospital setting, where the challenges brought on by COVID-19 presented a unique opportunity in terms of modulating the level of procedural constraints that employees experience in the workplace. In brief we logically anticipate that on the back of a new and evolving situation such as COVID-19 and national and institutional responses thereto, any differences that exist in terms of pre-existing procedural constraints is likely to be magnified (Zhang 2020; Munawar, 2020). Health care workers have been recognized to be at risk of emotional distress as a result of increased risk of exposure to the virus, concerns about infecting and caring for their loved ones , shortage of personal protective equipment (PPE), longer working hours and involvement in emotionally and ethically fraught resource- allocation decisions (Pfefferbaum, 2020; Shreffler, 2020). Though at the forefront of the pandemic and hailed as today's heroes this has not prevented disgruntlement with reports of strikes and industrial action (Cheng, 2021; Chima 2020) in the midst of the response. That said, the private sector being better resourced and less bureaucratic, implies that private sector workers may experience somewhat lower levels of procedural constraints as a result of their having access to better resources, or consequent to their job goals being made less difficult to achieve. However there may be more similarities than disparities among healthcare professionals' motivation factors, regardless of hospital ownership as seen by others (Muthuri, 2020).

Manolopoulos (2008); Pierce and Gardner (2004), in their studies on motivation in the public sector note that work-context characteristics may lead to differences in employees' motivation, job satisfaction and performance. This view is supported by Wright (2004) who in his study on job

satisfaction also in the public sector agree that the work context may explain the variation in employee motivation and suggest that it may be the root of sector differences. The capacity to use available resources and inputs to achieve desired outcomes influences motivation and performance. He expounds that procedural constraints can result in job goals seeming more difficult to achieve by limiting the strategies, actions or resources that may be available to the employee. In a study on motivation and work context carried out among soldiers a profession considered as equally involving, it was identified that autonomous work motivation is significantly related to the contextual factors, organizational and leader member exchange (Chambel et al., 2015).

Munawar (2021); Van Loon (2017) note that there are many layers of influences upon health worker motivation amongst them determinants that operate at organizational level or rather what forms their work context. These include organizational culture, reporting structures, human resource management, channels of accountability, types of interactions with clients and communities. Most of the other researchers have alluded to lack of training, inadequate resources, supervision and management challenges as well as financial and economic reasons as posing procedural constraints that negatively affect motivation (Adzei & Atinga, 2012; Willis-Shattuck et al., 2008; Afolabi, 2018). According to Henderson and Tulloch (2008), financial incentives are key for motivation although economic reasons alone cannot motivate.

However, others disagree with these views and are of the opinion that experiencing difficult working environments is not the cause of demotivation more so for professionals. Rather this is as a result of intrinsic job satisfaction as asserted by Darkwa et al. (2015), in a study of health professionals' motivation carried out in a remote locality. Wright (2004), continues to argue that on the other hand the constraints may enhance motivation by getting the employee to expend more effort to avoid dissatisfaction caused by poor performance.

We thus test whether and how procedural constraints as a unique characteristic of the employee's work context affects work motivation through their influence on the antecedents of work motivation- job characteristics and job attitudes in the background of the pandemic response.

2.2.4 Job Attitudes and work motivation

Job attitudes is the evaluations of one's job in terms of ones' feelings toward, beliefs about and attachment to ones' job (Khan et al., 2016). Self- Efficacy which is the extent to which the

employees feel confident in handling/carrying out their tasks is one of the key aspects of job attitudes. It is ones' belief in their capacity to achieve the set goals (Bandura, 1977). How confident one feels in carrying out tasks may be influenced by the context within which one works and the nature of the job characteristic in terms of how difficult or specific the goal is. This in turn has an influence on motivation (Wright, 2004; Pierce & Gardner 2004)).

Some researchers in their studies have shown self-efficacy having direct effects on satisfaction and motivation. Skaalvik and Skaalvik (2010) in his study of self-efficacy relations with burnout, job satisfaction and motivation to quit where the subjects were principles. Williams et al. (2015) argues that self-efficacy influences employees' choice of learning and the goals they set for themselves. It also affects their level of effort and persistence when learning difficult tasks. However, Wang et al. (2015) argue that high self-efficacy doesn't necessarily mean high motivation and vice versa. In their study that involved supervisors and direct reports they point out that when one has self-efficacy they are motivated to continue towards goal achievement. On the flipside when one is motivated to succeed they are more likely to reach goal achievement and hence self-efficacy. Students' confidence in their writing capabilities influence their writing motivation as well as various writing outcomes in school (Lauermann & König, 2016). However still in the education sector, Vancouver et al. (2006) gives a different view on self-efficacy negatively relating to motivation and performance whereby training contexts may evoke planning processes that do not necessarily promote self-efficacy and motivation. Wright (2004) in his public sector relates self-efficacy with the work context and goal attainment. He asserts that a person's ability to handle constraints in this case self-efficacy will determine performance and goal attainment which will positively influence motivation.

In healthcare, self-efficacy has mainly been studied amongst patients showing results in better self-care and improving patient outcomes (Darkwa et al., 2015). Regarding the health workforce, health care workers (and in these studies, focus on nurses) with low self-efficacy have been shown to have increased burnout and higher turnover intention (Afolabi et al., 2018). This view is supported by Fida et al. (2018) whose study is also among nurses and defends that self-efficacy contributes to motivation by protection from negative or unhealthy workplace behaviour, burnout and turnover intentions. However self-efficacy is still seen as playing a mediating role in enabling leadership in that those nurses with high self-efficacy are more likely to take on extra leadership roles (Salanova

et al. 2011). Soudagar et al. (2015), brings a twist to the self-efficacy narrations by expounding in a study on self-efficacy among nurses in Iran that it is dependent on skills and experience in that those more skilled and with more experiences show more self-efficacy.

The different perspectives on the role of self-efficacy forms its consideration in this study. Moreover, these studies have been carried out in developed nations for example (Fedirici, 2011; Fida, 2018) and amongst different sectors like the public sector (Wright 2004) education (Fedirici, 2011) and management (Vancouver, 2006). The few studies in the health sector are cadre specific and cannot be generalized (Soudagar 2015; Fida 2018).Thus, the role of self-efficacy in motivation is still being investigated. More so there is yet to be a clear understanding of how it fits within the context of a new and evolving healthcare challenge such as presented by the COVID-19 pandemic.

2.3 Research Gap

Despite literature being rich on motivation and its importance for enhancing retention and reducing turnover in the health sector there is little on the effects of key variables on motivation. The different roles and the interplay of job characteristics (more specifically job goal difficulty, job goal specificity), work context (procedural constraints) and job attitudes (self- efficacy) are yet to be fully explored especially in the health care sector. Furthermore (Wright, 2004) allude to sector differences and how the variables may differ in their influence depending on the setting. Job characteristics, work context and job attitudes have also not been studied from the context of a new and evolving disease of which not much is known. The recent COVID-19 pandemic provides us with such an opportunity.

A summary of the literature and gaps identified is as follows:

Table 2.1: Literature review research gaps table

Author and study title	**Aim**	**Methodology**	**Findings**	**Knowledge Gap**
Nalla, Lim, Demirkol (2015).The relationship between goal difficulty, goal	To examine the relationship between Singapore security	Descriptive study using quantitative methods	Perceptions of goal difficulty, goal specificity and task significance are strong predictors	The study was on Singapore Security guards and cannot be generalized as the context is different

specificity, rewards and job satisfaction.	guards' perceptions of their work environment and the extent to which these factors determine their job satisfaction.		of the guards' job satisfaction. In addition, the results indicated that officers' perceived opportunities for better pay and benefits as well as promotions were positively related to their job satisfaction.	
Li, Nan, & Mo, 2010 Effects of budgetary goal characteristics on managerial attitudes and performance	To determine effects of budgetary goal characteristic, managerial attitudes and performance in two dimensions of goal clarity and goal difficulty.	Descriptive study quantitative in nature	Budget goal difficulty and budget goal clarity have significant effects on job-related and budget-related attitudes. Budget goal difficulty is found to have a positive effect on managerial performance	Here the focus was on budgetary goal clarity and goal difficulty on managerial attitudes and performance. It was done in China and only job difficulty is addressed and there are no relations to self-efficacy and work context.
Fang, Palmatier, Evans (2004). Goal-setting paradoxes Trade-offs between working hard and working smart	To propose a model of the impact of goal difficulty and goal specificity on selling behaviors and hence sales and behavior performance.	Mixed methodology including observational and cause and effect relationship	The results show that goal difficulty and goal specificity both have opposite effects on the two dimensions of working smart: adaptive selling and sales planning.	This study was conducted among salespersons in United States and China the setting of which may be different culturally and contextually It focused on the impact that goal difficulty and goal specificity had on selling behavior. There are no direct correlations with motivation and the

				relationship with job attitudes.
Mbindyo et al, (2009). Contextual influences on health worker motivation in district hospitals in Kenya And Adzei, & Atinga, (2012). Motivation and retention of health workers in Ghana's district hospitals.	To explore contextual influences on worker motivation And a systematic review to consolidate existing empirical evidence on the impact of financial and non-financial incentives on motivation and retention of health workers	Qualitative methods including individual in-depth interviews, small-group interviews and focus group discussions And Quantitative design	Effective management at hospital level may create an enabling working environment modifying the impact of resource shortfalls. Financial incentives significantly influence motivation and intention to remain in the district hospital. Leadership skill and supervision, opportunities for continuing professional development and availability of infrastructure and resources were predictors of motivation and retention.	These studies are on the work context in terms of training and how resourced (material and equipment) the health facilities are. How these play out in a new and evolving disease is not brought out together with the roles of self-efficacy, goal difficulty and specificity in these contexts
Willis-Shattuck, et al (2008). Motivation and retention of health workers in developing countries	To consolidate existing evidence on the impact of financial and non-financial incentives on	Literature review	Financial rewards, career development, continuing education, hospital infrastructure, resource availability, hospital	These studies too are on the work context in terms of training and how resourced (material and equipment) the health facilities are. How these play out in a new and evolving disease is not brought out together with the

	motivation and retention.		management and recognition/appreciation were seen to enhance motivation and retention. There was less clear evidence on the differential response of different cadres.	roles of self-efficacy, goal difficulty and specificity in these contexts. In this study the main focus was also on motivation and retention only
Wright, & E., B. (2004). The role of work context in work motivation: A public sector application of goal and social cognitive theories.	To test a conceptual model predicting how the organization's work context might influence work motivation	Quantitative analysis	The theoretical framework can identify specific leverage points that can increase work motivation and, therefore, productivity in the public sector.	This study focused on the public sector and alluded to the need of future research advancing the understanding of work context within organizations and how sector differences may influence employee motivation and productivity.
Soudagar et al, (2015). Factors associated with nurses' self-efficacy in clinical setting in Iran	To investigate self-efficacy and the factors predicting nurses' self-efficacy in clinical setting.	Cross-sectional quantitative study	Nurses with diploma degrees gained higher self-efficacy scores compared to those with bachelor's degrees. Overall, self-efficacy was predicted by the years of experience in the field of	Study focused purely on self-efficacy and was among nurses in Iran thus findings cannot be generalized as they may be different contextually

			nursing and the interest	
Federici, et al (2012). Principal self-efficacy: Relations with burnout, job satisfaction and motivation to quit	To explore relations between principals' self-efficacy, burnout, job satisfaction and principals' motivation to quit	Descriptive study using quantitative methods	Principal self-efficacy was positively related to job satisfaction and motivation to quit and negatively related to burnout.	The study was limited to self-efficacy relation to burnout, satisfaction and motivation to quit and conducted in the education sector and thus may be different contextually.

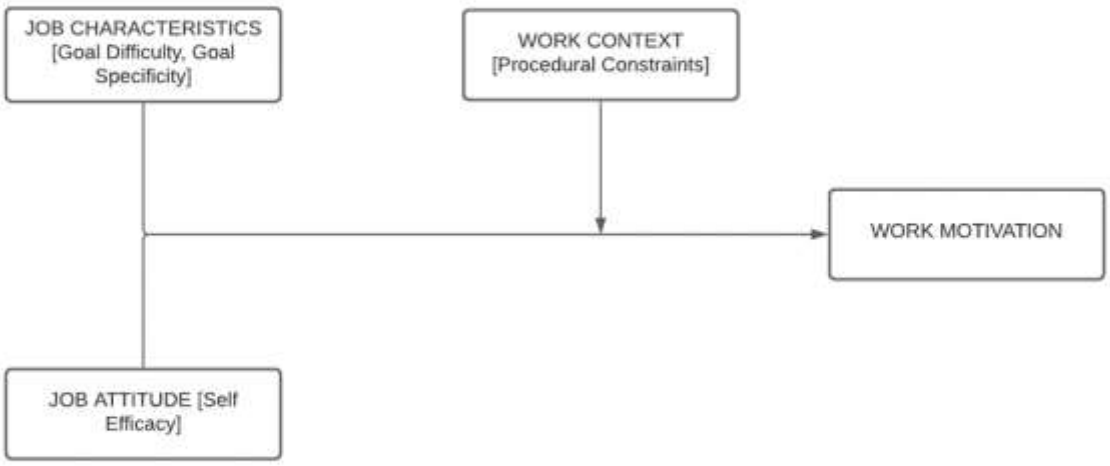
Source: Author (2020)

2.4 Conceptual Framework

The conceptual framework shows the relationship between the variables. Procedural constraints as a unique characteristic of employees work context is hypothesized to affect motivation through their influence on the antecedents of work motivation- job characteristics and job attitudes. The dependent variable is thus Work Motivation while the independent variables are Job Characteristics and Job Attitudes moderated by Work Context measured under the constructs job goal difficulty and specificity, self-efficacy and procedural constraints respectively.

Figure 2.2: Conceptual Framework

Independent Variables Moderating variable Dependent variable



Source: Author (2020)

2.5 Chapter Summary

Locke's goal setting theory provides the theoretical background for the study. The willingness to work toward the attainment of a goal is the key factor in job motivation. For the goal-setting to be effective the goals need to be clear, specific and difficult yet reachable otherwise they will not motivate. However, one's belief in their capacity to produce specific performance attainments influence behaviour including goals and the amount of energy expended towards goal achievement. The effect of goal clarity and goal specificity, and the effect of the presence/absence of appropriate feedback mechanisms, inform on the motivation of the health care workers in the context of COVID-19 response.

The different roles and the interplay of job characteristics, work context and job attitudes are yet to be fully explored especially in the health care sector. The study asses the degree to which health workers had to rapidly up skill in order to be able to offer appropriate counsel and care to those infected and affected by COVID-19; and to assess whether and how comfortable they felt (self-efficacy) with regard to their newly and often rapidly acquired knowledge and skill. It proposes the direct effects of job characteristics and job attitudes on work motivation the nature of which is moderated by specific work context.

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CHAPTER THREE

METHODOLOGY

Introduction

This chapter presents the research methodology which includes the research design, the data collection instrument, process and data analysis approaches. It highlights the location of the study, the population and sampling method used. It also discusses aspects of the research quality and ethical considerations.

3.1 Research Design

The study purposed to give a snapshot view describing motivation in the health care setting in the background of the pandemic response. It therefore adopted a cross- sectional study design and is descriptive in nature. This design was appropriate in this study considering that the study seeks to identify descriptive aspects involving work motivation, work context, job attitude and job characteristics. The researcher engaged the respondents at one-point time to identify essential descriptive relating to the research problem.

3.2 Study Site

The model was tested using both public and private sector workers in order to additionally check for any differences between the sectors as is commonly hypothesized. Two hospitals were purposefully selected, these were the Kenyatta National Hospital (KNH) and the Aga Khan University Hospital Nairobi (AKUH). Kenyatta National Hospital is the largest public referral hospital designated to be one of the main isolation centres due to its capacity by the Ministry of Health. It is located in Nairobi Upper Hill area. Aga Khan University Hospital Nairobi is one of the leading private hospitals in Nairobi and that also receives referred patients. It is located in Parklands area of Nairobi. The two hospitals are level six hospitals in Nairobi providing specialised care to large numbers of patients as well as serving as post-graduate training centres with established institutional research ethics review boards.

3.3 Target population

The population of interest for this study was health care professionals: the doctors, nurses, pharmacists/ pharm technologists and laboratory technologists/technicians working in level six

hospitals in Nairobi. This is the population that is at the front line of providing clinical care. They are directly involved in the implementation of policies, directives, guidelines on patient care both from the national government and their institutions. Their roles also put them at higher risk of getting infected with the virus as they interact closely with the patients. These form part of their work context and in lieu of the job characteristics and job attitudes may have an effect on their work motivation.

3.4 Sampling technique and Sample size calculation

Stratified random sampling was used to obtain responses from health care staff: doctors, pharmacists, lab technicians/technologists and pharmacists/pharm technologists. The sample size was calculated per each facility. This method was used considering that the study was conducted in two independent institutions and sought information from doctors, nurses, pharmacists and lab technologists.

Yamane (1967) formula to determine the sample size was used:

$$n = \frac{N}{(1 + N(e)^2)}$$

Where,

n= sample size

N= target population

e= margin of error (95% confidence interval)

Sample size calculation for Kenyatta National Hospital

Thus, for KNH where the total population is 2,700

The sample size was calculated as follows

2700/ (1+ 2700 (0.05^2))

n = 348

Thus, the disaggregated sample size for Kenyatta National Hospital was:

Table 3.1: Disaggregated sample size for Kenyatta National Hospital (Source: Human Resource and Departmental Records)

	Kenyatta National Hospital	**Sample calculation**	**Sample**	**Actual sample collected**	**Response rate %**
Doctors	885	885/ 2700*348	114	111	97%
Nurses	1,502	1,502/2700 *348	193	185	96%
Pharmacists/ pharm technologists	123	123/2700 *348	16	15	94%
Lab Technologists/ lab technicians	190	190/2700*348	25	23	92%
Total	**2700**		**348**	**334**	**96%**

Thus, based on the sample size, the total response rate at Kenyatta National Hospital was 96%.

The sample size calculation for Aga Khan University Hospital

The total population was 1,200

Thus, using the Taro Yamane's sample size formulae,

The sample size was calculated as follows

1200/ (1+ 1200 (0.05^2))

n = 300

Disaggregated sample size for Aga Khan University Hospital was:

Table 3.2: Disaggregated sample size for Aga Khan University Hospital (Source: Human Resource)

	Aga Khan Hospital Nairobi	**Sample per cadre calculation**	**Sample size**	**Actual sample collected**	**Response rate %**
Doctors	390	390/1200* 300	97	86	89%
Nurses	630	630/1200*300	158	154	97%
Pharmacists/ pharm technologists	95	95/1200 *300	24	19	79%
Lab Technologists/ lab technicians	84	84/1200 *300	21	16	76%
Total	**1200**	**300**	**300**	**275**	**92%**

Thus, based on the sample size, the total response rate at Aga Khan University Hospital was 92%.

This study was a cross sectional study where the researcher interacted with a respondent at only one point in time. The sample size used was based on this cross-sectional approach. It used Taro Yamane's formula and is a representative of the total population (Healthcare professionals). It is from the sample size that the researcher is able to make inferences and draw conclusions for the whole population (Israel, 2009). In addition, with 5 to 7 likert items and a confidence interval of 95% and coefficient of variation of 0.5, the sample size was within acceptable ranges (Park, 2009). Following approvals the researcher was able to access information on total cadre populations from the respective hospitals.

3.5 Data Collection Tool

Data was collected using online Google forms that ensured there were no double entries as one could not re-use the link. It saves serially thus unique coding to each form. Research assistants did follow up and reminders ensuring filling and submission of the forms online. This enabled data collection from a large population and since they were respondent-only based minimised bias and increased rate of response.

Work motivation defined as the direction, intensity and persistence of work-related behaviours desired by the organization (Mitchelle, 1997) was measured using Patchen's motivation scale (Payne & Patchen, 1973).This instrument was developed and validated by Patchen and his colleagues in 1973 and provides a general measure of work motivation. It comprises of four items measuring how individuals are involved in their work (direction) and how hard they work (intensity) on five-point response scales.

Job goal specificity and job goal difficulty key aspects of job characteristics was measured using a four item and five item measure respectively based on Locke and Latham (1990) and Lee et al. (1991) ideas on Goal Setting Questionnaire and Steers (1976) instrument. Self-efficacy used to assess job attitudes was measured using a four-item measure of work-related expectancies borrowed from (Sims et al., 1976). These goal-content and goal-related attitudes were measured indirectly in this study by assessing the specificity, difficulty, or even efficacy related to an employee's job in general rather than to any specific goal.

Procedural constraints that constitute work context were measured using five items largely adapted from Buchanan and Huczynski (2007) Structure Salience Scale which assessed the extent to which employees feel constrained by organizational rules and practices.

The research tools used have been validated and no issues of psychological distress have been reported in regards to the same. In addition, the participants were made aware of their right to withdraw from the study at any point with no repercussions as well as be free to skip any questions that they may not feel comfortable with. The study is also non-interventional and only questionnaires were used.

Interval data was measured using a modified five-point Likert scale of agreement coded 1-5 (strongly disagree, disagree, neither agree nor disagree, agree, and strongly agree). A five-point

scale coded 1-5 was also used for frequency of occurrence (almost never/never, rarely, sometimes, often and almost always/ always).

3.6 Data Collection Procedure

Once the research had been cleared by the respective Ethics and Research Committees and research permit received, the list of names, contact and email addresses of the participants were obtained from human resource and respective administrative offices of the hospital departments and units. The participants were then categorized into the different cadres of interest and randomly chosen using random numbers until the required sample size was achieved. The chosen participants were then contacted via email, phone or work station and the study explained to them including the consent form and confidentiality. Willing participants who meet inclusion criteria were then enrolled into the study. The link for the questionnaire (https://forms.gle/WonFsjmN6CB7iNQr7) was provided and questions accessed once participants clicked the accept button. The single-use link to the online Google form ensured no double entry, and moreover, each completed form was saved serially. Two research assistants in each of the hospitals assisted in follow up, clarifications and acted as a link to the primary investigator following up correspondences. This is for example for respondents who requested for reminders or to be contacted at specific times or any clarifications on the information and consents. They ensured filling of the forms and submissions on-line. The respondents were made aware of their right to decline participation or withdraw at any point with no repercussions as stipulated in the consent form. The responses were only accessible to the primary investigator using a unique code. Participants were not individually identified as no names were required and individual entries had been number coded.

3.7 Inclusion Criteria

Participants included were health care professionals in one of the four categories- doctors, nurses, pharmacists or pharm techs, lab technologists or technicians working in either of the two hospitals – KNH and AKUH Nairobi.

3.8 Validity and Reliability

Validity indicates the questionnaire is testing what it should or rather the extent to which the scores from a measure represent the variable they are intended to while reliability is the consistency of a set of measurement items (Kurian, 2014).

The three types of consistencies were put into consideration. Overtime or test-retest reliability that measures consistency of a construct over time was done by checking the tool against theoretical and empirical literature reviews on motivation. The tool was seen to be reliable as the measures of motivation, job characteristics, work context and job attitudes had been based on already theoretically validated tools. Cronbach's alpha which measures the consistency of people's responses across items was used to measure internal consistency reliability of the tool and will be calculated to ensure it is within acceptable ranges of 0.7 or higher. The measure was found to be at 0.701. Inter-rater reliability that refers to consistency across different researchers Kurian (2014) was ensured by having the proposal reviewed by the institutional ethical review committees from three institutions namely Strathmore University, AKUH and KNH. The National Commission for Science, Technology and Innovation. NACOSTI licensing) for clearance and by the supervisor who ensured that it is suitable and the tool answers the research questions. Face validity and content validity was used to check the extent to which different observers are consistent in their judgments. These were adhered to by reviewing the research tool to see that the questions are in line with the objectives and ensuring that the constructs of interest had been captured therein.

Table 3.3: Reliability statistics

	Cronbach alpha
Job characteristics	0.7
Work context	0.6
Job attitude	0.8
Work motivation	0.6
Overall alpha	0.7

3.9 Data Analysis and Presentation

Data was analysed using descriptive and inferential statistics to establish the relationship between the objectives under study. Statistical Package for Social Science (SPSS) version 25 was used. A significance level of 0.05 was also adhered to.

The descriptive analysis was based on the type of data collected. Categorical data was analyzed using frequencies (n) and percentages (%) while continuous data was analyzed using Mean (SD) and Median (IQR). The inferential analysis performed included Spearman correlation and multinomial logistic regression. A spearman rank correlation analysis was conducted to determine the relationship between job characteristics, work context, job attitude and work motivation. In assessing the effects of the variables on work motivation, a linear regression analysis using enter method was performed.

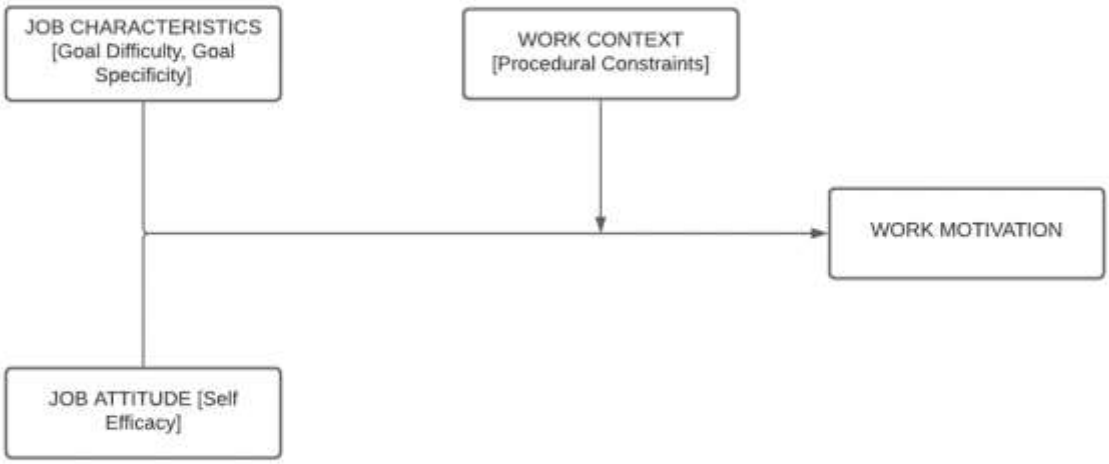

Fig 3.1: Hypothesized relationship model

Work motivation, Job attitude, work context and job characteristics were measured on a Likert scale. However, the Likert scales that have been used in this study are continuous measure scales that do provide interval responses hence it is possible to apply descriptive analysis as well use parametric analysis techniques. The modified five point Likert scale of agreement was coded 1-5 and had continuous data (Intervals). These are equidistant from each other and represent the number of responses under each scale point. Scores were added together to the get the total scores which were used to do the mean, SD, the correlations and multiple regression analysis (Sullivan, 2013; Hemsworth, 2018).

3.10 Ethical Considerations

This study was carried out in line with expected ethical standards. All sources of information used were acknowledged. The respondents were informed of their right to respond to questionnaires or withdraw from the research at any point with no consequences. This was done prior to administering questionnaires. Confidentiality was ensured and no information was used to identify individuals. The purpose of the study was clearly stated. The researcher sought and received the approval of the ethics research committee both at Strathmore Business School and at the respective institutions where the study was be carried out (KNH and AKUH). In addition, the National Commission for Science, Technology & Innovation (NACOSTI) permit for research was sought and received prior to data collection.

3.11 Dissemination of Result/Findings

The research will be available at the institutions' research office as part of studies repository and will be accessible to interested parties in line with stipulated guidelines. Scientific conferences, seminars, webinars held within and without the institutions will also provide avenues for result dissemination and this will be done following the stipulated guidelines and protocols.

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CHAPTER FOUR

DATA ANALYSIS RESULTS AND RESEARCH FINDINGS

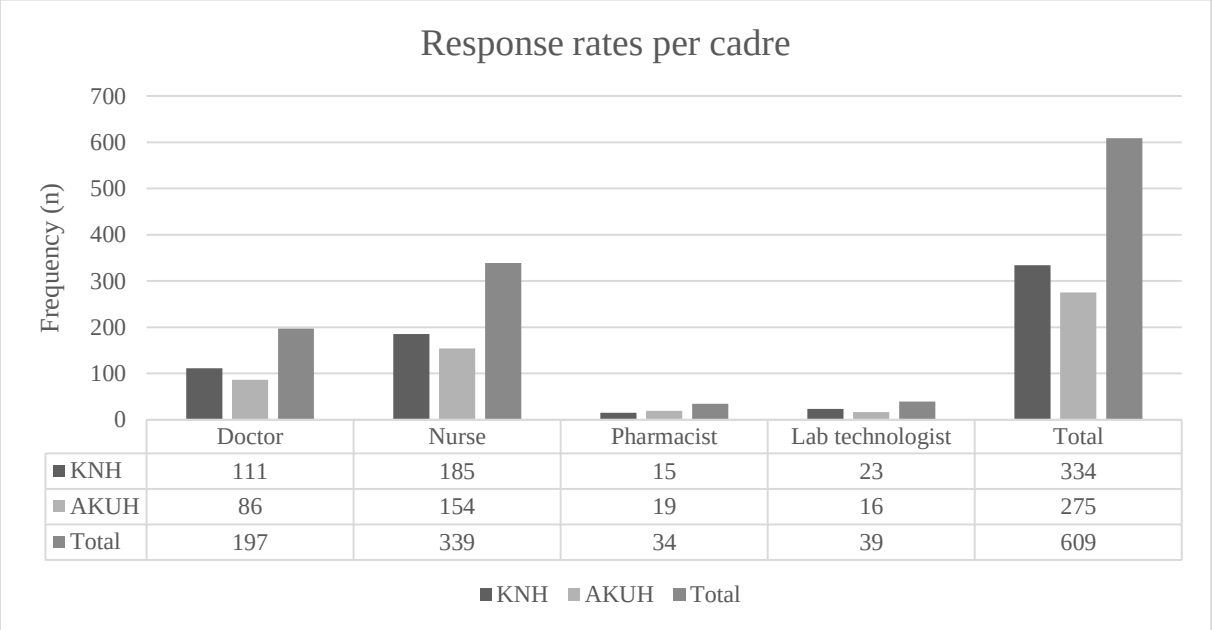
Introduction

This chapter discusses the analysis results and findings of this study, determining the effect of job characteristics, work context and job attitudes on work motivation in level six hospitals in Nairobi within the context of the COVID-19 response. It presents the demographics and background information of the respondents and the research findings based on the objectives of the study. Descriptive and inferential statistics have been used to establish the relationship between the objectives under study. Statistical Package for Social Science (SPSS) version 25 was used. A significance level of 0.05 was also adhered to.

4.1 Response Rate

The level six hospitals that were included in the study were Kenyatta National Hospital and Aga Khan University hospital. In Kenyatta National Hospital, from the expected sample size of 348, the data collected was 334 representing a 96% response rate. In Aga Khan University hospital, a sample size of 300 was sought from which 275 respondents participated representing a 92% response rate as presented in Figure 4.1.

Figure 4.1: Response rate



4.2 Demographic characteristics of the respondents

The findings showed that, 60% (n =367) of the respondents were nurses, 29% (n =169) were doctors. Majority of the respondents, 61% (n =370) were female. More than half, 52% (n =315) of the respondents had graduate level education. The average age was 34 (SD=7.3) years. 63% (n =386) had worked in the hospitals for a period of 5 years or less. Most of the respondents, 72% (n =440) had less than10 years of experience as illustrated in Table 4.1.

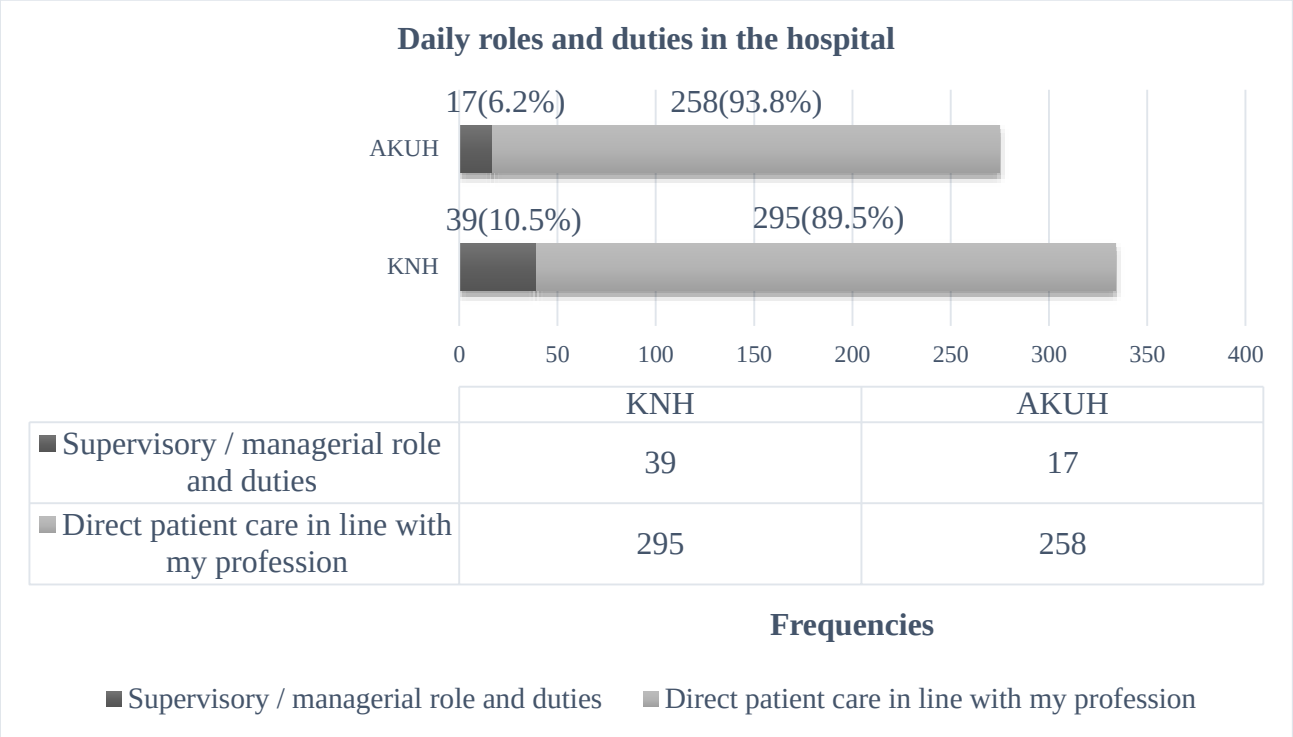
Table 4.1: Demographic characteristics

	Hospital name		
	KNH n (%)	**AKUH n (%)**	**Total n (%)**
Professional cadre			
Doctor	79(24)	90(33)	169(29)
Nurse	231(69)	136(50)	367(60)
Pharmacist	10(3)	24(9)	34(5)
Lab technologist	14(4)	25(9)	39(6)
Gender			
Female	196(59)	174(63)	370(61)
Male	138(41)	101(37)	239(39)
Age			
Mean ± SD	35.27±8.2	33.36±5.8	34.4±7.3
≤30 Years	118(38)	112(44)	230(40)
> 30 Years	195(62)	144(56)	379(60)
Level of education			
Certificate	3(1)	1(0.4)	4(1)
Diploma	112(34)	104(38)	216(35)
Graduate	174(52)	141(51)	315(52)
Post Graduate	45(14)	29(11)	74(12)
Years worked in the hospital			
Mean ± SD	7.16±7	5.39±4.7	6.36±6.2
≤ 5 years	202(61)	184(67)	386(63)
> 5 years	132(40)	91(33)	223(37)
Years of experience			
Mean ±SD	9.88±7.6	8.08±55.2	9.08±6.2
≤10 Years	230 (69)	210(76)	440(72)
> 10 years	104(31)	65(24)	169(28)

4.2.1 Daily roles and duties in the hospital among respondents

In assessing daily roles and duties in the hospital, majority of the respondents in AKUH, 93.8% (n =258) and KNH, 89.5% (n =295) were in direct patient care in line with their profession as illustrated in Figure 4.2.

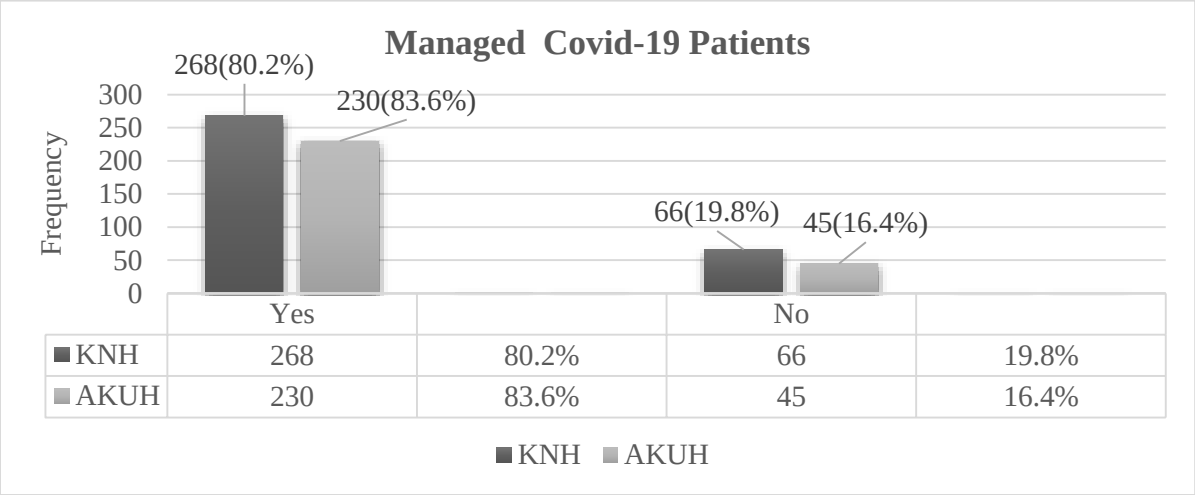
Figure 4.2: Daily roles and duties in the hospital



4.2.2 Management of COVID-19 Patients

In assessing respondents who have managed Covid-19 patients, 80.2% (n=268) in KNH and 83.6% (n =230) in AKUH affirmed to have done so. (Figure 4.3).

Figure 4.3: Management of Covid-19 patients among respondents



Descriptive analysis results and qualitative aspects for job characteristics, work context and job attitude

4.3 Job Characteristics

The study sought to assess job characteristics based on job difficulty and specificity among the respondents.

<u>Job Goal Difficulty</u>

The highest mean for job difficulty was 4.62 which assert that majority of the respondents **strongly agreed** to the statement that, '*A high degree of skill and know-how is necessary to do my job well'*. The respondents also **agreed** to statements like '*the work objective in my job require a great deal of effort*' with a mean of 4.4 and 'my work is very challenging' with a mean of 4.17. The lowest mean was 1.82 which affirms that majority of the respondents **disagreed** with the statement that their job is easy. (Table 6).

Table 4.2: Descriptive analysis of Job goal difficulty among respondents

Statements		Strongly Disagree (1)	Disagree (2)	Neither Agree nor Disagree (3)	Agree (4)	Mean	SD
The work objectives in my job require a great deal of effort.	n	15	6	24	209	355	4.4	0.826
	%	2.5	1	3.9	34.3	58.3		
A high degree of skill and know-how is necessary to do my job well.	n	7	6	14	157	425	4.62	0.692
	%	1.1	1	2.3	25.8	69.8		
Jobs like mine are quite demanding day after day.	n	8	2	12	174	413	4.61	0.674
	%	1.3	0.3	2	28.6	67.8		
My work is very challenging.	n	8	2	12	174	413	4.17	0.9
	%	1.3	0.3	2	28.6	67.8		
My job is easy.	n	251	237	78	25	18	1.89	0.972
	%	41.2	38.9	12.8	4.1	3		

Job Specificity

The highest mean was 4.3 which shows that most of the respondents **agreed** to the statement that, '*I know exactly what I am supposed to do on my job*' followed by '*I understand fully which of my jobs are more important than others'* at 4.13. The lowest mean was 2.65 which illustrates that most of the respondents neither agreed nor disagreed with the statement that, '*It is difficult to evaluate success or failure on my job*' (Table 4.3).

Table 4.3: Descriptive analysis of job specificity among respondents

Statement		Strongly Disagree (1)	Disagree (2)	Neither Agree nor Disagree (3)	Agree (4)	Strongly agree (5)	Mean	SD
My responsibilities at work are very clear and specific.	n	13	42	96	273	185	3.9	0.963
	%	2.1	6.9	15.8	44.8	30.4		
I understand fully which of my job duties are more important.	n	20	25	68	236	260	4.13	0.991
	%	3.3	4.1	11.2	38.8	42.7		
It is difficult to evaluate success or failure on my job.	n	110	210	124	111	54	2.65	1.219
	%	18.1	34.5	20.4	18.2	8.9		
I know exactly what I am supposed to do on my job.	n	11	15	29	261	293	4.33	0.826
	%	1.8	2.5	4.8	42.9	48.1		

Additional responses on different ways respondents experienced job difficulty and specificity regarding their job goals

The analysis determined that majority of the respondents asserted that inadequate equipment and supplies proved a major challenge in accomplishing their job goals. The increased risk of contracting Covid-19 was also identified as a major challenge among the respondents. Some of the respondents also asserted that they are forced to do activities that are not in line with their job description. Other challenges that were identified included high workload, assignment to other departments, favoritisms and corruption which hindered their duties.

4.4 Work Context

In assessing work context, the study evaluated procedural constraints among the respondents. The highest average was 3.81 which showed that most of the respondents **agreed** to the statement '*I always must check with my boss before making important decisions.*' They also agreed that *'Rules, administrative details and red tape make it difficult for new ideas to receive attention'* (3.55). The lowest mean was 2.79 which identified that many of the respondents neither agreed nor disagreed with the statement that, '*I have the authority to change my work processes to get the job done.*' (Table 4.4).

Table 4.4: Descriptive analysis of procedural constraints among respondents

Statements		Strongly Disagree (1)	Disagree (2)	Neither Agree nor Disagree (3)	Agree (4)	Strongly agree (5)	Mean	SD
I have the authority to change my work processes to get the job done.	n	78	223	116	134	58	2.79	1.199
	%	12.8	36.6	19	22	9.5		
This organization seems much more concerned that I follow procedures than that I do a good job.	n	26	101	186	192	104	3.41	1.083
	%	4.3	16.6	30.5	31.5	17.1		
I always must check with my boss before making important decisions.	n	20	69	85	268	167	3.81	1.063
	%	3.3	11.3	14	44	27.4		
Rules, administrative details, and "red tape" make it difficult for new ideas to receive attention	n	28	80	153	228	120	3.55	1.083
	%	4.6	13.1	25.1	37.4	19.7		
In my job, even small matters must be referred to someone higher up for a final answer.	n	58	167	125	157	102	3.13	1.253
	%	9.5	27.4	20.5	25.8	16.7		

Additional responses on other ways respondents have come across procedural constraints while performing their duties

Respondents were also asked in what other ways they have experienced procedural constraints while performing their duties. Most of the respondents identified delay in decision making as a major procedural constraint in performing their duties and inability to make decisions without involving their superiors. One of the respondents asserted that, "*I have toxic bosses who demand to know any decision you make on the job.*" Other respondents affirmed that, "*Having the right decision about an issue but cannot make it final until you consult authority.*" Other common procedural constraints that were identified include lack of clear guidance on patient's management, inaccessibility of superiors, too many protocols and policies and long documentation procedures.

Job Attitudes

Assessment of the self-efficacy among healthcare workers found that the highest means were 4.43 and 4.39 which showed that most of the respondents "agreed" to the statements that, 'I am confident that I can successfully perform any task assigned to me in my current job.' and 'I can complete the task that is expected of me'. On the other hand, the lowest mean was 2.32 which affirmed that most of the respondents **"**disagreed**"** with the statements that, 'I am not as well prepared as I could be to meet all the demands of my job' and also, 'I can't get my work done on time even when I try very hard.' (Table 9).

Table 4.5: Descriptive analysis of self-efficacy among respondents

Statements		Strongly Disagree (1)	Disagree (2)	Neither Agree nor Disagree (3)	Agree (4)	Strongly agree (5)	Mean	SD
I am confident that I can successfully perform any tasks.	n	7	8	22	253	319	4.43	0.731
	%	1	1.3	3.6	41.5	52.4		
I can complete the work that is expected of me.	n	10	16	13	255	315	4.39	0.798
	%	1.6	2.6	2.1	41.9	51.7		
I am not as well prepared as I could be to meet all the demands	n	148	263	87	79	32	2.32	1.131
	%	24.3	43.2	14.3	13	5.3		
I can't get my work done on time even when I try very hard	n	153	256	78	94	28	2.32	1.144
	%	25.1	42	12.8	15.4	4.6		

Additional responses on ways respondents have practiced self-efficacy in their current role in the frontline

The respondents were asked whether they have practiced self-efficacy in their current role in the frontline. Many of the respondents highlighted that, they have practiced self-efficacy in successfully performing any tasks regardless of any difficulties. They cited effective planning and commitment to meet organizational needs, accomplishing tasks before the deadlines, being available at workplace and being innovative in terms of new ideas to meet the required objectives. Proper planning in management of responsibilities was a major element identified by the participants in the study.

4.5 Work Motivation

Assessment of work motivation among employees was measured on five levels which included almost/never, rarely, sometimes, often, almost always/ always as shown in Table 6. The highest mean was 4.51 which stated that most of the respondents quoted **often** to the statement that, 'I put forth my best effort to get my job done regardless of the difficulties.' The lowest mean was 1.68 which shows that majority of the respondents cited **rarely** to the statement that, 'I probably do not work as hard as others who do the same type of work.'

Table 4.6: Descriptive analysis of work motivation among respondents

Statement		Almost/ Never (1)	Rarely (2)	Sometimes (3)	Often (4)	Almost always/ always (5)	Mean	SD
I put forth my best effort to get my job done regardless of the difficulties.	n	4	3	29	217	356	4.51	0.674
	%	0.7	0.5	4.8	35.6	58.5		
I am willing to start work early or stay late to finish a job.	n	19	51	177	150	212	3.80	1.102
	%	3.1	8.4	29.1	24.6	34.8		
It has been hard for me to get very involved in my current job.	n	143	277	115	46	28	2.24	1.040
	%	23.5	45.5	18.9	7.6	4.6		
I probably do not work as hard as others who do the same type of work.	n	348	172	44	23	22	1.68	1.011
	%	57.1	28.2	7.2	3.8	3.6		
I do extra work for my job that isn't really expected of me.	n	41	113	199	128	128	3.31	1.188
	%	6.7	18.6	32.7	21	21		
Time seems to drag while I am on the job.	n	222	159	183	25	20	2.12	1.055
	%	36.5	26.1	30	4.1	3.3		

Additional responses on difficulties experienced at work that limit work motivation

The study subjects were also asked to identify specific challenges that negatively influence their motivation in workplace. Most of the respondents affirmed that inadequate staffing and low motivation from management in terms of managerial support were the major factors that were negatively affecting their motivation at work. Other challenges are lack of clear knowledge and updates about COVID 19, pressure from both patients and relatives, congestion in hospitals with no physical distancing as well as the worry of being infective with Covid-19 virus. Inadequate and low-quality PPEs (Personal Protective Equipment) was also noted to be a major challenge which negatively affects the motivation of healthcare providers.

Inferential Analysis Results- Relationship between Job characteristics, work context, job attitude and work motivation

A spearman rank correlation analysis was conducted to determine the relationship between job difficulty, job specificity, procedural constraints, self-efficacy (Constructs of job characteristics, work context, job attitude respectively) and work motivation as illustrated in Table7. The findings revealed that, there was a ***significant positive relationship between job difficulty*** *($p<0.0001$, $r=0.150$)*, ***job specificity*** *($p = 0.019$, $r = 0.095$)*, ***self-efficacy*** *($p<0.0001$, $r = 0.249$)* ***and work motivation.***

The findings also showed that there was a ***significant negative relationship between procedural constraints and work motivation*** ($p= 0.011$, $r = -0.103$).

Table 4.7: Relationship between job difficulty, job specificity, work context, self-efficacy and work motivation

			Job difficulty	**Job specificity**	**Self-efficacy**	**Procedural constraints**	**Work motivation**
Spearman's rho	Job difficulty	r	1	.178**	.163**	-.148**	.150**
		p-value		P<0.0001	p<0.0001	p<0.0001	p<0.0001
		N	609	609	608	609	608
	Job specificity	r	.178**	1	.085*	-0.034	.095*
		p-value	p<0.0001		0.036	0.405	0.019
		N	609	609	608	609	608
	Self-efficacy	r	.163**	.085*	1	-.126**	.249**
		p-value	p<0.0001	0.036		0.002	p<0.0001
		N	608	608	608	608	608
	Procedural constraints	r	-.148**	-0.034	-.126**	1	-.103*
		p-value	p<0.0001	0.405	0.002		0.011
		N	609	609	608	609	608
	Work motivation	r	.150**	.095*	.249**	-.103*	1
		p-value	p<0.0001	0.019	p<0.001	0.011	
		N	608	608	608	608	608

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

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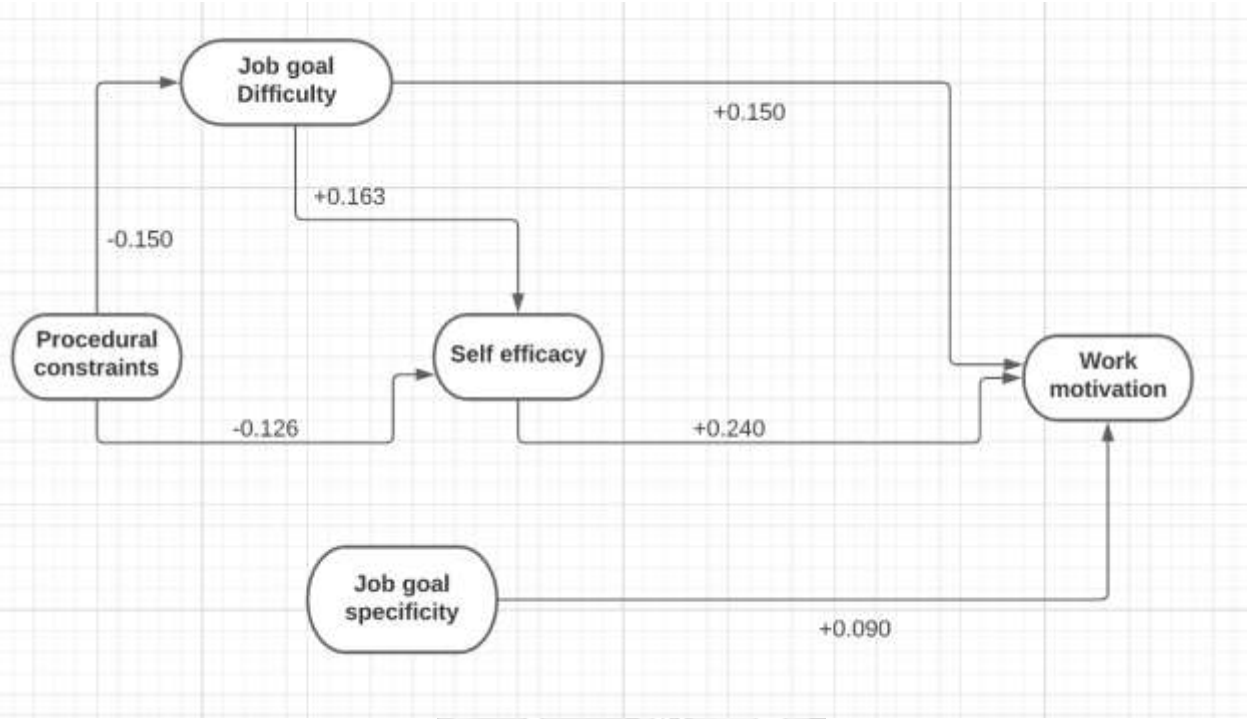
4.6 Model of work motivation and path estimates p<0.05.

Figure 4.4: Relationship model



Job characteristics (Job goal difficulty, Job goal specificity) and Job attitudes (self-efficacy) have significant positive relationship on work motivation. Self-efficacy is also seen to mediate the effect of job goal difficulty on motivation. However, Work context (procedural constraints) has a significant negative relationship on work motivation through its negative effect on self-efficacy. It moderates the effects of job goal difficulty and self-efficacy. (Figure 4.4).

Inferential Analysis Results -Effects of Job characteristics, Work context and Job attitudes on Work motivation

In assessing the effects of Job characteristics (job difficulty, job specificity), work context (procedural constraints), job attitudes (self-efficacy) on work motivation, a linear regression analysis using enter method was performed. The model summary shows that the independent variables (of job difficulty, job specificity, procedural complains, self-efficacy) included in the model **explain 12.8% of work motivation** as showed in Table 4.8.

Table 4.8: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.358[a]	.128	.123	2.742	.128	22.214	4	603	.000

a. Predictors: (Constant), Procedural constraints, Job specificity, Self-efficacy, Job difficulty

The significance of the model was also assessed. The analysis of variance showed that the **model was statistically significant**, F (4, 605) = 22.214, p<0.001. Thus, the model can significantly predict work motivation as showed in Table 4.9.

Table 4.9: Analysis of variance model

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	668.083	4	167.021	22.214	.000[b]
	Residual	4533.691	605	7.519		
	Total	5201.775	609			

a. Dependent Variable: Work motivation

b. Predictors: (Constant), Procedural constraints, Job specificity, Self-efficacy, Job difficulty

The analysis of coefficients found that job difficulty had a statistically significant effect on work motivation, b = 0.123, t (609) = 2.319, p =0.021). Self-efficacy was also found to have a statistically significant effect on work motivation, b_1 = 0.397, t (609) =6.759, p<0.0001 as shown in Table 4.10.

Table 4.10: Model Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B	
		B	Std. Error	Beta	t	p-value	Lower Bound	Upper Bound
1	(Constant)	9.669	1.379		7.009	.000	6.960	12.378
	Job difficulty	.123	.053	.098	2.319	.021	.019	.228
	Job specificity	.067	.051	.054	1.322	.187	-.033	.167
	Self-efficacy	.397	.059	.273	6.759	.000	.282	.513
	Procedural constraints	-.061	.035	-.068	-1.714	.087	-.130	.009

a. Dependent Variable: *Work motivation*

Work context influence on the relationship between job characteristics and work motivation

The findings show that work context has a moderating influence on the relationship between job difficulty and work motivation. Without work context, job difficulty explained 4.5% of work motivation while with work context it did at 5.6%.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.211[a]	.045	.043	2.864	.045	28.258	1	606	.000
2	.237[b]	.056	.053	2.849	.012	7.451	1	605	.007

a. Predictors: (Constant), Job difficulty

b. Predictors: (Constant), Job difficulty, Procedural constraints

Job specificity explained 2.2% of work motivation without work context and 3.9% with work context thus also having a moderating effect.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.148[a]	.022	.020	2.898	.022	13.561	1	606	.000
2	.205[b]	.042	.039	2.870	.020	12.599	1	605	.000

a. Predictors: (Constant), Job specificity

b. Predictors: (Constant), Job specificity, Procedural complaints

Work context influence on the relationship between self-efficacy and work motivation

The results revealed that work context had a slight moderating influence on the relationship between self-efficacy and work motivation. Self-efficacy explained 10.7% of work motivation without work context and 11.4% with work context.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.326[a]	.107	.105	2.769	.107	72.304	1	606	.000
2	.338[b]	.114	.111	2.760	.008	5.268	1	605	.022

a. Predictors: (Constant), Self-efficacy

b. Predictors: (Constant), Self-efficacy, Procedural complaints

Self-efficacy influence on the relationship between job difficulty and work motivation

Self-efficacy has a significant positive effect on the relationship between job difficulty and work motivation influencing positively the relationship from 4.5% to 12.2%. It is thus seen to mediate this effect.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.211[a]	.045	.043	2.864	.045	28.258	1	606	.000
2	.349[b]	.122	.119	2.748	.077	53.086	1	605	.000

a. Predictors: (Constant), Job difficulty

b. Predictors: (Constant), Job difficulty, Self-efficacy

Further Analysis results on comparisons between the various demographics and background on their relationships with job characteristics, work context and job attitudes

Though not the main focus of this study, the researcher found that there were some statistically significant relationships between some demographical and background aspects and the constructs under study- job goal difficulty, job goal specificity, procedural constraints and job attitudes. These offered important points that allowed for comparisons and discussions that included institutional differences, cadre differences,

4.7 Institutional Differences

Independent samples t-test was conducted to determine whether there was a statistically significant difference between the two institutions (KNH, AKUH) in regards to job difficulty, job specificity, self-efficacy, procedural constraints and work motivation.

In assessing job characteristics, there was a ***higher job specificity score in AKUH*** (M = 15.32, SD =2.625) compared to KNH which had (M =14.85, SD = 2.071). The difference was found to be ***statistically significant, (*****p = 0.022**). There was slight difference in the mean scores of job difficulty in both KNH and AKUH with higher job difficulty in KNH (M = 19.84, SD=1.91) compared to AKUH (M = 19.67, SD = 2.746). The difference on job difficulty was however not statistically significant at 95% confidence interval.

In assessment of the comparison of work context between Kenyatta National Hospital and Aga Khan University hospital, the findings showed that there was a ***higher procedural constraint at KNH, with mean of 13.42 (SD =3.06) compared to AKUH*** with 13.11 (SD=3.43) as shown in Table 15. However, the difference was ***not statistically significant at 95%*** confidence level.

Evaluation of job attitudes-self-efficacy found that there was slight difference between KNH (M = 13.48, SD = 1.967) and AKUH (M = 13.47, SD = 2.062). The findings however, revealed that there was no statistically significant difference between the groups.

The overall comparison of work motivation found that, there was ***higher motivation score in AKUH*** (M =17.89, SD=2.94) compared to KNH (M = 17.68, SD = 2.91). The difference however, was ***not statistically significant at 95% confidence level***.

Table 4.11: Group Statistics

Hospital name		N	Mean	Std. Deviation	Std. Error Mean
Job difficulty	KNH	302	19.84	1.91	0.11
	AKUH	225	19.67	2.746	0.183
Job specificity	KNH	302	14.85	2.071	0.119
	AKUH	225	15.32	2.625	0.175
Procedural constraints	KNH	302	13.4238	3.06505	0.17637
	AKUH	225	13.1111	3.43448	0.22897
Self-efficacy	KNH	301	13.48	1.967	0.113
	AKUH	225	13.47	2.062	0.137
Work motivation	KNH	301	17.68	2.909	0.168
	AKUH	225	17.89	2.935	0.196

Table 4.12: Independent samples test between job difficulty, job specificity, procedural constraints, self-efficacy, work motivation based on hospitals

	F	t	df	p-value	Mean Difference	Std. Error Difference	95% CI of the Difference	
							Lower	Upper
Job difficulty	15.849	0.837	525	0.403	0.170	0.203	-0.229	0.569
Job specificity	9.027	-2.297	525	0.022	-0.470	0.205	-0.872	-0.068
Procedural constraints	1.126	1.100	525	0.272	0.313	0.284	-0.246	0.871
Self-efficacy	0.557	0.041	525	0.967	0.007	0.177	-0.340	0.355
Work motivation	0.544	-0.812	525	0.417	-0.209	0.257	-0.715	0.297

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4.8 Cadre Differences

Some statistically significant relationships and differences were also found in a further analysis of cadres.

In regards to job characteristics, the findings showed that there was a ***difference in job specificity scores with doctors having higher scores*** (M = 15.16, SD = 1.780) compared to nurses (M =15.01, SD = 2.541). The difference was ***statistically significant*** at 95% confidence level, (p = 0.012). However, there was a slight difference on job difficulty between doctors (M = 19.79, SD =2.038) and nurses (M = 19.76, SD = 2.415). The difference was not statistically significant at 95% confidence level.

Assessment of job attitudes-self-efficacy revealed that, there was ***higher self-efficacy scores among nurses*** (M =13.60, SD =2.176) compared to doctors (M =13.19, SD =1.526). The differences were ***statistically significant*** at 95% confidence level (p =0.030).

In evaluating the overall work motivation, there was ***higher work motivation scores among doctors*** (M =17.96, SD = 2.871). However, the difference ***was not statistically significant***.

Table 4.13: Group Statistics job characteristics based on cadre

Professional cadre		N	Mean	Std. Deviation	Std. Error Mean
Job difficulty	Doctor	162	19.79	2.038	0.16
	Nurse	365	19.76	2.415	0.126
Job specificity	Doctor	162	15.16	1.78	0.14
	Nurse	365	15.01	2.541	0.133
Procedural constraints	Doctor	162	13.3086	2.83563	0.22279
	Nurse	365	13.2822	3.39195	0.17754
Self-efficacy	Doctor	162	13.19	1.526	0.12
	Nurse	364	13.6	2.176	0.114
Work motivation	Doctor	162	17.96	2.871	0.226
	Nurse	364	17.69	2.941	0.154

Table 4. 14: Independent samples test between job difficulty, job specificity, procedural constraints, self-efficacy, work motivation based on professional cadre

	F	t	df	p-value	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
							Lower	Upper
Job difficulty	0.455	0.143	525	0.886	0.031	0.218	-0.396	0.459
Job specificity	13.402	0.691	525	0.012	0.152	0.220	-0.281	0.585
Procedural constraints	4.451	0.087	525	0.931	0.026	0.305	-0.579	0.626
Self-efficacy	13.458	-2.173	524	0.030	-0.410	0.189	-0.781	-0.039
Work motivation	0.464	0.959	524	0.338	0.264	0.276	-0.277	0.806

4.9 Relationship between years worked and self-efficacy

A spearman correlation analysis was conducted to investigate the relationship between years of experience and self-efficacy and work motivation. The findings showed that, there was a ***significant positive relationship between years of experience and self-efficacy*** (r = 0.089, p = 0.041).

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Table 4.15: Relationship between years worked and self-efficacy and motivation

Correlations					
			Years of experience	Self-efficacy	Work motivation
Spearman's rho	Years of experience	Correlation Coefficient	1.000	.089*	0.060
		Sig. (2-tailed)		0.041	0.167
		N	527	526	526
	Self-efficacy	Correlation Coefficient	.089*	1.000	.232**
		Sig. (2-tailed)	**0.041**		0.000
		N	526	526	526
	Work motivation	Correlation Coefficient	0.060	.232**	1.000
		Sig. (2-tailed)	0.167	0.000	
		N	526	526	526

*. Correlation is significant at the 0.05 level (2-tailed).
**. Correlation is significant at the 0.01 level (2-tailed).

4.10 Role Differences

Assessment of work context revealed that there ***were higher procedural constraints*** in respondents who were in direct patient care (M = 13.20, SD = 3.25) compared to respondents in supervisory/ managerial role and duties, (M =14.08, SD =2.94). The findings were ***statistically significant at 95% confidence level***.

In regards to job characteristics, findings showed that there was ***higher job difficulty score in respondents who were in supervisory/ managerial role and duties***, (M =19.87, SD =1.78) compared to respondents who had direct patient care roles (M = 19.76, SD = 2.355). However, the difference was ***not statistically significant***. There was ***higher job specificity in respondents who were in supervisory/ managerial role and duties,*** (M =15.31, SD =1.86) compared to respondents who had direct patient care line with their profession (M = 15.03, SD = 2.38). The difference ***was also not significant at 95%*** confidence level.

In assessing job attitudes-self-efficacy, there was ***slightly higher self-efficacy in respondents who were in supervisory/ managerial role and duties,*** (M =13.48, SD =1.615) compared to

respondents who had direct patient care line with their profession (M = 13.47, SD = 2.046). The difference ***was not significant at 95% confidence level***.

Table 4.16: Group Statistics job characteristics based on daily roles and duties

	Daily role and duties	N	Mean	Std. Deviation	Std. Error Mean
Job difficulty	Supervisory /managerial	52	19.87	1.783	0.247
	Direct patient care	475	19.76	2.355	0.108
Job specificity	Supervisory /managerial	52	15.31	1.863	0.258
	Direct patient care	475	15.03	2.379	0.109
Procedural constraints	Supervisory /managerial	52	14.0769	2.93623	0.40718
	Direct patient care	475	13.2042	3.25018	0.14913
Self-efficacy	Supervisory /managerial	52	13.48	1.615	0.224
	Direct patient care	474	13.47	2.046	0.094
Work motivation	Supervisory /managerial	52	17.50	3.299	0.457
	Direct patient care	474	17.80	2.877	0.132

Table 4.17: Independent samples test between job difficulty, job specificity, procedural constraints, self-efficacy, work motivation based on Daily roles and duties

	F	t	df	p-value	Mean Difference	Std. Error Difference	95% CI Difference Lower	Upper
Job difficulty	0.455	0.143	525	0.886	0.031	0.218	-0.396	0.459
Job specificity	13.402	0.691	525	**0.012**	0.152	0.220	-0.281	0.585
Procedural constraints	4.451	0.087	525	0.931	0.026	0.305	-0.579	0.626
Self-efficacy	13.458	-2.173	525	**0.030**	-0.410	0.189	-0.781	-0.039
Work motivation	0.464	0.959	525	0.338	0.264	0.276	-0.277	0.806

4.10.1 Differences between those who have and those who have not managed COVID-19 patients

The findings revealed that there was a ***statistically significant difference in the overall work motivation among respondents who had managed COVID-19 patients and those who had not.*** There was **higher** motivation in respondents who had managed Covid-19 patients (M = 17.89, SD = 2.93) compared to those who had not managed Covid-19 patients (M = 17.17, SD = 2.8) (p = 0.042).

However, in assessing, job specificity, job difficulty, procedural constraints and self-efficacy, despite the difference in the average scores between the groups the differences were not statistically significant at 95% confidence interval. There were higher scores in those who had managed COVID -19 patients in regards to job difficulty, job specificity. However those who had not managed COVID-19 patients had higher scores for self-efficacy and procedural complaints.

Table 4.18: Group statistics job characteristics based on management of a covid-19 case

Managed COVID-19 case		N	Mean	Std. Deviation	Std. Error Mean
Job difficulty	Yes	445	19.84	2.317	0.110
	No	82	19.37	2.203	0.243
Job specificity	Yes	445	15.08	2.374	0.113
	No	82	14.91	2.104	0.232
Procedural constraints	Yes	445	13.2562	3.18102	0.15079
	No	82	13.4756	3.48976	0.38538
Self-efficacy	Yes	444	13.47	2.033	0.096
	No	82	13.52	1.867	0.206
Work motivation	Yes	444	17.89	2.930	0.139
	No	82	17.17	2.801	0.309

Table 4.19: Independent samples test between job difficulty, job specificity, procedural constraints, self-efficacy, work motivation based on Daily roles and duties

	F	t	df	p-value	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference Lower	Upper
Job difficulty	0.072	1.726	525	0.085	0.477	0.276	-0.066	1.020
Job specificity	0.277	0.593	525	0.554	0.166	0.281	-0.385	0.717
Procedural constraints	2.398	-0.565	525	0.572	-0.21943	0.38824	-0.98212	0.54326
Self-efficacy	2.217	-0.241	525	0.810	-0.058	0.241	-0.532	0.416
Work motivation	0.078	2.042	525	**0.042**	0.714	0.350	0.027	1.402

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CHAPTER FIVE

DISCUSSION, CONCLUSION AND RECOMMENDATIONS

This chapter discusses the result findings of this study on the determination of the effect of Job characteristics, Work context and Job attitudes on work motivation in level six hospitals in Nairobi. It also presents the recommendations and conclusion.

5.1 Discussion

5.1.1 Job Characteristics and work motivation

Job characteristics which refers to the specific aspects of a job such as knowledge, skills, mental and physical demands that enable the objectives of the work to be met was studied under the constructs job goal difficulty and job goal specificity. These two are key factors that have been shown to influence the extent to which employees are motivated to meet demands of their jobs (Nalla et al., 2015).

Both Job goal difficulty and Job goal specificity were shown to have a significantly positive relationship and effect on work motivation. Majority of the respondents (health care workers), agreed to statements that showed that they perceived their job goals as being difficult. Their jobs required a high degree of skill and know-how and also the work objectives required a great deal of effort and were challenging. The health care workers asserted that inadequate equipment and supplies affected their ability to accomplishing their job goals. The increased risk of contracting Covid-19 and high workload were also major challenges that made their jobs more difficult. In regards to job goal specificity majority of the respondents perceived their jobs as being specific with a majority responding that they knew exactly what was required of them in their jobs. However additional responses on specificity showed that being required to do activities not in-line with their job description affected specificity and hence their motivation. This included re-assignments to different departments whereby one had to acquaint themselves with the new job expectations and roles in a short period of time.

These results are in line with studies such as (Munawar, 2021; Peterson et al., 2008) that have shown that health care workers experience burnout, exhaustion and stress symptoms that may be attributed to the difficult nature of their work. Workloads, appropriate equipment and supplies and the risk of contracting health care associated infections have been associated with increased job difficulty that in turn negatively affect motivation in the health care sector (Afolabi et al., 2018).

However Job goal difficulty has also been shown to positively affect work motivation in other studies, a result that has been reflected in this study. Despite having job goal difficulties, the health care workers still show some levels of motivation with a significantly positive relationship and effect of job difficulty on motivation. Lock and Latham assert that goal setting is essentially linked to task performance and that specific and challenging goals contribute to higher and better task performance (Locke & Latham, 1979). The risk of contracting the COVID-19 virus has been additionally and specifically mentioned as posing difficulty in attaining job goals. The results of this study additionally show that there is a statistically significant difference in motivation between those who have and those who have not managed COVID-19 patients with higher motivation levels seen in those who have. Difficult goals may be appraised as either threats or challenges depending on the coping mechanisms available and if there is self-growth opportunity. When perceived as a challenge there is better adaptation to change under difficult goal conditions and better performance (Martínez-López, 2020).

This study also found that job specificity had a statistically significant relationship and effect on motivation, a finding that correlates with other studies on specificity and motivation. Walston and Chou (2006) just as with Locke and Latham, (2006) assert that when it comes to changes within healthcare complex goals necessitate intense efforts and that the goals need to be specific in order to be accepted. For the goal-setting to be effective the goals need to be clear, specific and difficult yet reachable otherwise they will not motivate a situation reflected with the results of this study. An additional finding on job goal specificity is the statistically significant higher levels of specificity among doctors as compared to nurses. This may be attributed to the educational nature for the doctors whereby specialization into specific medical fields is done following the graduate studies and with a higher percentage attaining the graduate and post-graduate levels as opposed to their counterparts in other cadres.

5.1.2 Work Context and motivation

This study focused on an important aspect of work context- procedural constraints that may make it difficult to pursue goals. Prior studies on work context show that it may lead to differences in employees' motivation, job satisfaction and performance and may explain the variation in motivation in the different sectors (Wright, 2004; Manolopoulos, 2008).

The results show that majority of the health care workers in both KNH and AKUH have experienced procedural constraints in their work. Work context using the construct procedural constraints was found to have a significant negative relationship on work motivation through its negative effect on self-efficacy. It is seen to moderates the effect of job characteristics (job goal difficulty) and job attitudes (self- efficacy).

The respondents agreed to statements like '*I always must check with my boss before making important decisions.*' and that *'Rules, administrative details and red tape make it difficult for new ideas to receive attention'.* The health care workers cited delay in decision making due to hierarchical requirements for a final decision to be made as pausing a major procedural constraint in performing their duties. Majority were unable to make decisions without involving their superiors even when they were in a position to**.** One of the respondents asserted that, "*I have toxic bosses who demand to know any decision you make on the job*." Other respondents affirmed that, "*Having the right decision about an issue but cannot make it final until you consult authority.*" Other common procedural constraints that were identified include lack of clear guidance on patient's management, inaccessibility of superiors, too many protocols and policies and long documentation procedures. These findings resonate with those of (Adzei & Atinga, 2012; Willis-Shattuck et al., 2008; Afolabi,2018) on procedural constraints in the healthcare sector. Such a work context not only makes it more difficult to achieve the set goals but also influence the ability to believe in ones capabilities to achieve them (self-efficacy). This over-ally negatively affects motivation as was also seen in this study.

An additional finding was that there were higher procedural constraints in respondents who were in direct patient care as opposed to those who were in managerial/ supervisory roles. This may be as a result of the 'red tapes' in terms of procedures and protocols to be followed and the need to inform authority/ inability to make certain decisions for those who are lower down the hierarchy.

However, others disagree with these views and the findings of the study and are of the opinion that experiencing difficult working environments is not the cause of demotivation more so for professionals. Rather this as a result of intrinsic job satisfaction as asserted by Darkwa et al. (2015), in a study of health professionals' motivation carried out in a remote locality. Wright (2004), continues to argue that on the other hand the constraints may enhance motivation by getting the employee to expend more effort to avoid dissatisfaction caused by poor performance.

5.1.3 Job Attitudes and work motivation

The study evaluated Job attitudes using the construct self-efficacy which is the extent to which the employees feel confident in carrying out their tasks and the belief in their capacity to achieve the set goals (Bandura, 1977).

This study found that Job attitudes (self-efficacy) have significant positive relationship and effect on work motivation. Though predicted to have a direct relationship with work motivation it was also found to play a mediating role between job goal difficulty and motivation. Majority of the respondents had self-efficacy and were confident that they can successfully perform any task assigned to them in their current job and can complete the tasks expected of them. The health care workers highlighted that they have practiced self-efficacy in successfully performing their assigned tasks regardless of the difficulties faced. They asserted that effective planning and commitment to meet organizational needs, being available at the workplace and being innovative in terms of new ideas to meet the required objectives enabled them to accomplishing tasks sometimes even before the deadlines. Therefore despite majority of the respondents experiencing constraints at work and them perceiving their job goals as being difficult they were able to practice self-efficacy. The study reflects (Wright, 2004) sentiments that how confident one feels in carrying out tasks may be influenced by the context within which one works and the nature of the job characteristic in terms of how difficult or specific the goal is. This in turn has an influence on motivation.

Some researchers in their studies have shown self-efficacy having direct effects on satisfaction and motivation (Skaalvik & Skaalvik, 2010; Williams et al., 2015). Others however like in this study find that it also plays a mediating role between Job goal difficulty in its influence on motivation (Wright, 2004). Unlike in his study though in public sector where job goal difficulty had been found to negatively affect self-efficacy this study found a positive relationship. This correlates with studies that have shown that self-efficacy can remain high even as goals become more difficult and the objective probability of goal attainment decreases (Klein et al. 1999). A person's ability to handle constraints in this case self-efficacy will determine performance and goal attainment which will positively influence motivation. Additional findings in the study is a significant positive relationship between years of experience and self-efficacy. Nurses were also found to have higher self-efficacy scores. These are in line with studies such as Soudagar et al. (2015), who asserts that those who are more skilled and experienced show more self-efficacy.

5.1.4 Work Motivation

Despite the health care workers expressing that they experienced job goal difficulties and work constraints, they were in the overall motivated. They asserted that they put forth their best effort to get their job done regardless of the difficulties. Some of the specific challenges cited as negatively influencing their motivation included inadequate staffing and low motivation from management in terms of managerial support, lack of clear knowledge and updates about COVID 19, pressure from both patients and relatives, congestion in hospitals with no physical distancing as well as the worry of being infective with the Covid-19 virus. Inadequate and low quality PPEs (Personal Protective Equipment) was also noted to be a major challenge which negatively affected the motivation of healthcare providers.

Job characteristics (Job goal difficulty, Job goal specificity) and Job attitudes (self-efficacy) were found to have significant positive relationship and effect on work motivation. However Work context (procedural constraints) was found to have a significant negative relationship on work motivation through its negative effect on self-efficacy.

The employees' perception of how difficult a goal is influences their attitude towards performance of specific tasks in their jobs having an effect on their efficacy that may influence their work motivation (Nalla et al., 2015). Thus though the health care workers perceived their goals to be difficult they were still able to experience high levels of self-efficacy and as a result be motivated. An interesting finding was that there was statistically significant higher motivation levels among those who had managed COVID-19 as opposed to those who had not. How confident one feels in carrying out tasks may be influenced by the context within which one works and the nature of the job characteristic in terms of how difficult or specific the goal is. This in turn has an influence on motivation (Wright, 2004).

5.2 Conclusion

The first objective of the study was to determine the effect of job characteristics on work motivation among level six hospitals in Nairobi. The study found that job goal difficulty and job goal specificity had significant positive relationship and effect on work motivation. It thus concludes that for the health care workers to be motivated the job goals not only need to be difficult but also doable and specific.

The second objective was to determine the effect of work context on work motivation through its effect on job characteristics and job attitudes among level six hospitals in Nairobi. Work context using the construct procedural constraints was found to have a significant negative relationship on work motivation through its negative effect on self-efficacy. It is seen to moderates the effect of job characteristics (job goal difficulty) and job attitudes (self- efficacy). The study thus concludes that the context within which the healthcare workers work needs to be supportive of the desired goals and enhance their self-efficacy for optimum work motivation.

The last objective was to determine the effect of job attitudes on work motivation among level six hospitals in Nairobi. This study found that self-efficacy has a significant positive relationship and effect on work motivation. Though predicted to have a direct relationship with work motivation it was also found to play a mediating role between job goal difficulty and motivation. This thus draws the conclusion that to enhance healthcare workers' motivation they need to be able to practice self-efficacy in the face of any perceived job goal difficulties.

Additionally though not the focus of the study, it was found that there was statistically significant ($p=0.022$) higher job specificity scores in AKUH ($M = 15.32$, $SD =2.625$) compared to KNH ($M =14.85$, $SD = 2.071$). However though hypothesized to be contextually different in view of their private –public nature the difference in work context's effect on motivation was not found to be statistically significant at 95% significant level despite higher constraints levels found in KNH (KNH- mean 13.42 SD =3.06; AKUH- 13.11 SD=3.43). Also there was higher motivation scores in AKUH though not statistically significant at 95% confidence interval (AKUH $M =17.89$, $SD=2.94$; KNH $M = 17.68$, $SD = 2.91$). The difference however, was not statistically significant at 95% confidence level. Thus the implications for motivation can be applied in both contexts in what mirrors similarity with (Muthuri, 2020) study that there may be more similarities than disparities among healthcare professionals' motivation factors, regardless of hospital ownership.

Also there was higher procedural constraints experienced by respondents who were in direct patient care as opposed to those who were in managerial/ supervisory roles. Therefore there is a need to ensure that constraints do not significantly impede on job goals and efficacy to negatively affect the 'sharp end' health care workers' motivation. The significant positive relationship found between years of experience and self-efficacy shows the need for expertise and its role in motivating the health care workers.

An interesting finding was that there was statistically significant higher motivation levels among those who had managed COVID-19 as opposed to those who had not (M = 17.89, SD = 2.93 versus M = 17.17, SD = 2.8 respectively - p = 0.042). Though hypothesized that COVID-19 would result in increased job difficulties and constraints (as seen in earlier studies such as Zhang 2020; Cheng, 2021; Chima 2020) negatively affecting motivation it was found that the healthcare workers were actually motivated. This reinforces the study's support of having job goals being difficult but attainable and specific within a context with minimal procedural constraints that encourages self-efficacy to motivate healthcare workers.

5.3 Recommendations

The study has important implications for human resource in health. Effective strategies can be put in place to motivate employees even beyond the pandemic period.

The study from its findings on job characteristics thus recommends that job goals need not only be difficult but also attainable for the healthcare workers to be motivated. This includes provision of the necessary resources to perform assigned tasks effectively. The jobs also need to be specific and as shown, experience levels is positively associated with self-efficacy. Thus the need for increased trainings and specializations in specific aspects of health care provision in order to not only motivate but also build the much needed capacity. As shown by the work context's influence on motivation, though following set procedures and rules is important, there should be a balance to ensure that the sharp end providers of care are able to practice autonomy in decision making. They should be in a position to use the available resources in their set-up to enhance safe patient outcomes and service delivery without delays in decision making as a result of 'red tape'. This will not only make it easier to achieve the set goals but also influence the ability to believe in ones capabilities to achieve them.

5.4 Study Limitation and Areas for further research

The study focused on the health care professionals- doctors, nurses, lab technologists and pharmacists working in Kenyatta National Hospital and Agha Khan University Hospital Nairobi. It investigated job characteristics, work context and job attitudes to determine their effect on

motivation. This study provides important insights into motivation in the heath sector. However motivation can still be more widely studied under different variables, contexts and sectors.

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VT OMNES VNVM SINT

APPENDICES

Appendix 1: Research Questionnaire

SURVEY QUESTIONNAIRE ON KEY ASPECTS OF MOTIVATION WITHIN THE CONTEXT OF THE COVID-19 RESPONSE

The purpose of this questionnaire is to assess effect of job characteristics, work context and job attitudes on motivation within the context of the COVID-19 response.

CONFIDENTIALITY: The responses you give will be strictly confidential and will be used to inform on motivation within the context of the COVID-19 response.

GENERAL INFORMATION AND DEMOGRAPHICS

1. Name of Hospital: _____

Tick where appropriate for the following questions

2. What is your professional cadre?

Doctor [ ] Pharmacist/ pharm technologist [ ]

Nurse [ ] Lab technologist/ lab technician [ ]

3. What is your gender? Male [ ] Female [ ]

4. a) How many years have you worked in your current institution?_____

b) For how many years have you practiced your profession? _____

5. What is your age in years? _____

6. What is your highest level of education attained?

Certificate [ ] Diploma [ ] Graduate/ Bachelor's degree [ ]

Post graduate/ Masters' Degree [ ] PhD [ ]

7. What mainly constitutes your day to day role and duties in the hospital?

Supervisory / managerial role and duties [ ]

Direct patient care in line with my profession [ ]

8. Have you managed a confirmed COVID-19 positive patient or suspect in line with your profession? Yes [ ] No [ ]

SECTION 1: JOB CHARACTERISTICS

9. Below are aspects that measure job goal difficulty and specificity. Kindly indicate to what extent you agree or disagree with each of the statements below where

1= strongly disagree **2= Disagree** **3= neither agree nor disagree**

4=agree **5= strongly agree**

Regarding my current role in the frontline of the COVID-19 response in this hospital…	**1- Strongly disagree**	**2 Disagree**	**3 Neutral**	**4 Agree**	**5 Strongly Agree**
The work objectives in my job require a great deal of effort.					
A high degree of skill and know-how is necessary to do my job well.					
Jobs like mine are quite demanding day after day.					
My work is very challenging.					
My job is easy.					
My responsibilities at work are very clear and specific.					
I understand fully which of my job duties are more important than others.					
It is difficult to evaluate success or failure on my job.					

I know exactly what I am supposed to do on my job.					

In what other ways have you experienced difficulty and/or specificity regarding your job goals?

_____

_____

SECTION 2: WORK CONTEXT

10. Below are aspects that measure procedural complaints. Kindly indicate to what extent you agree or disagree with each of the statements below where

1= strongly disagree 2= Disagree 3= neither agree nor disagree

4=agree 5= strongly agree

Regarding my current role in the frontline of the COVID-19 response in this hospital…	**1 Strongly disagree**	**2 Disagree**	**3 Neutral**	**4 Agree**	**5 Strongly agree**
I have the authority to change my work processes to get the job done.					
This organization seems much more concerned that I follow procedures than that I do a good job.					
I always must check with my boss before making important decisions.					
Rules, administrative details, and "red tape" make it difficult for new ideas to receive attention.					
In my job, even small matters must be referred to someone higher up for a final answer.					

In what other ways have you come across procedural constraints while performing your duties?

_____

_____

SECTION 3: JOB ATTITUDES

11. Below are aspects that measure self- efficacy. Kindly indicate to what extent you agree or disagree with each of the statements below where

Regarding my current role in the frontline of the COVID-19 response in this hospital…	**1 Strongly disagree**	**2 Disagree**	**3 Neutral**	**4 Agree**	**5 Strongly Agree**
I am confident that I can successfully perform any tasks assigned to me on my current job.					
I can complete the work that is expected of me.					
I am not as well prepared as I could be to meet all the demands of my job.					
Regarding my current role in the frontline of the COVID-19 response in this hospital…	**1 Strongly disagree**	**2 Disagree**	**3 Neutral**	**4 Agree**	**5 Strongly Agree**
I can't get my work done on time even when I try very hard					

How else have you practiced self-efficacy in your current role in the front line? _____

_____

SECTION 4: WORK MOTIVATION

12. Below are aspects that measure work motivation. Kindly indicate frequency of occurrence where:

1= Almost/Never **2= Rarely** **3= Sometimes**
4= Often **5= almost always/ always**

Regarding my current role in the frontline of the COVID-19 response in this hospital…	**1 Almost/ Never**	**2 Rarely**	**3 Sometimes**	**4 Often**	**5 Almost Always/Always**
I put forth my best effort to get my job done regardless of the difficulties.					
I am willing to start work early or stay late to finish a job.					
It has been hard for me to get very involved in my current job.					
I probably do not work as hard as others who do the same type of work.					
I do extra work for my job that isn't really expected of me.					
Time seems to drag while I am on the job.					

What are some of the difficulties experienced? _____

_____

Appendix 2: Participant Information and Consent Form

Title of Research: Effect of Job Characteristics, Work context and Job attitudes on work motivation in two level six hospitals within the context of the covid-19 response

Section 1: Principle investigator information and affiliation

Principle Investigator: Dr. Agnes K. Karume

Affiliation: Strathmore Business School

Contact information: Email- karumeagnes@gmail.com

Address- P.O.Box 19388-00202 Nairobi

Mobile- 0715181283

Institutional Contact: P.O. Box 20723 Hospital Rd – 00200, Nairobi, Kenya.

Section 2: Introduction and purpose of the Study

The study is on work motivation in the health care practice in the context of the COVID-19 response. It explores the effects of job goal difficulty, job goal specificity, efficacy and procedural complaints on motivation. The study will bring a more in depth knowledge and a better understanding on motivation in the changing face of health service provision. It will be important to stakeholders in the healthcare sector. These include both the public and private sector health employers and managers who will put effective strategies to motivate employees even beyond the pandemic period.

Section 3: Eligibility and research participation

Participation in the research is voluntary. There are no consequences of refusal to take part in the study or withdrawal from the study at any one point during the study course. For you to be eligible to take part in the study you need to be a health care professional- a doctor, nurse, pharmacist or pharm tech, lab technologist or lab tech working in the two study sites- Aga Khan University Hospital or Kenyatta University Teaching Referral and Research hospital.

Section 4: What taking part in the research entails

Once you agree to take part in the study, a link containing the research questionnaire will be sent to you via your email or phone. You will then be able to fill in your responses once you click the accept button.

Section 5: Potential Risks and Discomforts

There are no 'known risks'. The questionnaire will only take a few minutes of your time.

Section 6: **Potential Benefits**

The study findings will be key in informing policies and strategies that will influence work motivation positively regarding health care provision. There is no monetary compensation for taking part in the study.

Section 7: Confidentiality

The responses will be strictly confidential and will not be used to identify any individual. It will be anonymous. No names or identity information will be captured. The responses will only be in the custodian of the primary investigator and safety of the same ensured by having a unique code and electronic passwords.

Section 8: Contact in case of further questions

In case you have further questions or clarifications you can contact

- AKU Site Investigator Diana Kassaman- Email: diana.kassaman@aku.edu or the primary investigator Dr. Karume Agnes- Email karumeagnes@gmail.com

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

- AKUN – Medical College Research Office Email: AKUKenya.ResearchOffice@aku.edu

  Contacts: 071109 2148/1136/1512

- KNH-UoN Ethics and Research Committee Email: uonknh_erc@uonbi.ac.ke P. O. Box 19676 Code 00202 Nairobi Tel. (254-020) 2726300-9 Ext 44355

Section 9: Commitment to take part in the research

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

Participation in the research study (Tick as applies)

I AGREE to take part in this research ☐

I DO NDON'T AGREE to take part in this research ☐

Participant's Name _____Signature:_____

Date: _____Time:_____

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

Investigator's Signature: _____ Date: _____/_____/_____Time_____

Investigator's Name: _____

Appendix 3: NACOSTI Research License

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: **207866**

Date of Issue: **26/August/2020**

RESEARCH LICENSE

This is to Certify that Dr.. AGNES KARUME of Strathmore University, has been licensed to conduct research in Nairobi on the topic: EFFECTS OF JOB CHARACTERISTICS, WORK CONTEXT AND JOB ATTITUDES ON WORK MOTIVATION: A STUDY AMONG LEVEL SIX HOSPITALS IN NAIROBI WITHIN THE CONTEXT OF COVID-19 RESPONSE for the period ending : 26/August/2021.

License No: **NACOSTI/P/20/6345**

207866

Applicant Identification Number

Director General
NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Verification QR Code

NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.

THE SCIENCE, TECHNOLOGY AND INNOVATION ACT, 2013

The Grant of Research Licenses is Guided by the Science, Technology and Innovation (Research Licensing) Regulations, 2014

CONDITIONS

1. The License is valid for the proposed research, location and specified period
2. The License any rights thereunder are non-transferable
3. The Licensee shall inform the relevant County Director of Education, County Commissioner and County Governor before commencement of the research
4. Excavation, filming and collection of specimens are subject to further necessary clearence from relevant Government Agencies
5. The License does not give authority to tranfer research materials
6. NACOSTI may monitor and evaluate the licensed research project
7. The Licensee shall submit one hard copy and upload a soft copy of their final report (thesis) within one of completion of the research
8. NACOSTI reserves the right to modify the conditions of the License including cancellation without prior notice

National Commission for Science, Technology and Innovation
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Website: www.nacosti.go.ke

Appendix 4: SU ERC Approval

Strathmore UNIVERSITY

18th July 2020

Dr Karume, Agnes
karumeagnes@gmail.com

Dear Dr Karume,

RE: Effect of Job Characteristics, Work Context and Job Attitudes on Employee Motivation in Two Level Six Hospitals Within the Context of The Covid-19 Response

This is to inform you that SU-IERC has reviewed and **approved** your above research proposal. Your application approval number is **SU-IERC0864/20.** The approval period is **18th July 2020 to 17th July 2021.**

This approval is subject to compliance with the following requirements:

i. Only approved documents including (informed consents, study instruments, MTA) will be used
ii. All changes including (amendments, deviations, and violations) are submitted for review and approval by SU-IERC.
iii. Death and life threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to SU-IERC within 72 hours of notification
iv. Any changes, anticipated or otherwise that may increase the risks or affected safety or welfare of study participants and others or affect the integrity of the research must be reported to SU-IERC within 72 hours
v. Clearance for export of biological specimens must be obtained from relevant institutions.
vi. Submission of a request for renewal of approval at least 60 days prior to expiry of the approval period. Attach a comprehensive progress report to support the renewal.
vii. Submission of an executive summary report within 90 days upon completion of the study to SU-IERC.

Prior to commencing your study, you will be expected to obtain a research license from National Commission for Science, Technology and Innovation (NACOSTI) https://oris.nacosti.go.ke and also obtain other clearances needed.

Yours sincerely,

STRATHMORE UNIVERSITY INSTITUTIONAL ETHICS REVIEW COMMITTEE (SU-IERC)
18 AUG 2020
TEL: +254 (0)703 034 000
P. O. Box 59857 - 00200
NAIROBI - KENYA

for Dr Virginia Gichuru,
Secretary; SU-IERC

Cc: Prof Fred Were,
Chairperson; SU-IERC

Ole Sangale Rd, Madaraka Estate. PO Box 59857-00200, Nairobi, Kenya. Tel +254 (0)703 034000
Email info@strathmore.edu www.strathmore.edu

Appendix 5: AKUH IERC approval

THE AGA KHAN UNIVERSITY

Faculty of Health Sciences
Medical College

Ref: 2020/IERC-123 (v3)
December 15, 2020

Ms. Diana Kassaman – AKU Site Investigator,
Dr. Agnes Karingo Karume – Masters of Business Administration, Strathmore Business School

Dear Ms. Kassaman and Team,

Re: EFFECTS OF JOB CHARACTERISTICS, WORK CONTEXT AND JOB ATTITUDES ON WORK MOTIVATION: A STUDY AMONG LEVEL SIX HOSPITALS IN NAIROBI WITHIN THE CONTEXT OF COVID-19 RESPONSE

The Aga Khan University, Nairobi Institutional Ethics Review Committee (IERC), is in receipt of your protocol resubmitted to the Research Office (RO) on November 23, 2020. With reference to the IERC letter Ref: 2020/IERC-123 (v2) dated November 11, 2020, the IERC reviewed and approved this project [*as per attached official stamped protocol and attachments - version Ref: 2020/IERC-123 (v3)*]. As per the NACOSTI Research License No: NACOSTI/P/20/6345, you are authorized to conduct this study from **December 15, 2020**. This approval is valid until **August 26, 2021** and is subject to compliance with the following requirements:

1. The conduct of the study shall be governed at all times by all applicable national and international laws, rules and regulations. IERC guidelines and Aga Khan University Hospital policies shall also apply, and you should notify the committee of any changes that may affect your research project (amendments, deviations and violations)
2. Researchers desiring to initiate research activities during COVID-19 pandemic must comply with the COVID-19 SOPs for Research as well as submit to the Research Office a Request Form to Initiate, Reinstate or Continue Research During COVID-19 Pandemic.
3. Please share with the Research Office (RO) a site approval from the Kenyatta National Hospital.
4. As applicable, prior to export of biological specimens/data, ensure a Material Transfer Agreement (MTA)/Data Transfer Agreement (DTA), is in place as well as seek shipment authority/permit from the relevant government ministry. Copies of these approvals should be submitted to the Research Office for record purposes.
5. All Serious Adverse Events and the interventions undertaken must be reported to the IERC as soon as they occur but not later than 48 hours. The SAE shall also be reported through the AKUHN quality monitoring mechanism(s) at Client Relations Department of the Chief of Staff's Office.
6. All consent forms must be filed in the study binder.
7. Further, you must provide an interim Progress Report Form **60 days before expiration** of the validity of this approval and request extension if additional time is required for study completion.
8. You must advise the IERC when this study is complete or discontinued and a final report submitted to the Research Office for record purposes. The hospital management should be notified of manuscripts emanating from this work.
9. While at AKUHN, please liaise with the Chief of Staff & Associate Dean Clinical Affairs Office for guidance on applicable protocols of the section that must be adhered to for the duration of data collection. If you have any questions, please contact Research Office at research.supportea@aku.edu or 020-366 2148/1136.

With best wishes,

Dr. Gloria Omosa-Manyonyi,
Vice Chair - Institutional Ethics Review Committee (IERC)
Aga Khan University, (Kenya)

cc: Co- Investigators

AK 965

3rd Parklands Avenue, off Limuru Road, P. O. Box 30270, GPO 00100, Nairobi, Kenya
Telephone: +254 20 366 2107/2109; Fax: +254 20 374 4035

Appendix 6: KNH – UoN ERC Approval letter

UNIVERSITY OF NAIROBI
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KENYATTA NATIONAL HOSPITAL
P O BOX 20723 Code 00202
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Telegrams: MEDSUP, Nairobi

Ref: KNH-ERC/A/438

30th November 2020

Dr. Agnes Karingo Karume
Reg. No.MBA/122819/2019
Strathmore Business School
Strathmore University

KENYATTA NATIONAL HOSPITAL
APPROVED
30 NOV 2020
KNH/UoN-ERC
P.O. BOX 20723 - 00202 NAIROBI

Dear Dr. Karume

RESEARCH PROPOSAL – EFFECTS OF JOB CHARACTERISTICS, WORK CONTEXT AND JOB ATTITUDES ON WORK MOTIVATION: A STUDY AMONG LEVEL SIX HOSPITALS IN NAIROBI WITHIN THE CONTEXT OF COVIF-19 RESPONSE (P525/9/2020)

This is to inform you that the KNH- UoN Ethics & Research Committee *(KNH- UoN ERC) has reviewed and* **approved** your above research proposal. The approval period is 30th November 2020 –29th *November* 2021.

This approval is subject to compliance with the following requirements:

a. *Only approved documents* (informed consents, study instruments, advertising materials etc) will be used.
b. *All changes* (amendments, deviations, violations etc.) are submitted for review and approval by KNH-UoN ERC before implementation.
c. Death and life threatening problems and serious adverse events (SAEs) or unexpected adverse events whether related or unrelated to the study must be reported to the KNH-UoN ERC within 72 hours of notification.
d. Any changes, anticipated or otherwise that may increase the risks or affect safety or welfare of study participants and others or affect the integrity of the research must be reported to KNH- UoN ERC within 72 hours.
e. Clearance for export of biological specimens must be obtained from KNH- UoN ERC for each batch of shipment.
f. Submission of a request for renewal of approval at least 60 days prior to expiry of the approval period. (*Attach a comprehensive progress report to support the renewal*).
g. Submission of an *executive summary* report within 90 days upon completion of the study. This information will form part of the data base that will be consulted in future when processing related research studies so as to minimize chances of study duplication and/ or plagiarism.

Protect to discover

For more details consult the KNH- UoN ERC website**http://www.erc.uonbi.ac.ke**

Yours sincerely,

PROF. M. L. CHINDIA
SECRETARY, KNH-UoN ERC

c.c. The Principal, College of Health Sciences, UoN
The Senior Director, CS, KNH
The Chairperson, KNH- UoN ERC
The Assistant Director, Health Information Dept, KNH
Supervisor: Dr. Ben Ngoye, Institute of Health Care Management, Strathmore University Business School

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