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Makanza, Patience

2023
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Makanza, Patience. (2023). The impact of human resource practices on employee productivity during the COVID-19 pandemic in the South African construction industry [Master's dissertation , University of the Witwatersrand, Johannesburg]. WireDSpace. https://hdl.handle.net/10539/39999

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Title

The impact of human resource practices on employee productivity during the COVID-19 pandemic in the South African construction industry.

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Research report submitted to the Faculty of Commerce, Law and Management, University of the Witwatersrand, in partial fulfilment of the requirements for the degree of Master of Business Administration

Johannesburg, May 31, 2023.

Protocol number: (WBS/BA2508886/567)

DECLARATION

I, Patience Makanza, declare that this research article is my own work except as indicated in the references and acknowledgements. It is submitted in partial fulfilment of the requirements for the degree of Master of Business Administration in the Graduate School of Business Administration, University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination in this or any other university.

Patience Makanza

Signed at ……POLOKWANE……

On the 27TH day of FEBRUARY 2023

DEDICATION

To my beloved family, my love Sly, my beautiful kids Brandon, Bradley ,Ayanna and my wonderful nanny Saru.

I dedicate this research project to you with all my heart. Your unwavering love, support, patience and encouragement have been my constant inspiration and motivation throughout this journey.

I am forever grateful for your understanding during the long hours spent studying and in online classes, the countless missed family days, and the stressful moments when I was impatient. Your belief in me has been the driving force behind my success, and I cannot thank you enough for everything you have done.

I dedicate this project to you as a small token of my appreciation and gratitude.

With all my love.

ACKNOWLEDGEMENTS

I would like to express my sincere gratitude to all those who have supported me throughout this project.

Firstly, I would like to thank the Almighty Jehova Shammah and Jireh he was always there and provided for everything.

I would also like to give gratitude to my supervisor Professor Jacob Mati whose guidance, support, and expertise have been invaluable. His feedback and constructive critique helped me to refine my ideas and produce a better-quality work.

I would also like to acknowledge the support of my boss Mr. TFV Ndou for his assistance financially and with time. As well as my colleagues from T2Tech and Diges for their support in collecting data.

I am also grateful to Mr Shelton Mandeya for his assistance in editing the report for this project.

Finally, I would like to extend my thanks to my family and friends especially Abomama, who have been a constant source of encouragement and support throughout this journey. Their patience, love and support have kept me motivated and inspired me to persevere through the challenges.

Without the support of these individuals, this project would not have been possible. Thank you all for your contributions and for believing in me.

ABSTRACT

The study examined the impact of human resource practices on employee productivity in the South African construction industry during the Covid-19 pandemic. Specifically, the study investigated four human resource practices - training, employee wellness, compensation, and employee engagement - to determine their impact on productivity, with the Covid-19 pandemic as the intermediary variable.

The study found that training had a positive impact on productivity, indicating that regular training opportunities should be provided to employees to enhance productivity. However, no conclusive evidence was found to support the hypothesis that training improved productivity during the pandemic. The study further revealed that compensation was strongly linked to productivity, but participants were indifferent about the impact of changes in compensation during the pandemic. The empirical evidence showed that although superiors offered support to their subordinates, participants were neutral about the link between employee wellness and productivity. Although it was discovered that employee involvement has a beneficial effect on productivity, participants were unable to affirm if it enhanced their performances during the epidemic as also reiterated by Ramakrishnan and Yogarajah (2021)

The results of the study have important repercussions for the South African construction sector, notably during the Covid-19 epidemic as also stated by Amoah and Simpeh, (2021).Construction businesses should follow the study's advice and pay attention to employee wellness, as it has a significant impact on productivity. Furthermore, companies should consider increasing compensation packages to improve productivity, and they should promote employee engagement as it positively impacts productivity. Overall, this study highlights the importance of human resource practices in improving employee productivity during the Covid-19 pandemic in the South African construction industry.

The recommendations presented in this study are crucial for construction companies in South Africa as they provide a basis for optimising employee productivity during challenging times. This study contributes to the existing literature on the impact of human resource practices on employee productivity during the Covid-19 pandemic

and calls for further research in this area to enhance the understanding of the best practices in human resource management during such crises.

Keywords: Human Resource Management Practices, Training and Development, Employee Wellness, Compensation, Employee Engagement, Employee Productivity, COVID-19 pandemic, South African construction industry

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CHAPTER 1: Introduction to the Study

1.1 Introduction

This study's main objective was to look at how HRM procedures affected worker productivity during the COVID-19 Pandemic in the South African construction industry, with a focus on the two businesses T2 Tech Engineers (Pty) Ltd and Diges (Pty) Ltd. T2 Tech Engineers was established in 2003 in South Africa. It is an engineering consulting firm that specialises in professional civil, structural and project construction, design and management. Diges Group (Pty) Ltd specialises in environmental engineering, geo-hydrology, civil and construction engineering and was established in South Africa in 2005.

Given the contemporary economic conditions, employee productivity is one of the vital foundations for not only organisational growth, but also its prosperity (Rodjam, Thanasrisuebwong, Suphuan, & Charoenboon, 2020). By definition, employee productivity in this study refers to the amount of output per given worker. In the same vein, the success of an organisation is closely related to the productivity of its employees. Empirical and theoretical studies, for example, Khalid (2007) and Singh and Mohanty (2010) concur that employee productivity provides the fertile and conducive ground for the success of an organisation. Given the significance of employee productivity as a crucial determining factor for organisational growth and prosperity, factors that determine employee productivity are a subject of interest in research spheres.

At the heart of employee productivity determinants, lies HRM practices. Literature authoritatively indicates that HRM practices significantly impact employee productivity (see Huselid, 1995; Zhu, 2005; Becker and Huselid, 2006; Nijssen and Paauwe, 2012; Adonu, Opuni, and Dorkenoo, 2020). Therefore, HRM practices incubate employee productivity, but despite these studies pointing to a common finding, one issue of interest is that they were all conducted under stable, non-pandemic conditions.

Given this background, it was interesting to investigate the impact of HRM practices on employee productivity under pandemic conditions, with the COVID-19 pandemic as a particular point of reference. This study attempted to fill this void in literature.

Using the reinforcement theory, the study examined how HRM procedures affected worker productivity in South Africa's construction sector during the COVID-19. The reinforcement theory by Skinner (1938) proposes that behaviour is influenced by its consequences, and it is either rewards or punishment that can be used to either reinforce or extinct a certain behaviour. The literature on the impact of HRM practices on employee productivity during the COVID-19 still remains scant. The proposed study , therefore, contributes to the extant but scant literature with the population of the study being employees and managers in the South African construction industry during the course of the pandemic.

1.2 Context of the study

HRM practices are a paradigm that connects personnel and innovation approaches to long-term organisational objectives (Mahfouz, et al., 2021). It is, therefore, focused on long-term resourcing in the framework of an organisational strategy, and the implications of any changes that may occur from the HRM practices. Erasmus, et al., (2014) define HRM practices as holistic processes that encompass recruitment and selection, training and development, compensation, performance management, and employee wellness. Given the changes in micro and macro environmental factors, HRM practices have also transformed and evolved over the years.

Although these practices have evolved over time, there was a relentless disruption caused by the novel coronavirus that ravaged the face of earth in 2020. Empirical literature documents that the COVID-19 pandemic influenced HRM practices to a greater extent (Bieńkowska, Salamacha, and Tworek, 2020; Montani and Staglianò, 2021). The COVID-19 pandemic forced organisations to adjust their HRM practices in response to various regulations that were imposed to curb the spread of the virus, for example, social distancing and hard-lockdowns which forced employees to work from home. These changes have been unprecedented and abrupt, hence forcing HRM practices to adapt and adopt newer strategies, principles and policies (Bienkwska et al., 2022).

During turbulent periods, organisations face challenges of employee management and changing social norms (Saleem and Khurshid, 2014). For example, under COVID-19, in order to gain more flexibility for employees to work in a work-life synergy and

enhance productivity, companies had to adopt work-from-home (WFH) culture (Bienkwska et al.,2022). In Europe, for instance, more than half of their workers partially worked from home (Galanti, et al., 2021). China and Italy prioritised the construction of hospitals and emergency facilities, thereby exempting the construction industry from being shutdown (Chen, 2021). However, the case was different for South Africa, which either completely or partially shut down the construction sector as a containment measure (Gigauri, 2020). Consequently, most construction companies experienced considerable delays in project delivery and employment losses while facing income loss, economic deterioration, and business interruption as a result of the COVID-19 pandemic (Aigbavboa, et al., 2022). It was crucial that the South African construction industry had to find the optimal strategies to deal with incidences of similar nature.

South Africa set five different alert levels to deal with the COVID-19 pandemic, ranging from level 1 – being the least restrictive, to level 5 – being the most strict and restrictive. During the earlier periods of COVID-19, in March 2020, South Africa was put under the most restrictive Alert level 5. Under level 5, virtually all non-essential operations were ground to a halt. The construction sector was not spared, with only activities deemed essential, like construction linked to the health sector, being exempt from closure. In these earlier days of the pandemic, which coincided with the Alert level 5, there was much confusion over the implementation of the HRM policies. Confusion and anxiety also engulfed the employees in the construction sector, with particular reference to their job securities. However, the government gradually loosened the regulations as time went by. Construction activities resumed from at least Alert level 4. By that time, HRM policies in the construction industry had adapted to the changes in the sector. Most office-bearing employees in the sector were encouraged to engage in remote work while the on-site employees like engineers and general construction workers had to continue with production. This brought changes to HRM practices. For example, regulations like ensuring that construction workers sanitised their hands, put on masks at all times and observed social distancing were put in place in an effort to save lives and to curb the spread of COVID-19.

Graves and Karabayeva (2020) as cited in Bieńkowska et al., (2022) remote work has been shown to improve employee performance by providing time flexibility, reduced

travel requirements, and the ability to hire from anywhere. Better job performance results from increased output quality, productivity, and job satisfaction from remote work. This is a general contention. Therefore, the researcher wants to explore if this is true for the construction industry in particular. Social isolation had a direct influence on worker productivity, with professional expertise, unstructured interactions, and organisational commitment acting as moderators in the relationship (Chaker, et al., 2021).

Against this background, this study investigated the impact of HRM practices on employee productivity under the conditions of COVID-19, with a particular focus on the South African construction industry. The study explored the impact of traditional HRM practices such as training, compensation, employee wellness, employee engagement on employee productivity in the South African construction industry.

1.3 Problem Statement

There is a great deal of published work on the influence of HRM practices on employee productivity (see for example, Bhatti and Qureshi, 2007; Singh and Mohanty, 2010; Nda and Fard, 2013; Samnani and Singh, 2014; Iqbal, Ahmad and Allen, 2019; Gan and Yuso, 2019; Cherif, 2020 and Wright and Gardener, 2021). Three issues can be raised on these studies. First, very few studies have been carried out in South Africa. Second, literature on the effects of COVID-19 on employee productivity is not only scant, but mostly covers the service industry, with very few studies focused on the construction industry (see Iqbal, et al., 2019 and Cherif, 2020 among others). Third, the results are inconclusive at best. For example, Iqbal, et al. (2019) and Cherif (2020) concur that HRM practices spur employee productivity while on the other hand, Samnani and Singh (2014) and Vega and Comer (2005) found contrasting evidence that some HRM practices may decrease employee productivity.

From the above, it is clear that there is a huge volume of studies that has documented the impact of HRM practices on employee productivity. However, the evidence is still scant on the relationship between these two variables under unstable conditions like the COVID-19 pandemic, and it also appears contrasting at best.

In light of this, this study looked at how HRM procedures affected worker productivity in the South African construction sector during the COVID-19 pandemic. In particular,

the study identified the HRM strategies that were put in place in the construction industry during COVID-19. It also assesses the impact of these strategies on employee productivity and the role played by the construction sector macro-environment in mediating the impact of HRM practices on employee productivity.

1.4 Research Objectives

The main objective of this study was to examine the in depth knowledge and understanding of the impact of HRM practices, that is, training, employee wellness, compensation and employee engagement, impact worker productivity in the construction sector during the COVID-19 pandemic and might be instructive for future HR professionals.

1.4.1 The sub-objectives

The sub-objectives of the study are:

- To establish how the existing HRM strategies impacted on employee productivity in the construction industry during COVID-19
- To identify HRM policies and strategies that were put in place in the construction industry during COVID-19.
- To determine the role of COVID-19 pandemic environment in mediating the impact of HRM practices on employee productivity in the construction industry.
- To provide recommendations on best HRM practices that improve employee productivity, knowledge and responsiveness in the construction industry, especially during emergency situations and pandemics, like COVID- 19.

1.5 Research Questions

The primary research question of the study queries the impact of HRM practices (training, employee wellness, compensation and employee engagement, on employee productivity during COVID-19 pandemic in the South African construction industry.

1.5.1 Sub-Questions

- How did existing HRM strategies impact on employee productivity in the South African construction industry during COVID-19?
- What were the new HRM strategies and policies put in place in the South

African construction industry during COVID-19?

- What role has the COVID-19 pandemic played in mediating the impact of HRM practices on employee productivity in the industry?
- Drawing from the above, what are the best HRM practices for improving employee productivity in the construction industry during a pandemic?

1.6 Significance of the study

By examining the impact of HRM practices on employee productivity under COVID-19 in the South African construction industry, this study enriches literature in various ways. As all the previous studies have explored the impact of HRM practices on employee productivity in non-pandemic situations, this study adds to the literature that has produced diverse views of the relationship between these variables. In addition, the topic of the impact of HRM practices on employee productivity has not been studied exhaustively. While there is a fairly limited number of studies that have directly examined the relationship between impact of HRM practices on employee productivity, during COVID-19 most of these studies were on the services sector. Therefore, the study contributes to the existing literature by probing the impact of HRM practices on employee productivity in the construction sector during COVID-19 pandemic and the related lockdown.

In turn, the overall findings of this study might be useful in establishing improved worker productivity, wellness and support of the on-site construction workers and the responsiveness especially during emergencies and pandemics like COVID-19. Today's knowledge economy demands investments in the human capital of the organisation and creation of a work environment where employees excel at their jobs. Hence, this study provides insights on how HRM practices in the construction sector can be adapted to better support employees during pandemics, and how these practices can contribute to increased employee productivity in the workplace, particularly in the construction industry.

1.7 Delimitations

Although efforts were made to ensure that the study covers as sufficient scope as possible to be empirically and scientifically defensible, a few limitations affect this

study. Firstly, this study was focused on two construction companies namely, T2 Tech Engineers and Diges (Pty) Ltd , hence, the results may not be generalised to other organisations. Secondly, the study relied mainly on a sample of T2 Tech Engineers and Diges (Pty) Ltd employees.

1.8 Assumptions

The study assumes that if a set of HRM practices are put in place in the right context and content, employee performance will improve. This, in turn will enable the organisation to get its strategic objectives more effectively than ever. The study assumes that the respondents are rational beings, who would reasonably respond to changes in the HRM policies.

1.9 Ethical considerations

The researcher was guided by the ethical code of conduct from the University of Witwatersrand. An ethical clearance was received before any contact with respondents was done. Caution was exercised throughout the research in order to remain ethical. Questionnaires were conveyed together with consent forms for the respondents. Data was collected anonymously and no personal information was collected. Participants were not forced to answer any questions if they so decided. Participants' confidentiality, anonymity and privacy has been protected at all times in this report. Use of other people's work will be cited and acknowledged.

1.10 Organisation of the study

This report of the study is organised as follows: This first chapter has provided introduction to the study which incorporates the purpose of the study the context of the study, the problem statement, study questions as well as the significance of the study. Chapter two provides the literature review on the impact of HRM practices on employee productivity. The research approach is discussed in Chapter 3. The analysis and interpretation of data are covered in chapter four. Chapter 5 summarizes the findings, makes recommendations, and conclusions drawn.

Chapter 2: Literature Review

2.1 Introduction

In this chapter, the study's framework is presented, and the existing literature is examined. The review of the literature covers both theoretical and empirical aspects. It focuses on various methods for studying the relationship between Human Resources Management (HRM) practices and employee productivity. Additionally, the conceptual framework used in the study is presented in this chapter.

2.2 Human Resources Management

Sanders and Lin (2016) suggest that the success of an organisation is highly dependent on its employees, who are shaped and motivated by HRM practices. Consequently, HRM plays a crucial role in organisations. The definition of HRM by Sanders and Lin highlights two critical elements: managing human capital and work, both of which focus on the human aspect and the employees' work.

In a similar vein, Jibrin-Bida (2017 as cited in Baloyi, 2020) defines HRM as techniques that put people first and treat employees like assets. To increase organizational performance, the main goal is to find and keep a skilled and dedicated personnel. This definition also emphasises the importance of human capital, and employees' role is vital for organisational success.

However, according to Boxall and Purcell (2003), certain factors that contribute to an organisation's uniqueness, such as culture, skills, motivation, and interpersonal relationships, cannot be easily replicated. Consequently, HRM practices in an organisation provide a competitive advantage necessary to outperform rivals. Therefore, organisations implement various practices and systems to motivate employees to enhance their performance.

2.3 Human Resources Management practices

As we gathered above, a company's workforce is a crucial component, and they also offer unique attributes that are not easy to replicate in other organisations. Employees being an integral part of an organisation, and offering unique attributes are grounds

for argument, however, what arises is the question of their contribution to an organisation. Employee contribution is only attained and optimised through the implementation of HRM practices that relates directly with the employee's wellbeing, which motivates them to change their attitudes towards work, thereby stimulating organisation's performance (Sanders and Lin, 2016). This ties the question of employees' contribution to an organisation with the HRM practices, leaving the burden of employee contribution to the actions and practices of HRM.

HRM practices are organisational initiatives aimed at managing and leveraging the human resources of a company to achieve its objectives, as described by Steyn et al. (2017). Alternatively, Boselie (2005) defines HRM practices as a set of carefully chosen techniques used to modify employees' attitudes in order to enhance the effectiveness and performance of the organisation. Baloyi (2020) citing Boselie (2005) and Dominguez-Falcón (2016), argues that these practices can be viewed as either a series of disparate actions with no discernible relationship or as a cohesive system of practices that are connected and collaborate to accomplish the organization's HRM goals . In other words, the HRM practices are designed to optimize the performance of human resources and contribute to the overall success of the organisation.

A number of HRM practices have been linked to employee productivity. Alsafadi and Altahat (2021) identify a number of variables as HRM practices linked these practices to employee productivity as including development, training, selection, appointment, and compensation systems. Nguyen et al., (2020) as cited in (Khan 2020) HRM practices are used to ensure that human resources contribute to the organization's goals and develop staff to increase their capability, potential, and incentive. Khan (2010) believes that the implementation of these HRM practices spur employee satisfaction, and hence productivity.

Kowalski and Loretto (2017) explained the nexus between HRM practices and employee productivity using a different vector of variables. Kowalski and Loretto (2017) explained that there is a positive relationship between training and development, employee engagement and compensation (as HRM practices), and employee productivity.Training improves the skills base of the employees which in turn increase their productivity. Koç, Cavus, and Saracoglu (2014) investigated the impact of various HRM practices, including training and development and compensation on

employee productivity. In particular, they examined how these practices affected employee perceptions and behaviour, in turn leading to employee productivity. One of the HRM practices they looked at was training and development, which helps to expand the skills and knowledge of employees, resulting in improved productivity and performance. Therefore, training and development can be seen as an essential HRM practice that contributes to the overall success of an organization.In a separate study by Liggans (2019), selection, performance appraisal, compensation as well as training and development were identified as the HRM practices that impacts employee productivity. Norm, Cyntia and Francisco (2017) employed organisational commitment in its normative dimension, based on reciprocity and respondibility as value to the work where a link to the organisation based on loyalty of workers set was developed as an independent variable for employee productivity. Cherif (2020) also identiified organisational commitment as an HRM practice, although in this instance it was the dependent variable.

From the theory reviewed above it can be noted that the most common HRM practices are training and development, employee wellness, compensation, employee engagement, and motivation. Accordingly, a critical review of the literature relating to these variables follow and hypothesis will be formed.

2.3.1. Training and development

Training is the organised way in which organisations provide development and enhance quality of new and existing employees (Nda and Fard, 2013). It is a systematic approach of learning and development that improve individual, group and organisation (Khawaja and Nadeem, 2013). It therefore, includes a series of activities embarked upon by an organisation, leading to knowledge or skills acquisition with the hope of encouraging employee productivity. The process of training is comprehensive and covers a wide range of activities. It commences with the orientation of newly recruited employees, and continues with the acquisition of job-specific skills, leadership development, and professional training opportunities. Overall, the training process encompasses all the different ways in which an employee can acquire the knowledge and skills required to perform their job effectively, develop their career, and contribute to the success of the organisation (Jibrin-Bida, *et al*., 2017).

Although training and development is often used in theory as a phrase having two words with one meaning, however, Nda and Fard (2013) drew an analogy between the two variables. Nda and Fard (2013) defined employee development as activities that leads to the acquisition of new knowledge or skills for purposes of growing, hence enhancing their capabilities.

Be that as it may, the terms training and development are rarely used separately in literature, but in unison. Apart from the acquisition of skills, either through on the job training, professional training or induction, training and development assumes also the role of mentorship, which, Woods and West (2014) argued that training and development provides employees with a neutral and objective resource for guidance and education. Apart from mentorship, career coaching is also crucial as a training and development variable that encourages career development and advancement.

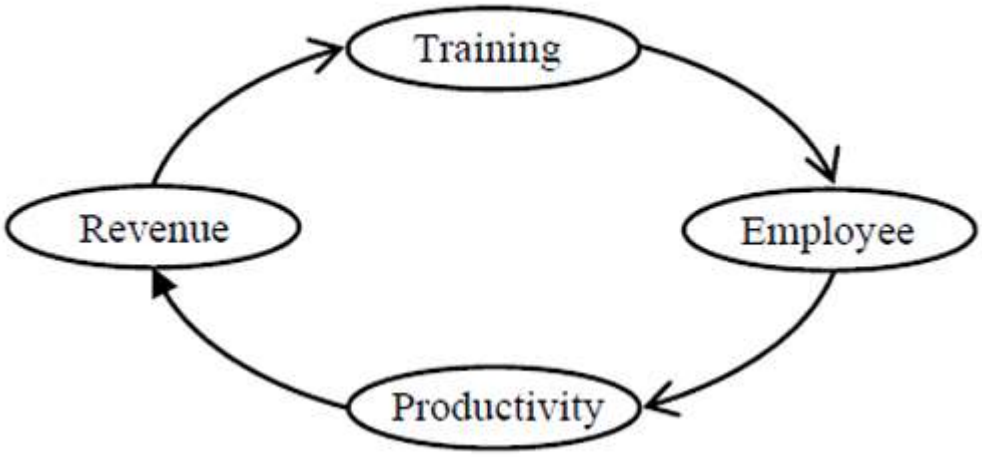
There is evidence in literature that training and development spurs employee productivity. For instance, Woods and West (2014) proposes that mentorship and career coaching as training and development proxies, results in employees having impartial support and capacity optimisation that enables them to perform their work better, leading to an improvement in employee productivity.

Moreover, training and development provides individuals with the ability to work better to reach their highest possible potentials (Alsafati and Altahat, 2021). Through training and development, employees are awarded a chance to reach their maximum potential through realising both their tacit and implicit knowledge, which is unlocked through training and development. Apart from unlocking tacit and implict knowledge, training and development also imparts skills necessary to perform tasks more quicker and skilfully.

Singh and Mohanty (2012) also supported that investing in training and development on employees on various aspects such as decision making, teamwork, problem solving and interpersonal relations has beneficial impact of the organisations' level of growth, as well as impacting on employee productivity. Training and development has a stimulating effect on the behaviour of employees as well as their performance in turn (Satterfield and Hughes, 2007). Singh and Mohanty (2012) created a model that links training and development to productivity and revenue, where, training an employee

leads to an increase in productivity, which in turn leads to an increase in revenue. An increase in revenue will in turn have enough proceeds to sponsor further training, hence the circle goes on. Figure 1 illustrates the cycle by Singh and Mohanty (2010).

Figure 1: Training and Productivity relationship cycle



Source: Singh and Mohanty (2010:51)

Given this background, we therefore assume the following:

H1: *Training and development has a positive impact on employee productivity under conditions of the COVID-19 pandemic.*

2.3.2. Employee wellness

Employee wellness is defined as a process in which an employee understands their health risks and adopting healthy behaviours to supress these risks (Ngeno and Muathe, 2014). Employee wellness programmes may include health risk awareness programmes, health risk management and screening, psychological counselling and lifestyle management, educational endeavours such as seminars, health coaching, on-site fitness facilities among others (Lee, Blake and Lloyd, 2010).

Theories can be used to explain the link between employee wellness and employee productivity. One such theory that can be used is the Maslow (1943) hierarchy of needs, which suggests that human needs can be classified into five broad categories and that these categories can be arranged in a hierarchy of importance. The five categories explained in order of importance are: physiological, security, belonging,

esteem and self-actualisation needs. For the purpose of this section, the Maslow hierarchy of needs will only be explained in line with the physiological needs. In line with Maslow's theory, an employee is only motivated first and foremost after attaining the physiological needs i.e. those basic needs such as shelter, food, clothing and health. Employee wellness is obtained if employees, at bare minimum, have access to the physiological needs, which are the lower level but crucial needs. The theory then explains that, only after attaining these needs, can an employee start to require other higher-level needs. This makes physiological needs the most critical. It is then important that an organisation ensures that employee wellness is ensured.

Apart from the Maslow hierarchy of needs, Herzberg also explains the importance of employee wellness as a necessary condition for employee productivity. The Herzberg theory suggests that there are factors in a job which enhances productivity. The factors are divided into two categories: hygiene and motivational factors. Motivators are those factors that are intrinsic to the job and they create job satisfactions which include achievement, recognition, autonomy and other intrinsic aspects when fulfilled. Although they stimulate motivation, their absence, however, does not result in demotivation.

On the other hand are the hygiene factors. These factors, if absent, result in demotivation. However, when present, they do not cause any remarkable increase in motivation. Examples of such factors are salary, working conditions, status, company policies and administration (Saiyadain, 2009).

Workplace wellness programmes generally include any health promotion intervention policies, or activities in the workplace designed to improve health outcome of workers (Lee*, et al*, 2010). Such workplace wellness programmes fall under the Herzberg's motivators. They motivate employees if present, but their absence does not demotivate employees. Their presence therefore motivates employees, leading to an increase in productivity.

Given this background, we can assume the following hypothesis:

H2: *Employee wellness has a positive impact on employee productivity under the conditions of COVID-19 pandemic*

2.3.3. Compensation

Hassan,(2016) defines the act of compensating employees for work they have performed with money or other types of payment as compensation. Normal salary, extra payments, bonuses, allowances, business shares, and fringe perks are all possible forms of compensation. According to Jibrin-Bida et al. (2017), compensation refers to any sort of payment made to workers in exchange for work they have completed for the company.

Some businesses utilise competitive pay and perks to attract and keep talented personnel (Hassan, 2016). However, compensation and perks are not the only factors that workers take into account when deciding whether or not to stay with the company. Other factors such as motivation and employee wellness among others, are also considered. However, this points to a crucial note that compensation is a necessary precondition for an employee's productivity but not a sufficient factor.

Compensation is not limited to payment for work done but also includes performance rewards, which are benefits connected to the employee's job performance, in addition to regular pay. These rewards are given to employees who perform their duties satisfactorily and above average. Employee incentives are intended to help companies find and keep qualified employees, giving them a competitive edge over rivals. (Edirisooriya, 2014). According to Edirisooriya (2014), performance compensation and recognition are the most significant factors that impact employees. Extrinsic incentives are material and unconnected to a worker's job, but inbuilt benefits are qualitative and personally fulfilling consequences, such as satisfaction in accomplishments.

It is public knowledge that the highest cause of labour unrests lies in compensation disputes. Labour unrests in the form of strike actions in both private and public organisations underscores the significance that employees attach to compensation (Yamoah, 2013). The prevalence of strike results in a decrease in the number of hours workers dedicate towards their work, which will lead to a decrease in output per worker – productivity.

Apart from strike action, employees may also engage in other forms of industrial action that may take long to notice. Examples of such actions are go-slows where workers

deliberately work below their capacity, which will take a knock-on effect on production, and productivity ultimately.

Given this background, the following hypothesis can be obtained:

H3: *Compensation is positively related to employee productivity under the conditions of COVID-19 pandemic*

2.3.4. Employee engagement

Employee engagement, is defined as how each individual employee connects with their organizations and interacts with the organization's stakeholders while it is absent, is referred to as psychological unemployment, Johnson & Carland, (2006). In the same vein, Fleming, Coffman and Harter (2005) employed the term committed employees as a synonym for engaged employees. On the other hand, Wellins and Concelman (2004) call employee engagement, “the illusive force that motivates employees to higher levels of performance”. Employee engagement is defined further as a dedication to the organization, pride in one's work, initiative, enthusiasm, and excitement, as well as dedication to results and indeed the bottom line , Johnson & Carland, (2006). Further, it is the feelings or attitudes employees have toward their jobs and organisations. Put together, this implies that employee engagement is the employee’s commitment towards their work.

Little and Little (2006) conceptualised employee engagement from different perspectives. They criticised the existing body of literature on failures to provide water tight definitions. First, is engagement an attitude or a behaviour, since attitudes refer to affective responses to an object or situation, while behaviours are responses to attitudes and actual behaviours. Second, engagement occur at the individual or group level? If the phenomena is an individual one, it may be investigated on a personal level; if it is a group phenomenon, testing for within-group and between-group variations should be conducted(Johnson & Carland, 2006).

A number of proxies are used to measure employee engagement in literature. For instance, Bedarkar and Pandita (2014) asserts that employee engagement can be

driven by the leadership traits, work-life balance and communication within the organisation.

Employee engagement provides employees with the liberty to make their work exciting and creating an environment for having an engaged work life. In turn, employees get space and time to make a perfect blend of work and fun at workplace. This leads to happy employees who can transfer their happiness to their work, hence more productive.

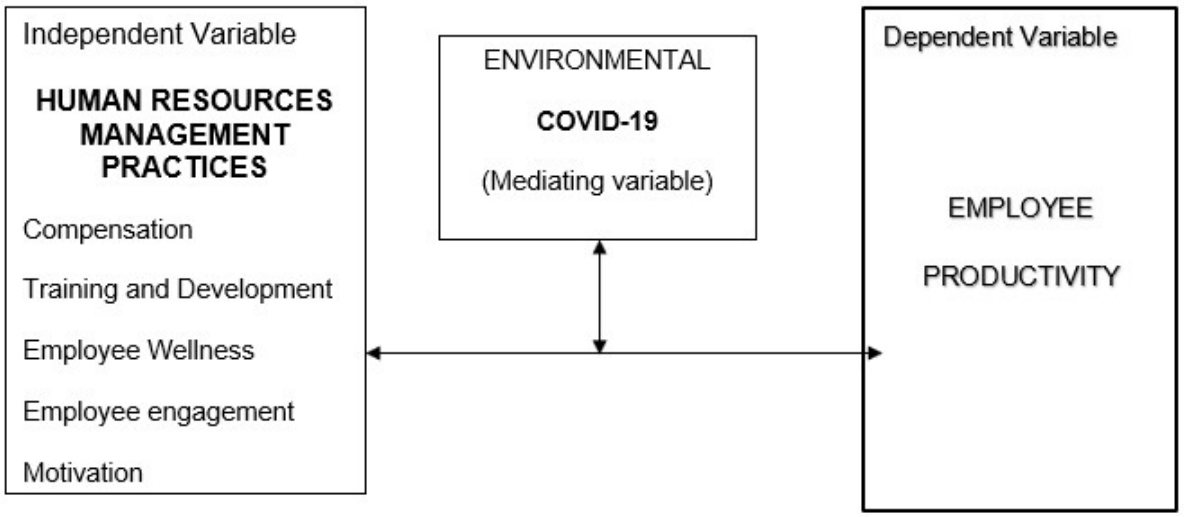
Given this, the following assumption can be made:

H4: *Employee engagement is positively related to employee productivity under the conditions of COVID-19 pandemic*

2.4. Conceptual framework

Given the review of literature above, a conceptual framework can be drawn. The evidence obtained overwhelmingly supports that training and development, compensation, employee wellness and employee engagement are the human resource management practices that affects employee productivity. These variables are assessed under the conditions of COVID-19. The mediating variable therefore become COVID-19. Since the impact of these variable are assessed vis-à-vis employee productivity, it follows that employee productivity becomes the dependent variable. Figure 3 illustrates the conceptual framework.

Figure 3: Conceptual Framework linking human resources practices to employment productivity under the conditions of COVID-19



2.5. Concluding remarks

This chapter has provided a review of literature, both empirical and theoretical. HRM policies variable have been discussed and the literature that links them to employee productivity were discussed. The HRM practices discussed are training and development, employee wellness, employee engagement, compensation and motivation. In closing, a conceptual framework was built.

Chapter 3: Research Methodology

3.1. Introduction

The previous chapter explored literature on the impact of HRM practices on employee productivity under COVID-19 conditions. Building from that, this chapter discusses the research design, research philosophy, research methods, data collection as well as how the data analysis was performed.

3.2. Objective and Significance of the Study

This study investigated the impact of HRM practices on employee productivity in the South African construction industry under the condition of COVID-19. The specific HRM practices investigated in this study were training and development, employee wellness, compensation, employee engagement, and motivation. The main objective of the study was to examine knowledge and understanding of the impact of HRM practices on employee productivity during the COVID-19 pandemic in the South African construction industry. Accordingly, the sub-objectives of the study were:

- To establish how existing HRM strategies impacted on employee productivity in the construction industry during COVID-19
- To identify HRM policies and strategies that were put in place in the construction industry during COVID-19.
- To determine the role of the COVID-19 pandemic environment in mediating the impact of HRM practices on employee productivity in the construction industry.
- To provide recommendations on best HRM practices that improve employee productivity, knowledge and responsiveness in the construction industry, especially during emergency situations and pandemics, like COVID- 19.

This chapter details how these objectives were met in the study and sets the context for the chapter that follows on the analysis of the data collected. Given the scant literature on the HRM practices in the South African construction industry, we hope that this study will significantly contribute to knowledge in the HRM spheres especially in pandemic situations.

3.3. Scope of the study

An understanding of the scope of the study was important it helped in the efficient allocation of resources as we conducted the research. The scope of this study included aspects such as where the study was conducted, what was researched, and who was studied. Accordingly, the scope of the study is the construction companies in South Africa.

3.3.1. The Survey Area

The study area was the HRM practices in the South African construction industry during pandemic situations. This was carried out on two construction companies in South Africa, that is, T2 Tech Engineers (Pty) Ltd; and Diges (Pty) Ltd, which will we selected due to their convenience and proximity to the researcher. The researcher stays closer to the company in order to reduce financial impact.

3.3.2. The survey population

The study population which is the employees in the South African construction industry. It was from this population that a sample was drawn. We did random sampling of the employees. Given the hurdles in studying the entire population, two companies from the construction industry were selected for the study that is Diges Group and T2 Tech Engineers.

3.3.3. The study sample

Because it is virtually difficult to include every respondent from the population in the study, a representantive of the population was drawn (Bryman and Bell, 2011). Two steps were conducted in sampling the population, one being a sample of the two companies -Diges Group and T2 Tech Engineers in the construction sector, and the second being the respondents from these companies. From the two selected construction companies, a survey was conducted on a randomly selected sample of 100 employees, ranging from low to top management level.

3.3.4. Sampling techniques

Two sampling techniques were employed in this study. This first technique - which falls under the non-probability techniques – the convenience sampling technique was applied to select the companies from a pool of construction companies. Convenience

sampling was used in select, that is Diges Group and T2 Tech Engineers due to their physical proximity to the researcher.

After convenience sampling of the companies, simple random sampling of individual participants was performed. Simple random sampling gave every potential participant in the population a known and equal chance of being selected, giving it superiority to other sampling techniques (Saunders*, et al.,* 2016). Because potential participants stood an equal chance of being selected, this increased randomness while reducing bias.

The study followed the methodology described in literature by Israel (1992) in determining the sample size. Given a margin of error of 5%, a population size of about 105 potential participants, and where the confidence level is 95%, the study focused on a sample of 80 participants, as per Israel (1992)'s calculations.

3.4. Research Approach

The study employed quantitative research methods to determine the significance of HRM practices on employee productivity during COVID-19 pandemic in South African construction industry. This was informed by Maree's (2011) explanation that quantitative research methods entail a methodology of leveraging quantitative data from only a small subset of a population to draw inferences that is systematic and objective.

For the purpose of this research, quantitative research method was chosen over other methods due to its ability to discover facts about social phenomena and having measurable reliability. Bhattacherjee (2012) states that quantitative research generally involves the collection of primary data from large numbers of individuals, frequently with the intention of projecting the results to a wider population.

3.5. Research Strategies

The study made use of a case study approach using the two construction companies in South Africa. The research employed the use of explanatory case studies, based on these two companies. The explanatory case studies were chosen since it is often

used when researchers are interested in looking at cause-and-effect relationship, as well as different phenomena and investigating hypotheses (Waters, 2007).

3.6 Data Collection Methods

The research made use of primary data obtained from the participants through the use of a self-administered questionnaires that was sent through emails and WhatsApp electronic means. Specifically, a questionnaire was designed on Google Forms. The forms was set not to collect personal data such as email addresses. Afterward, emails with the Google Forms link to the questionnaire was emailed and forwarded to the potential recipients. Although the questionnaire was designed such that a participant will complete it within 10 minutes, an allowance of 2 weeks was given to participant to allow for convenience. Google forms collated the results, which were downloaded onto a Microsoft excel spreadsheet and uploaded into The Statistical Package for the Social Sciences (SPSS).

3.7 Research Instrument

A formal self-administered questionnaire (attached in Appendix 1) was utilised as the data collection instrument. The questionnaire, whose questions were adapted from previous three previous studies (Aladwan, 2012; Alfes, *et al*, 2019; Ashiedu, 2009; Mani, 2021; Ntimba, 2019) comprised of closed questions. The researcher took into account the qualities of a good questionnaire as outlined by Bhattacherjee (2012). These are:

- the ability of the questionnaire design to provide required data. This was achieved through having a good number of closed ended questions which are aligned to the research objectives.
- designed to encourage respondents to become involved in the research. The questionnaire was designed in such a way that it would be brief, and created a rapport with the respondents before it delved into matters that concerned the study,
- designed to minimise response errors. This was achieved through having a good number of closed ended questions.
- proper question content and sequencing, which was attained through logical sequencing of questions; and

- Avoiding sensitive or provoking questions. No sensitive questions, nor personal questions were asked in this regard.

3.7.1. Questionnaire design, wording and structure

The questionnaire was designed to minimise time spent to complete the same in order to prevent inconveniencing the respondents during their business times and lunch breaks.

The first step that the researcher took was to define the specific information that was required and the type of survey that was to be conducted. An electronic questionnaire was chosen because it was less complex than those used in personal interviews. Secondly, the researcher established the question content ensuring that every question contributed to achieving the objective of the research under study.

The questionnaire comprised both open-ended and closed-ended questions with the majority being the latter. Open-ended questions were used so that respondents use their own words to provide information that could have not been foreseen. The structured or closed questions were used to specify the permitted responses and make certain information aware to the respondent. Under structured questions, dichotomous questions only had two response alternatives, such as yes or no.

Bless and Smith (2000) reiterates that questions must be phrased so that respondents can clearly and easily understand them. In this regard, leading questions, complex questions vague words were avoided by using plain language that could be clearly understood. The questions were laid out in an interesting manner to avoid boredom. This was done through a basic personal information at the beginning and later on introducing complex questions at the end.

3.7.2. Pre-testing the questionnaire

According to Cant *et al*., (2008) as cited in Utamalie *et.al* (2022)(UTAMALIE et al., 2022) Pre-testing a measurement instrument is administering a freshly created survey to a limited sample of study participants in order enable the researcher to uncover and address any possible issues before the tool is widely used. The process of pretesting helped the researcher to improve on questionnaire content, layout and, intuitiveness.

The questionnaire was pretested on a group of 10 colleagues. Errors were reported to the researcher. These errors included a repeated question and spellings which were rectified before the questionnaire was deployed to the intended recipients. The responses collected during the pre-testing stage were not used for data analysis.

3.8. Data Analysis

Having detailed the process through which the sample was drawn, as well as the data collection, this section provides a discussion on the data analysis. Statistical procedures and tests that were used to analyse and give some inferential conclusions on collected data. Data analysis for this study was done using Statistical Package for the Social Sciences (SPSS) software.

Data analysis for the study includes descriptive statistics, as well as inferential statistics, such as the Chi-square tests, ANOVA and Pearson's correlation. The Chi-Square test were used as a test for association whilst Pearson`s correlation was used to analyse the relationships between variables. The Chi-square were used to test the goodness of fit of the research hypotheses which the given data conforms or follows the given distribution (Cooper and Schindler, 2006). The Chi-square test was used to test association between variables and performed by cross-tabulating two variables (Cooper and Schindler, 2006). ANOVA was also applied to test the differences in information obtained through data collected from the respondents. ANOVA was used to test for significant differences in situations where the variables were more than two.

3.9. Validity and reliability

Babbie (2007) defines validity as the degree to which an empirical measure accurately reflects the true meaning of the subject under consideration. To see if the measured variables accurately reflect the number of constructs, Confirmatory Factor Analysis (CFA) was employed. This ia a multivariate statistical method for detecting if observable variables and their underlying latent components were linked. CFA assisted the researcher in determining which constructs were legitimate versus the invalid. When an instrument measures the same item several times and returns the same results, it is considered to be reliable (Salkind, 2014).

3.10. Sampling errors

An inevitable disadvantage of sampling results is errors (Sedgwick, 2012). There might be difference between a parameter and an estimate due to the sampling process known as the sampling error (Sedgwick, 2012). On the other hand, there are errors which occur in all surveys regardless of whether a sample or a population is used, these are known as non-sampling errors.

- **Response errors** in this study, the researcher minimized the occurrence of response errors by carefully constructing the questionnaires and formulating short and straightforward questions. Personal and open-ended questions were kept to a minimum. The use of self-administered questionnaires assisted the researcher in reducing response errors because it clarified the questions which the respondents did not understand.
- **Non response errors** arose from the failure to contact all the respondents in the ample or failure of the respondents to respond to the questionnaire (Bryman and Bell, 2011). These were reduced to the ideal minimum by making use of the self-administered questionnaires. A direct interaction with the respondents through took place and respondents were assured that total confidentiality was guaranteed.

3.11. Ethical Considerations

Saunders *et al.* (2016) as cited in in Utamalie *et.al* (2022) points out that ethics are principles of conduct that serve as a guide for decisions regarding one's own behavior and interactions with others. Salkind (2009) lists four fundamental research moral values: no harm to subjects, informed consent, anonymity, and privacy. First, only those participants who are willing to participate in the study were engaged with. Second, the researcher looked for informed consent from the participants. Third, no personal information was collected to ensure anonymity, and confidentiality was attained through any identifiable information from the participants being kept private. Last, no harm in its various forms, (that is, physical, self-esteem, inflicting stress or harm to future prospects) was subjected to the participants. The researcher acquired Ethical Clearance from the Wits Business School`s Research Ethics Committee which gave ethical approval in the research instruments for conducting research.

3.12. Conclusion

This chapter detailed how the study will empirically tested the study objectives. It provided details regarding the scope of the search, sampling techniques as well as data collection. Reliability, as well as validity issues, were also addressed. In closing, ethical considerations were also provided.

Chapter 4: Analysis and Interpretation of Results

4.1. Introduction

The previous chapter discussed the research methodology used to gather and examine data. This chapter focuses on analysing and interpreting the research results with the main objective of investigating the impact of human resource practices on employee productivity during the COVID-19 pandemic in the South African construction industry. This involves validating, editing, coding the data, then entering and organising it. The findings are visualised using tables, bar graphs, and pie charts, and hypothesis testing is also performed.

The chapter first deals with the demographic data before delving into human resource practices. Afterwards, attention was drawn towards the relationship between the HRM practices and employee productivity using various inferential statistics.

4.2 Demographic Data

This section explains the demographic information of the survey participants. The number of targeted employees from the survey was 260 from the two companies – T2-Tech Engineers and Diges Group. A response rate of 40% was expected from this total, which would have been 104 respondents. However, after multiple rounds of emails to the participants reminding them to complete the survey questionnaire, a response rate slightly higher than 31,20% was realised, translating to 80 responses.

Individual attributes like age, gender, educational attainment, and length of service can have an impact on employee productivity (Tett and Burnett, 2003; Le, *et al.,* 2011; Yang and Hwang, 2014). This then justifies the analysis of demographic information in this study. An analysis of demographic information will be given in the subsections that follows.

4.2.1. Gender distribution

An analysis of gender distribution enabled the researcher to get a snapshot of the gender distribution in the sample population. Figure 4.1 illustrates the gender distribution from the study.

Figure 4.1: Gender distribution

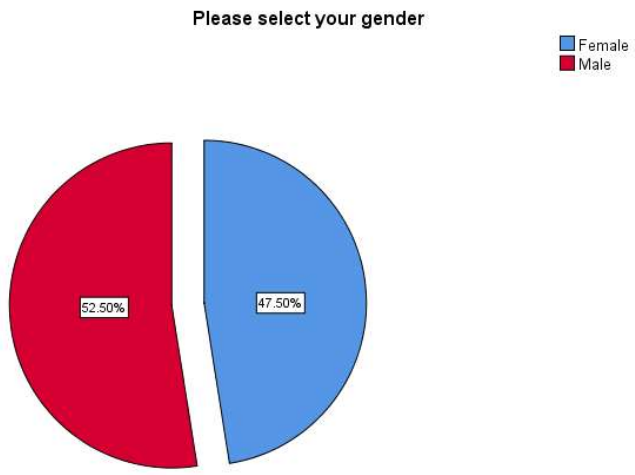
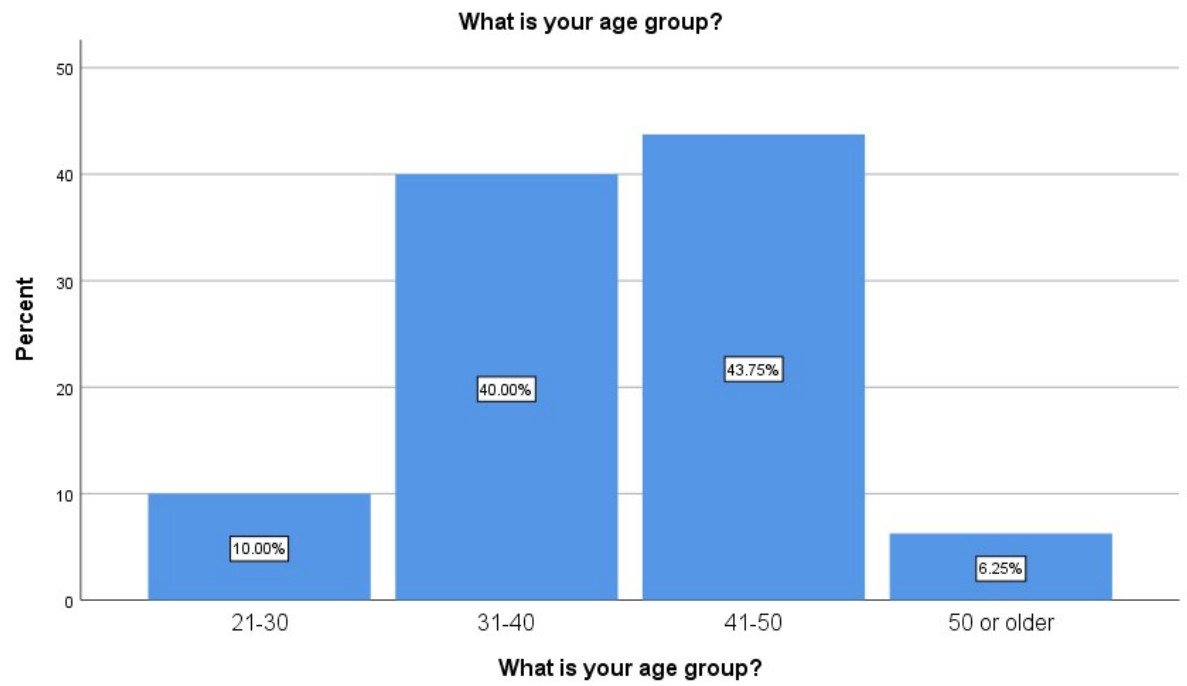


Figure 4.1 illustrates that in a sample of 80 respondents, 52.50% of the participants were males, while females were 47.50%, leading to an inference that there are more males than females in the sample population. This is consistent with the national statistics of women in the South African construction industry, which is reported to be between 46% and 48% (see Agherdien and Smallwood, 2008; Mariam, Olalusi and Haupt, 2021). These results confirm the historical gender imbalances in the construction industry, not only in South Africa but the world over.

4.2.2. Age Distribution

The information on age distribution enabled the researcher to establish the age group that is more active in the South African construction industry, but more specifically in the sample population. Figure 4.2 illustrates the information in the age distribution of the research participants.

Figure 4.2: Age Distribution of the participants



While Figure 4.2 provides the visuals of the age distribution of the participants, further information can be revealed through the means of a frequency table illustrating the frequency, percentages, as well as cumulative percentages

The questionnaire also gave an allowance for those below the age of 20. However, none of the participants fell under this category. From the information illustrated in Figure 4.2, more than four in five employees (80%) in the construction sector within the sample population fall between the age of 31 and 50 years. Since the study only considered those who are at least supervisors or higher in the construction sector, the trends may illustrate that it takes considerably longer for workers in the construction industry to get promoted to the supervisory levels or higher positions. A study by Xie, Luo and Zhao (2022) corroborates this as they found that factors such as age and working years are critical factors that affect construction worker's career promotion. Promotion is mainly related to the tenure of employment as opposed to the qualifications in the construction industry.

One would have expected the share of those who are above the age of 50 to be high in the construction industry as is the case in a number of countries such as the United States (see Zhao, 2019). However, the lower proportion of the old aged in the

construction industry in South Africa can be explained by the lower life expectancy, which the StatsSA (2022) estimated to be 59.3 years for males and 64.6 for females.

Having established that one of the factors that leads to career promotion in the construction industry is the tenure of employment, the subsection that follows delves into the tenure of employment for the study participants.

4.2.3. Tenure of employment

While tenure of employment is classified under the demographics in this study, it can also be utilised for drawing inferences on employee productivity. Tenure of employment provides a reflection of the HRM practices. Effective HRM practices would be reflected by longer tenure of employment, while ineffective practices would be indicated by high employment turnover. Also, tenure of employees comes with routine experience, which may also increase employee productivity. Figure 4.3 reflects the tenure of employment for the participants.

Figure 4.3: Tenure of employment

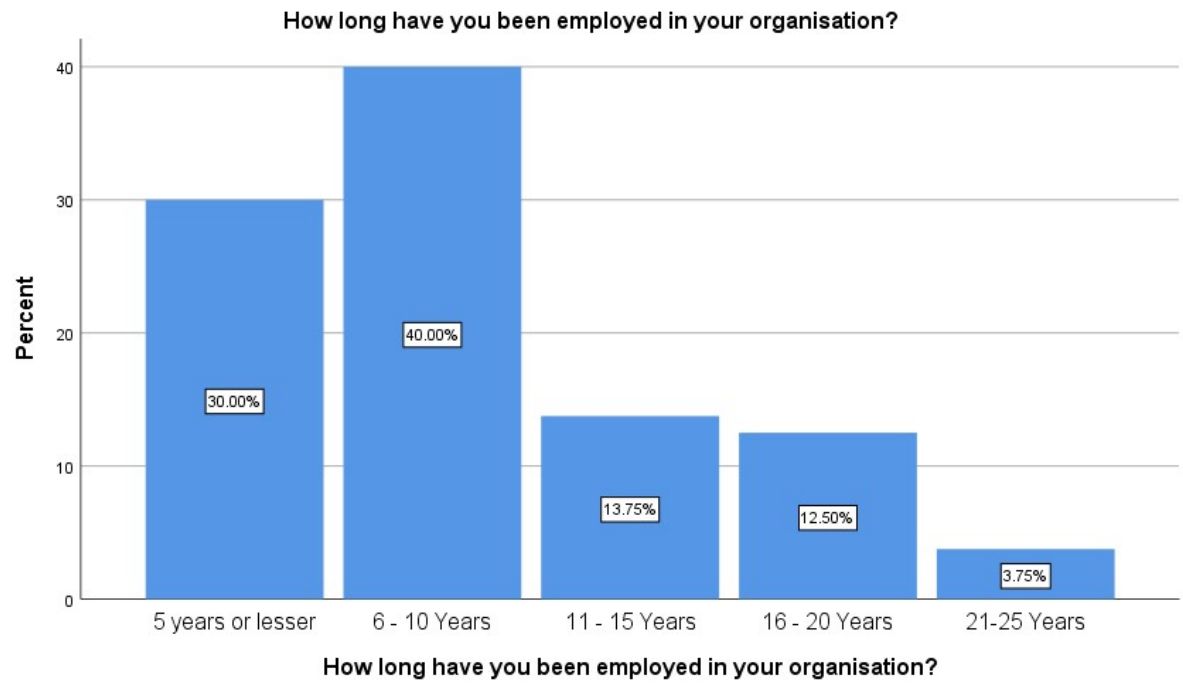


Figure 4.3 illustrates that 70% of the respondents have stayed with the organisations under study for at most 10 years. The study findings also reveal that 70% of the participants stayed with their organisation for at least 6 years, which is a considerably

long tenure of employment. However, it is in most cases those who would have stayed with their organisations the most who would be in leadership positions. The 30% that falls within the 5 years or lesser have a higher chance of being millennials, who are young and sensitive to HRM policies and the working environments. Apart from the tenure of employment, the level of qualifications is another demographic factor that affects employee productivity. Accordingly, the following subsection details the highest qualifications attained by the participants.

4.2.4. Highest Qualifications

The participants were asked to indicate their highest level of qualifications. Figure 4.3 illustrates the highest levels of qualifications for the participants.

Figure 4.3: Highest Qualifications



The information obtained from the participants regarding the levels of highest qualifications tends to follow a normal distribution marked by the extremes of those with PhDs as their highest qualifications and matric as the lowest qualifications. The highest concentration of the participants falls within these two extremes. Most of the participants have either honours or masters qualifications. The data shows that most employees in managerial positions within the construction industry are qualified with at least a diploma.

4.2.5. Job Descriptions

After having considered the tenure of employment and the level of qualifications, the factor next examined under the demographics is the job description of the participants. As with theories like the Maslow Hierarchy of needs and the Herzberg two-factor theory, motivation increases with earnings, and promotions, as indicated by the job descriptions. Figure 4.3 illustrates the job descriptions provided by the participants.

Figure 4.3: Job Descriptions



It would have been expected to obtain a largest proportion of participants being supervisors since they are the majority in the management structures of, not only the construction sector but also across various industries. However, the participants were made up of more than 50% being either middle level managers or senior managers. The reason behind this anomaly could be explained by the nature of work in the construction sector, which deters lower levels employees form having time off that could have afforded them responding to the survey. Lower-level management, and employees in the construction sector are involved with the physical work, while upper-level management spends most of their time in the offices.

4.2.6. Highest qualifications vs Job Description

It is also important to investigate if trends exists between qualifications and job descriptions in the construction industry. In addition, as argued in section 4.2.3 the tenure of employment may also be the basis for seniority within the construction industry, section 4.2.7 will also examine this relationship. Table 4.3 illustrates the relationship between job descriptions and the level of education.

Table 4.3: Job Descriptions and Level of Education

		Please select your highest qualification						
		Less than matric Count	Matric Count	Diploma Count	Degree Count	Honours Count	Masters Count	PhD Count
Select your current description of your current job	Supervisor	0	0	8	6	6	0	0
	Middle Management	0	2	5	4	8	7	0
	Senior Management	0	0	0	2	9	9	1
	Executive	0	0	1	2	3	7	0

The information from the participants shows that those without matric are not in any managerial position. Further, the pattern seems to illustrate that the higher the qualification, the more senior a position one obtains. However, more reliable inferences can be done by running correlations tests. Table 4.4 illustrates the Pearson correlation coefficient from the SPSS output.

Table 4.4: Correlation between qualifications and seniority

Bayes Factor Inference on Pairwise Correlations[a]

		Select your current description of your current job	Please select your highest qualification
Select your current description of your current job	Pearson Correlation	1	.469
	Bayes Factor		.001
	N	80	80
Please select your highest qualification	Pearson Correlation	.469	1
	Bayes Factor	.001	
	N	80	80

a. Bayes factor: Null versus alternative hypothesis.

The Pearson correlation coefficient obtained is 0.469 which illustrates the existence of a positive relationship between qualifications and seniority, although the relationship is moderately weak.

4.2.7. Tenure of employment vs Job Description

The relationship between tenure of employment and the seniority should also be examined given that the tenure of employment can be utilised as the basis for seniority. Further, employee productivity tends to increase as the tenure of employment. Table 4.5 illustrates the relationship between the tenure of employment and seniority.

Table 4.5: Tenure of Employment vs seniority

		How long have you been employed in your organisation?						
		5 years or lesser Count	6 - 10 Years Count	11 - 15 Years Count	16 - 20 Years Count	21-25 Years Count	26 - 30 Years Count	At Least 31 Years Count
Select your current description of your current job	Supervisor	8	8	3	1	0	0	0
	Middle Management	12	8	2	4	0	0	0
	Senior Management	1	12	3	4	1	0	0
	Executive	3	4	3	1	2	0	0

The information obtained from the participants regarding the tenure of employment and the seniority points to two interesting findings. One, a positive relationship seems to be present until 10 years of tenure within an organisation and seniority, while second, afterwards a negative relationship occurs. This points to a non-monotonic relationship between the two variables.

Having analysed these factors, the section that follows details the descriptive statistics.

4.3. Descriptive Statistics

The study utilized descriptive statistics to identify patterns and provide a summary of the data. The primary focus of this analysis was on the mean and standard deviation, which are two key measures of descriptive statistics. The study evaluated four different human resource management practices, and the results are presented accordingly.

It is worth noting that descriptive statistics are just one of many tools used in data analysis. This measure is important because it allowed the researcher to get a sense of the central tendency and variability of the dataset, which was useful in identifying trends and making comparisons. Additionally, visualising the data using plots such as histograms and box plots provided valuable insights into the distribution of the data.

A Likert scale with five responses was used to answer the closed questions that were provided under the HRM practices. The Likert scale had 1 as strongly disagree, 2 as

disagree, 3 as neutral, 4 as agree and 5 as strongly agree. Therefore, for analysis, if the mean is closer to 5, it implies that on average, participants strongly agree to the question, while a mean closer to 1 denotes strong disagreement with the question. The median, which is the central observation, was used for analysis instead of the mean in cases of either positive or negative skewness. Positive skewness occurs when there is an occurrence of a few extremely large values, in this instance, being a strongly agree responses. On the other hand, negative skewness is when the data has a few extremely large negative values, being in this instance, strongly disagree. Also, positive skewness is characterised by having the mode that is lower than the median, while the median will be lower than the mean. The opposite is true for negative skewness.

For the context of this study, if negative skewness is present, it then implies that most of the responses were towards either agreeing or strongly agreeing while positive skewness implies that most of the responses were either disagreeing or strongly disagreeing.

4.3.1. Training: Descriptive Statistics

The participants were asked various questions regarding training as a human resources management practice. The descriptive statistics on the questions are summarised in Table 4.6.

Table 4.6: Training Descriptive Statistics

Item	Questions	Mean	Median	Mode	Skewness
T1	Employees in our organisation receive training throughout their professional lives.	3,80	4,00	4	-0,940
T2	Employee training and development policies cover all the personnel in the organisation	3,65	4,00	4	-0,785
T3	Employees focused support for professional learning will help improve recruitment and retention	4,21	4,00	4	-1,784
T4	Newly recruited employees are mentored by skilled and highly regarded senior officials	3,63	4,00	4	-0,903
T5	This organisation provides me with training opportunities enabling me to extend my range of skills and abilities	3,79	4,00	4	-1,090
T6	I get the opportunity to discuss my training and development requirements with my employer	3,75	4,00	4	-0,902
T7	My work pays for my work-related training or development requirements I want to undertake	3,78	4,00	4	-0,961
T8	This organisation is committed to the training and development of its employees	3,74	4,00	4	-0,787
T9	Experienced employees who want to further their professional learning after some years in the profession are supported	3,80	4,00	4	-1,162
T10	During COVID-19, I was offered training to suit the COVID-19 induced changes	3,00	3,00	3[a]	-0,124
T11	My work pays for my work-related training or development requirements I want to undertake during the course of COVID-19	3,00	3,00	4	-0,133
T12	The trainings offered to me during COVID-19 assisted me to discharge my duties	3,08	3,00	3	-0,153
T13	Without the training offered to me during COVID-19, I wouldn't have been successful in carrying out my day-to-day work.	2,65	3,00	2	0,341
T14	I feel that the trainings offered to me during the course of COVID-19 were more of a necessity than a mere luxury (human desires)	3,19	3,00	3	-0,130

a. Multiple modes exist. The smallest value is shown.

All the questions that were presented to the participants, but not centred on the role of COVID-19 recorded a mean of at least 3.63, which is closer to 4, implying that participants largely gave affirmation to the questions. Further, the median obtained throughout was 4, implying that at least 50% of the participants either agreed, or strongly agreed to the questions posed. The mode recorded was also 4 for all the items, which implies that most of the participants agreed to the questions. Also, interestingly, the questions also generated negative skewness, implying that most of the participants were either agreeing or strongly agreeing.

The questions that were focused on the role of COVID-19 on training generated lower means, medians and the modes. Item T10, with a questions which reads, “During COVID-19, I was offered training to suit the COVID-19 induced changes”, has a mean of 3, implying that, on average, participants were indifferent if they were offered trainings that suited the changes that were brought in due to adjust to the changes owing to COVID-19. The median recorded is 3, and the mode is 3, further confirming that most of the participants were indifferent. The same also goes for item T12 which links the trainings offered during COVID-19 to the discharge of duties. Again, the participants were neutral and indifferent. Consistently the participants also disagreed that the trainings they were offered during the course of COVID-19 were necessary in carrying out their duties. This further implies that the participants could not see a relationship between the training that was offered to them during the course of COVID-19 and their productivity.

4.3.2. Employee Wellness: Descriptive Statistics

The participants were also asked various questions regarding employee wellness as a human resource management practice. The descriptive statistics are illustrated in Table 4.7.

Table 4.7: Employee Wellness Descriptive Statistics

Item	Questions	Mean	Median	Mode	Skewness
EW1	I engage in exercises such as jogging, swimming, brisk walking, etc	3,78	4,00	4	-0,688
EW2	I maintain a healthy weight, avoiding overweight and underweight	3,69	4,00	4	-0,884
EW3	I include a variety of fruits and vegetables in my diet	3,93	4,00	4	-1,119
EW4	I have close friends, relatives or others with whom I talk about personal matters and call on for help when needed	3,89	4,00	4	-1,278
EW5	My superiors are supportive to my personal matters	3,56	4,00	4	-0,643
EW6	My work environment is supportive to my personal wellbeing	3,49	4,00	4	-0,679
EW7	The HRM department understands my personal wellbeing, and it take precedence over work	3,06	3,00	4	-0,184
EW8	During the course of the COVID-19 pandemic, I could maintain my peace of mind	3,24	4,00	4	-0,527
EW9	During the course of COVID-19 pandemic, my superiors were supportive to my personal matters	3,60	4,00	4	-0,536
EW10	During the course of COVID-19, the HRM department understood my personal wellbeing, and it took precedence over work	3,38	4,00	4	-0,821
EW11	The employee wellness programmes offered to me during COVID-19 improved my productivity	3,13	3,00	4	-0,188
EW12	My job leaves me with enough time for family or personal life	3,15	3,00	4	-0,162
EW13	My job is influenced by wellness programmes	2,76	3,00	3	-0,012

The first item under employee wellness sought to determine if the participants engage in employee wellness activities. On average, the participants agreed, and about half of the participants either agreed or strongly agreed while the most of them agreed. Participants also affirmed that they maintain healthy lifestyles and have support systems of friends. Participants also confirmed that their work environments are supportive, however, the descriptive statistics shows that their peers and work environments are more supportive than their HRM departments. About 50% of the participants agreed or strongly agreed that their work environments are supportive to their well-being, as shown by the median equivalent to 4, while support from their HRM departments had a median of 3.

Regarding the role played by employee wellness as a HRM practice during COVID-19, the participants, on average, agreed that their superiors were supportive, while they were neutral on the employee wellness programmes improving their productivity.

4.3.3. Compensation: Descriptive Statistics

The participants were asked eight questions pertaining to compensation as an HRM practice. Of these eight questions, three of them were centred on effect of compensation on employee productivity during the course of the COVID-19 pandemic. Table 4.8 illustrates the demographics for compensation.

Table 4.8: Descriptive Statistics for compensation

Item	Questions	Mean	Median	Mode	Skewness
C1	This organisation pays well	3,13	3,00	3	-0,397
C2	I am fairly satisfied with my current salary	2,76	3,00	2	-0,062
C3	My effort towards work is well compensated	3,01	3,00	4	-0,426
C4	This organisation offers a good benefits package compared to other similar organisations	2,98	3,00	3	-0,190
C5	My compensation remained the same, or at least improved the course of COVID-19	3,23	4,00	4	-0,458
C6	Changes in the compensation structure during the course of COVID-19 improved my productivity	2,74	3,00	3	0,268
C7	My effort towards work during the course of COVID-19 was well compensated	2,91	3,00	3	0,108
C8	On a scale of 1 to 5 (1 as least likely, and 5 as the most likely) how well connected is your performance to your productivity	3,98	4,00	5	-0,744

The first three questions sought to establish how the participants feel about how they are compensated. The first item asked if their organisations pay them well. On average, participants were neutral, as indicated by the mean value of 3. Also, most of them were responded neutral on the question, as indicated by the mode of 3. Regarding satisfaction with their current salaries, the respondents, on average disagreed that they are satisfied, and most of them disagreed that they are satisfied. However, most of them felt that their work effort commensurate with their compensations.

During the course of COVID-19, most of the participants agreed that their compensation either remained the same or improved, as indicated by the mode equivalent to 4. Asked if changes in the compensation structures during the course of COVID-19 improved their productivity, the mode and the median shows that most of them were neutral. The Pearson coefficient of skewness recorded was 0.268, which denotes positive skewness, implying that most of the respondents either disagreed or strongly disagreed that the compensation structures improved their productivity during the course of COVID-19. The same goes for their effort being well compensated during the course of COVID-19.

The last question asked the participants to rank, from 1 to 5, 1 being least likely and 5 being most likely, how well connected their performance is to their productivity. The mode obtained was 5, indicated that most of them feel that their productivity is well connected to the compensation they receive. The mean also shows that on average the participants agreed with this statement.

4.3.4. Employee engagement: Descriptive Statistics

The participants were also asked questions regarding employee engagement as a HRM practice. The participants were asked nine questions, of which three of them were focused on the effect of employee engagement as a form of an HRM practice on their productivity during the course of COVID-19 pandemic. The rest of the questions sought to establish if there is a relationship between employee engagement and productivity, as well as if it exists within their organisations. Table 4.9 illustrates the demographic trends for employee engagement.

Figure 4.9: Descriptive Statistics for employee engagement

Item	Questions	Mean	Median	Mode	Skewness
EE1	Promotions are handled fairly, and there is an atmosphere of openness and trust	2,86	3,00	3	-0,032
EE2	I am well involved in decisions that affect my work	3,53	4,00	4	-0,705
EE3	I am involved in decisions that affect work in general, even if it does not affect my work directly	3,43	4,00	4	-0,573
EE4	I am fully engaged to my work	4,13	4,00	4	-1,291
EE5	There is trust and cooperation between teams.	3,51	4,00	4	-0,681
EE6	Team counselling is often done to help employees develop trust and cooperation	2,71	3,00	2[a]	0,012
EE7	Employee engagement programmes in my organisation continued as normal after the emergence of COVID-19	3,01	3,00	4	-0,532
EE8	The employee engagement programmes introduced during the course of COVID-19 helped to either maintain or improve my productivity at work	3,10	3,00	3	-0,700
EE9	Trust and cooperation between and within teams continued as normal during COVID-19	3,35	4,00	4	-0,829

a. Multiple modes exist. The smallest value is shown.

Regarding employee engagement, on average, participants were indifferent on the fairness of how promotions are handled , in specific reference to openness and trust. Most of the respondents were also indifferent, as shown by the mode of 3. However, it seems most of the participants agreed that they are involved in decisions that affects their work, as shown by the mode of 4, as well as the negative skewness of -0.705. The same also applies to decisions that affects their work in general, even if it does not affect their work directly.

Turning over to the issues concerning employee engagement during the course of COVID-19, on average, participants were indifferent if employee engagement programmes continued as normal after the emergence of COVID-19. Also, they were neutral on the question whether employee engagement improved their productivity during the course of COVID-19. However, majority of them agreed that trust and cooperation between and within firms continued as normal during the course of COVID-19.

4.4. Exploratory Factor Analysis

While descriptive statistics provides valuable information about the sample, inferential statistics takes it one step further by allowing the researcher to make predictions and generalisations about the population, test hypotheses, and estimate population parameters. Because of this, the study goes further to perform inferential statistical analysis. Inferential statistics go beyond what descriptive statistics can do by allowing the research to make predictions and generalisations about the population based on sample data. This is a crucial step in the research process because it allows research to make inferences about a larger group of individuals or objects based on a smaller sample of data.

In order to understand the relationship between variables and simplify the number of variables, an exploratory factor analysis was conducted. A number of tests were run to determine the suitability of exploratory factor analysis. The Kaiser-Meyer-Olkin (KMO) test was performed. The KMO test is performed to assess whether there are enough items for each factor in the sample. The KMO test score ranges from 0 to 1, with a value of less than 0.5 indicating an inadequate sample.

The results of the Bartlett's test of sphericity indicate that there are patterned relationships in the data, as the p-value is less than 0.05. After loading the data, the researcher created factors associated with the variables and ranked them in order of highest to lowest.

4.4.1. Training

The KMO and Bartlett's tests were performed for the practice – training and presented in Table 4.10.

Table 4.10: KMO and Bartlett's test for Training

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.857
Bartlett's Test of Sphericity	Approx. Chi-Square	606.357
	df	91
	Sig.	.000

The KMO measure of sampling adequacy is 0.857, which is greater than 0.6, we should therefore proceed with exploratory factor analysis. The Bartlett's test of sphericity p value is significant, further indicating that we can proceed with the exploratory factor analysis. The next step is the determination of number of factors based on the SPSS output.

Table 4.11: Determination of Factors: Training

Training

Statement	Component		
	Factor 1	Factor 2	Communalities
This organisation is committed to the training and development of its employees	.867		0.762
Experienced employees who want to further their professional learning after some years in the profession are supported	.857		0.711
This organisation provides me with training opportunities enabling me to extend my range of skills and abilities	.780		0.829
I get the opportunity to discuss my training and development requirements with my employer	.762		0.563
My work pays for my work-related training or development requirements I want to undertake	.719		0.581
Employees in our organisation receive training throughout their professional lives.	.680		0.497
Employee training and development policies cover all the personnel in the organisation	.622		0.549
The trainings offered to me during COVID-19 assisted me to discharge my duties		.915	0.839
g COVID-19, I was offered training to suit the COVID-19 induced changes		.882	0.764
My work pays for my work-related training or development requirements I want to undertake during the course of COVID-19		.825	0.744
Without the training offered to me during COVID-19, I wouldn't have been successful in carrying out my day-to-day work.		.779	0.562
I feel that the trainings offered to me during the course of COVID-19 were more of a necessity than a mere luxury (human desires)		.680	0.599
Employees focused support for professional learning will help improve recruitment and retention		.794	0.546
Newly recruited employees are mentored by skilled and highly regarded senior officials	.336		0.502
Cronbach's Alpha	0.891	0.609	

Factor 1 represent the training practices that were existing before the COVID-19 pandemic, while the other factor denotes the training practices during COVID-19 . These demonstrate how each factor and the relationships between the latent factor are correlated.The question that reads “This organisation is committed to the training and development of its employees” has a reliability coefficient of 0.867, indicating that the question has a significant link with component 1, which is the retrospective.

The first 7 questions and the last question (as per order in Table 4.11) are related to factor 1.

The Cronbach’s alpha for Factor 1 is 0.891, while for factor 2 is 0.609. The Cronbach for factor 1 denotes excellent, while the one for the second factor is moderate. Cronbach’s alpha is a measure of internal consistency; that is, how closely related a set of items are as a group. It is important to consider the independent variables column, which shows the link between an existing variable and other factors or items, in order to provide appropriate findings if communalities are less than 0.3. it suggests that a small sample size may have influenced the results. However, in this study, all communalities are above 0.3, indicating that the results are less likely to be affected by sample size.

4.4.2. Employee Wellness

Table 4.12 illustrates the KMO and Bartlett’s test for employee wellness.

Table 4.12: KMO AND Bartlett’s test for Employee Wellness

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.756
Bartlett's Test of Sphericity	Approx. Chi-Square	445.750
	Df	78
	Sig.	.000

The KMO measure of sampling adequacy is 0.756, which is greater than 0.6, while the Bartlett’s test of sphericity’s p-value denotes significance. The next step is to reduce the factors. Table 4.13 below illustrates the factor extraction for employee wellness.

Table 4.13: Factor extraction for employee wellness

Employee Wellness

	Component			
	1	2	3	4
My superiors are supportive to my personal matters	.873			
I have close friends, relatives or others with whom I talk about personal matters and call on for help when needed	.772			-.335
My work environment is supportive to my personal wellbeing	.748			
During the course of COVID-19 pandemic, my superiors were supportive to my personal matters	.695			
I engage in exercises such as jogging, swimming, brisk walking, etc		.869		
I maintain a healthy weight, avoiding overweight and underweight		.844		
I include a variety of fruits and vegetables in my diet	.362	.725		
My job is influenced by wellness programmes			.867	
The employee wellness programmes offered to me during COVID-19 improved my productivity			.809	
My job leaves me with enough time for family or personal life			.624	
During the course of COVID-19, the HRM department understood my personal wellbeing, and it took precedence over work			.521	
The HRM department understands my personal wellbeing, and it take precedence over work	.324		.457	.345
During the course of the COVID-19 pandemic, I could maintain my peace of mind				.964
Cronbach Alpha	0.639	0.344	0.765	0.669

Employee wellness produced four factors, with three of them having Cronbach alpha greater than 0.6, and one that is poor and equal to 0.344.

4.4.3. Compensation

The tables for compensation are indicated below.

Table 4.14: KMO and Bartlett's test for Compensation

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.822
Bartlett's Test of Sphericity	Approx. Chi-Square	322.248
	Df	28
	Sig.	.000

The KMO measures of sampling adequacy for compensation recorded is 0.822, while the Bartlett's test of sphericity's p-value is significant. The next step is extraction of factors, which is illustrated in the table that follows.

Table 4.15: Factor extraction for Compensation

Compensation

	1	Communalities
I am fairly satisfied with my current salary	.958	.789
This organisation pays well	.955	.658
My effort towards work is well compensated	.884	.865
This organisation offers a good benefits package compared to other similar organisations	.640	.724
My effort towards work during the course of COVID-19 was well compensated	.561	.364
On a scale of 1 to 5 (1 as least likely, and 5 as the most likely) how well connected is your performance to your productivity	.540	.792
Changes in the compensation structure during the course of COVID-19 improved my productivity	.436	.660
My compensation remained the same, or at least improved the course of COVID-19	.412	.524
Cronbach's Alpha	.876	

The compensation variables were found to have high internal consistency, with a Cronbach alpha of 0.876 indicating their reliability. Additionally, all the variables were found to have communalities greater than 30%, suggesting that the results obtained are acceptable and not distorted by a small sample size.

4.4.4. Employee engagement

The KMO measures of sampling adequacy was performed, as well as the Bartlett's test of sphericity. The results are illustrated in the table below.

Table 4.16: KMO and Bartlett's test for employee engagement

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.767
Bartlett's Test of Sphericity	Approx. Chi-Square	295.962
	df	36
	Sig.	.000

The Bartlett's test produced a result of 0.0, which is less than 5%, but the KMO gauge of sample adequacy statistic was determined to be 0.767, indicating a sufficient number of items for each component. This demonstrates how distinct a correlation matrix is from an identity matrix. The table below is an illustration of the extraction matrix.

Table 4.17: Factor extraction for employee engagement

Employee Engagement

	Component		
	1	2	Communalities
Trust and cooperation between and within teams continued as normal during COVID-19	.864		.896
Employee engagement programmes in my organisation continued as normal after the emergence of COVID-19	.832		.852
The employee engagement programmes introduced during the course of COVID-19 helped to either maintain or improve my productivity at work	.826		.845
Team counselling is often done to help employees develop trust and cooperation	.749		.751
There is trust and cooperation between teams.	.477	.477	.632
I am well involved in decisions that affect my work		.887	.781
I am involved in decisions that affect work in general, even if it does not affect my work directly		.868	.485
I am fully engaged to my work		.734	.854
Promotions are handled fairly, and there is an atmosphere of openness and trust		.525	.843
Cronbach's Alpha	.857	.652	

The variables were loaded into two factors where factor 1 had the first 5 questions. The 5th question was loaded to both factors. Factor 2 had questions 5 to 9. It seems the first factor had employee engagement factors related to COVID-19, while factor 2 had the rest. The strongest association was recorded for the variable under factor 1, being 0.864.

For factors 1 and 2, the Cronbach's alpha values are 0.857 and 0.652, respectively, demonstrating dependability and internal consistency.

4.5. Correlation Analysis

The researcher used the correlational analysis to examine the relationship between the factors that were identified through the Exploratory Factor Analysis (EFA). Correlation was used to determine if there is any connection, link, or dependence of at least two variables. The correlation coefficient is a number that ranges from -1 to 1. If the value is 1, it indicates a strong positive relationship between the variables. On the other hand, a value of -1 shows that there is a strong inverse relationship between the variables, meaning that as one increases, the other decreases.

The factors that were extracted with the exploratory factor analysis are illustrated in the table below.

Table 4.18: Factors from the EFA

EFA FACTORS		
Factor	Description	Cronbach's Alpha
Factor 1	Existing training Practices	0.891
Factor 2	Training Practices under COVID-19	0.609
Factor 3	Employee Wellness 1	0.639
Factor 4	Employee Wellness 2	0.604
Factor 5	Employee Wellness 3	0.765
Factor 6	Employee Wellness 4	0.669
Factor 7	Compensation	0.876
Factor 8	Employee engagement during COVID-19	0.857
Factor 9	Existing Employee engagement practices	0.652

Pearson's rank correlation was then performed on the factors listed in the table above. The table 4.19 shows the Pearson's factor correlations.

Table 4.19: Pearson's factor correlations

Correlations									
	Factor 1	**Factor 2**	**Factor 3**	**Factor 4**	**Factor 5**	**Factor 6**	**Factor 7**	**Factor 8**	**Factor 9**
Factor 1	1								
Factor 2	0.745	1							
Factor 3	0.247	0.499	1						
Factor 4	0.411	0.382	0.501	1					
Factor 5	0.503	0.200	0.586	0.149	1				
Factor 6	0.114	0.045	0.743	0.417	0.522	1			
Factor 7	0.604	0.854	0.762	0.658	0.684	0.209	1		
Factor 8	0.509	0.652	0.301	0.726	0.654	0.351	0.533	1	
Factor 9	0.648	0.421	0.349	0.361	0.608	0.801	0.627	0.771	1

From the correlations, it can be deduced that training practices that existed before COVID-19 pandemic, and the existing employee engagement practices are moderately correlated with a coefficient of 0.648. The relationship between the training practices that existed before COVID-19 and those introduced during COVID-19 shows a strong positive correlation.

The correlation between employee's feelings about how their compensation structures are connected to their productivity and the all the other factor is strong positive, or moderately positive with the exception of its relationship with one of the factors under employee wellness.

4.6. Conclusion

The chapter performed a number of statistical tests, starting with the demographic information, and second the descriptive statistics and the inferential statistics. The descriptive statistics illustrates that, with regards to training, participants agreed that training improves their productivity, but were indifferent if it improved their productivity during COVID-19. However, regarding the impact of employee wellness as a HRM practice during the COVID-19 pandemic, the participants generally agreed that their superiors were supportive, but were neutral on the effectiveness of employee wellness programs in improving their productivity. On compensation, the participants confirmed that compensation is strongly linked to their performance. However, they were indifferent on the improvement on productivity due to changes in compensation during COVID-19. The last practice that was investigated was employee engagement, which participants agreed that engagement improves their productivity. However, they neither confirmed nor deny that employee engagement improved their performance during COVID-19.

Chapter 5: Conclusion And Recommendations

5.1. Introduction

The South African construction industry, like many others around the world, has faced a number of challenges due to the COVID-19 pandemic. The impact of the pandemic has led to a need for organisations to reassess their human resource management (HRM) practices in order to continue to maintain and improve employee productivity. The purpose of this study was to investigate the impact of HRM practices on employee productivity during the COVID-19 pandemic in the South African construction industry. This study aimed to establish how existing HRM strategies have impacted employee productivity in the construction industry during the pandemic, identify HRM policies and strategies that have been put in place, and determine the role of the COVID-19 pandemic environment in mediating the impact of HRM practices on employee productivity. The HRM practices under study include training, employee engagement, compensation, and employee wellness. The findings of this study contributes to a better understanding of the role of HRM practices in the South African construction industry during the COVID-19 pandemic and provide insights for organisations to improve employee productivity in this challenging environment.

5.2. Research Objectives

The primary objective of the study was:

To examine the impact of HRM practices, that is, training, employee wellness, compensation and employee engagement on employee productivity during COVID-19 pandemic in the construction industry.

The secondary objectives were:

i. To establish how the existing HRM strategies impacted on employee productivity in the construction industry during COVID-19
ii. To identify HRM policies and strategies that were put in place in the construction industry during COVID-19.
iii. To determine the role of COVID-19 pandemic environment in mediating the impact of HRM practices on employee productivity in the construction industry.

iv. To provide recommendations on best HRM practices that improve employee productivity, knowledge and responsiveness in the construction industry, especially during emergency situations and pandemics, like COVID- 19.

5.3. Research Questions

The primary research question in the study was:

What are the impact of HRM practices (training, employee wellness, compensation and employee engagement) on employee productivity during COVID-19 pandemic in the South African construction industry?

The secondary research questions were:

i. How did existing HRM strategies impact on employee productivity in the South African construction industry during COVID-19?
ii. What were the new HRM strategies and policies put in place in the South African construction industry during COVID-19?
iii. What role has the COVID-19 pandemic played in mediating the impact of HRM practices on employee productivity in the industry?
iv. Drawing from the above, what are the best HRM practices for improving employee productivity in the construction industry during a pandemic?

5.4. Summary of findings

5.4.1. Summary of findings on the main objective

The primary objective of the study was to examine the impact of HRM practices, that is, training, employee wellness, compensation and employee engagement on employee productivity during COVID-19 pandemic in the construction industry. In respect of the primary objective, the following findings emerged:

i. Training improves employee productivity. However, there was no conclusive evidence to prove that training improved productivity during the course of the COVID-19 pandemic. This finding is in line with empirical evidence from studies such as De Grip and Sauermann (2013) as well as Pedrini and Cappiello (2022) who find evidence that training improves productivity.
ii. Regarding employee wellness, empirical evidence obtained shows that although superiors offer support to their subordinates, however, they were

neutral on the link between employee wellness and productivity. Studies such as Galanti, *et al.,* (2021) also found similar results.

iii. On compensation, there was a consensus by participants that it is strongly linked to their productivity. However, they were indifferent on the improvement on productivity due to changes in compensation during the course of the COVID-19 pandemic. Similar results were also obtained from studies such as one by Daniel (2019) who found a positive relationship between compensation and employee productivity.

iv. Employee engagement improves productivity; however, the participants could not deny nor confirm that employee engagement improved their performance during COVID-19. The finding corroborates with studies such as Moletsane, Tefera and Migiro (2019) who performed their study on the relationship between employee engagement and productivity in South Africa.

5.4.2. Summary of findings on the secondary objective

The study had three empirically testable hypotheses. The first empirically testable hypothesis was to establish how the existing HRM strategies impacted on employee productivity in the construction industry during COVID-19. The objective was in a way a subset of the main objective. Regarding the HRM practices that were in existence, although they are all linked to employee productivity, however, evidence suggests that none of them improved productivity.

The second secondary objective sought to identify HRM policies and strategies that were put in place in the construction industry during COVID-19. Evidence obtained suggests that no particular policies were put in place different from the ones that were in existence before.

The third objective reads “to determine the role of COVID-19 pandemic environment in mediating the impact of HRM practices on employee productivity in the construction industry.” The evidence obtained shows that the presence of the COVID-19 pandemic was neutral in mediating the impact of HRM practices on employee productivity. In other ways, it did not change the relationship between the HRM practices and the employee productivity.

5.5. Strengths, limitations, and implications of the findings

The strengths of the study include its focus on a relevant and timely research topic and its use of a sample from two organisations, which allowed for a deeper understanding of the research topic. However, the study also has some limitations, such as the small sample size and the self-reported nature of the data. Despite these limitations, the results of the study have important implications for HRM practices in the South African construction industry and beyond. The findings suggest that HRM practices can play a significant role in improving employee productivity during the COVID-19 pandemic, and organisations should prioritize these practices to ensure the well-being and productivity of their employees.

5.6. Recommendations and suggestions for further research

This study offers recommendations to three parties, being the construction industry, the HR practitioners and the employees in the construction industry.

1. For the construction industry: The construction industry can improve their HRM practices to increase employee productivity during the COVID-19 pandemic. The findings of the study suggest that the HRM practices have a positive impact on employee productivity. The construction industry can therefore focus on improving these practices, for example by offering competitive salaries and benefits and by providing support for employee well-being.

2. For HR practitioners: The study highlights the importance of HRM practices in improving employee productivity during the COVID-19 pandemic. HR practitioners can use the findings of this study to inform their decision-making and to develop more effective HRM practices. For example, they can focus on providing training and engagement opportunities to employees, as well as improving employee wellness programs.

3. For employees: Employees can use the findings of this study to understand the importance of HRM practices in their productivity during the COVID-19 pandemic. They can also use these findings to advocate for better HRM practices in their workplace.

The study proposes the following suggestions for further research:

1. The study was limited to two South African construction industry firms, and it would be interesting to see how the findings apply to other industries and countries. A similar study can be conducted in other countries to determine if the findings are generalisable.

2. The study was limited to a few HRM practices, and it would be interesting to see how other HRM practices impact employee productivity. Future studies can examine the impact of other HRM practices, such as performance management, diversity and inclusion initiatives.

5.7. Conclusion

In conclusion, the findings from this study contribute to the understanding of the impact of HRM practices on employee productivity during the COVID-19 pandemic in the South African construction industry. The results suggest that training, employee engagement, compensation, and employee wellness were all positively linked to productivity in the construction industry, with compensation having the highest correlation. However, participants were indifferent in their belief that these practices improved their productivity during the course of the pandemic.

The findings also suggest that the existing HRM strategies had some impact on employee productivity, while the role of the COVID-19 pandemic environment was found to play a mediating role in the impact of HRM practices on employee productivity.

Based on the results, practical recommendations have been provided for stakeholders such as the construction industry, HR practitioners, and employees. Additionally, suggestions for further research have been provided to address the limitations of the study and areas for improvement.

Overall, the study highlights the importance of HRM practices in maintaining and improving employee productivity in the face of a pandemic, and further research is needed to better understand the specific mechanisms and strategies that are most effective.

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Appendix 1: Questionnaire

SURVEY QUESTIONNAIRE

Primary Researcher: Patience Makanza

Study Leader:

Dear research participant

You are invited to complete a research questionnaire for my Master study, at WITS BUSINESS SCHOOL (WBS). The purpose of the study is to investigate the impact of human resource practices on employee productivity in the South African construction sector during COVID-19. The study will be of value to the organisation as it will assist managers to strategically manage human resource to enhance productivity in the South African construction sector.

Kindly follow the instructions and answer ALL questions. There is no right or wrong answer to any of these questions. Answers are intended to determine your viewpoint based on your observation and experience. Completing the questionnaire will take more or less 20 minutes of your time. Your answers will be treated in strict confidence. You need not reveal your identity, and participation is voluntary. The information supplied will be used solely for research purposes and in accordance with the ethical rules of research applicable at WBS. By completing the questionnaire, you agree to participate in the study.

Any queries can be addressed to Patience Makanza at 0843504534, Email address 2508886@students.wits.ac.za OR my Supervisor: Prof Jacob Mati on email : Jacob.Mati@wits.ac.za

Your cooperation and participation in the study will be greatly appreciated.

Thank you in advance.

Regards

Patience Makanza
MBA Student

SECTION A:

This section seeks to gather the socio-demographic information for the survey to be used for statistical purposes only.

1. Please select your gender by marking with an x.

Gender	**Mark an X**
Male	
Female	
Prefer not to say	

2. What is your age? Mark with an x.

Age	**Mark an X**
16 - 20	
21 -30	
31 -40	
41 -50	
51 or older	

3. Please select your highest qualification by marking with an X

Qualification	**Mark X**
Less than matric	
Matric	
Diploma	
Degree	
Honours	
Masters	
PhD	

4. Select your current description of your current job level by marking an X.

Job/position	**Mark X**
Supervisor	
Middle management	
Senior management	
Executive	

8. How long have you been employed in your organisation?

Employment duration	Mark X
1-5 Years	
6-10 Years	
11-15 Years	
16 -20 Years	
21 -25 Years	
25 – 30 Years	
30 + Years	

SECTION B: HUMAN RESOURCE MANAGEMENT PRACTICES

This section comprises of different measures of the HRM practices.

Below is a list of statements relating to human resource management practices within your organisation. Kindly respond to the thirty-two (32) statements by putting an "X" in the appropriate box. Highlight your extent of agreement on a scale 1 to 5, where 1 strongly disagree and 5 strongly agree. Please mark only one item per question.

	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
TRAINING					
1. Employees receive training throughout their professional lives.	1	2	3	4	5
2. Employee training and development policies cover all the personnel in the organisation	1	2	3	4	5
3. Employees focused support for professional learning will help improve recruitment and retention	1	2	3	4	5
4. Newly recruited employees are mentored by skilled and highly regarded senior officials	1	2	3	4	5
5. This organisation provides me with training opportunities enabling me to extend my range of skills and abilities	1	2	3	4	5

6. I get the opportunity to discuss my training and development requirements with my employer	1	2	3	4	5
7. My work pays for my work-related training or development requirements I want to undertake	1	2	3	4	5
8. This organisation is committed to the training and development of its employees	1	2	3	4	5
9. Experienced employees who want to further their professional learning after some years in the profession are supported	1	2	3	4	5
10. During COVID-19, I was offered training to suit the COVID-19 induced changes	1	2	3	4	5
11. My work pays for my work-related training or development requirements I want to undertake during the course of COVID-19	1	2	3	4	5
12. The trainings offered to me during COVID-19 assisted me to discharge my duties	1	2	3	4	5
13. Without the training offered to me during COVID-19, I wouldn't have been successful in carrying out my day-to-day work.	1	2	3	4	5
14. I feel that the trainings offered to me during the course of COVID-19 were more of a necessity than a mere luxury (human desires)	1	2	3	4	5
EMPLOYEE WELLNESS					
15. I engage in exercises such as jogging, swimming, brisk walking, etc	1	2	3	4	5
16. I maintain a healthy weight, avoiding overweight and underweight	1	2	3	4	5
17. I include a variety of fruits and vegetables in my diet	1	2	3	4	5
18. I have close friends, relatives or others with whom I talk about personal matters and call on for help when needed	1	2	3	4	5

19. My superiors are supportive to my personal matters	1	2	3	4	5
20. My work environment is supportive to my personal wellbeing	1	2	3	4	5
21. The HRM department understands my personal wellbeing, and it take precedence over work	1	2	3	4	5
22. During the course of the COVID-19 pandemic, I could maintain my peace of mind	1	2	3	4	5
23. During the course of COVID-19 pandemic, my superiors were supportive to my personal matters	1	2	3	4	5
24. During the course of COVID-19, the HRM department understood my personal wellbeing, and it took precedence over work	1	2	3	4	5
25. The employee wellness programmes offered to me during COVID-19 improved my productivity	1	2	3	4	5
26. My job leaves me with enough time for family or personal life	1	2	3	4	5
27. My job is influenced by wellness programmes	1	2	3	4	5
COMPENSATION					
28. This organisation pays well	1	2	3	4	5
29. I am fairly satisfied with my current salary	1	2	3	4	5
30. My effort towards work is well compensation	1	2	3	4	5
31. This organisation offers a good benefits package compared to other similar organisations	1	2	3	4	5
32. My compensation remained the same, or at least improved the course of COVID-19	1	2	3	4	5
33. Changes in the compensation structure during the course of COVID-19 improved my productivity	1	2	3	4	5

34. My effort towards work during the course of COVID-19 was well compensated	1	2	3	4	5
35. On a scale of 1 to 5 (1 as least likely, and 5 as the most likely) how well connected is your performance to your productivity	1	2	3	4	5
EMPLOYEE ENGAGEMENT					
36. Promotions are handled fairly, and there is an atmosphere of openness and trust	1	2	3	4	5
37. I am well involved in decisions that affect my work	1	2	3	4	5
38. I am involved in decisions that affect work in general, even if it does not affect my work directly	1	2	3	4	5
39. I am fully engaged to my work	1	2	3	4	5
40. I am partially engaged to my work	1	2	3	4	5
41. There is trust and cooperation between teams.	1	2	3	4	5
42. Team counselling is often done to help employees develop trust and cooperation	1	2	3	4	5
43. Employee engagement programmes in my organisation continued as normal after the emergence of COVID-19	1	2	3	4	5
44. The employee engagement programmes introduced during the course of COVID-19 helped to either maintain or improve my productivity at work	1	2	3	4	5
45. Trust and cooperation between and within teams continued as normal during COVID-19	1	2	3	4	5