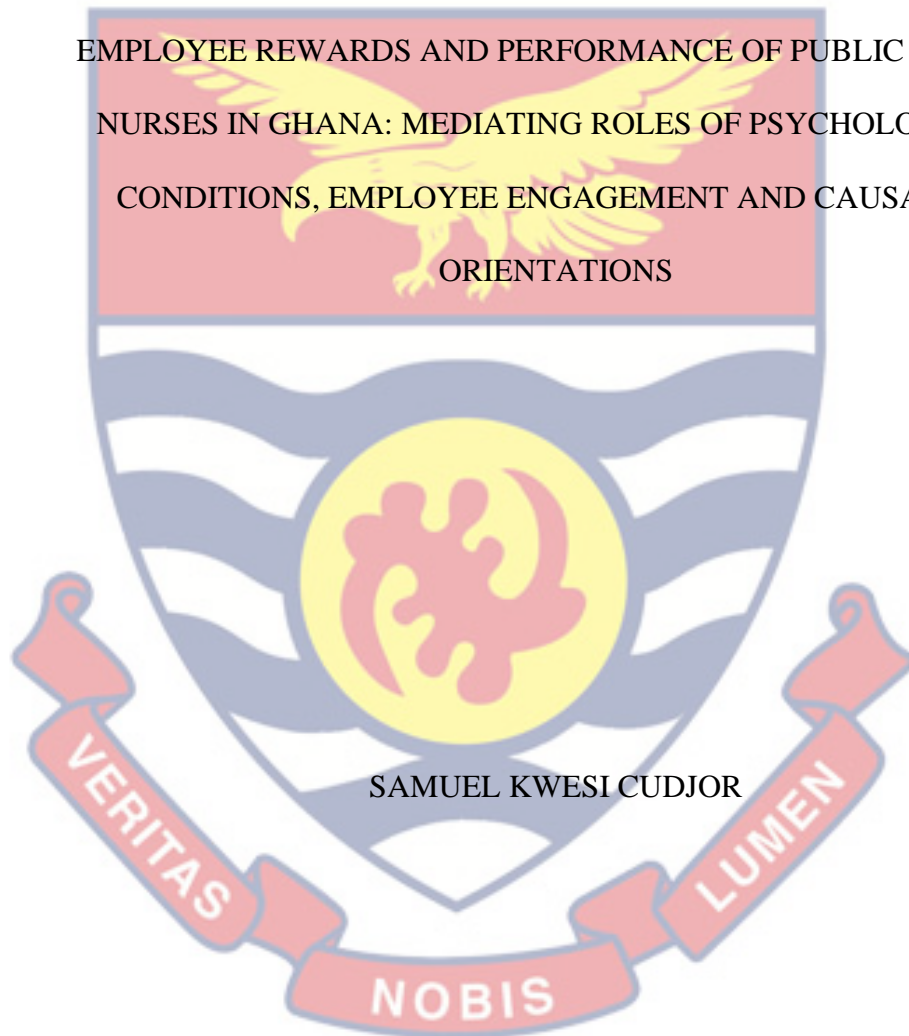


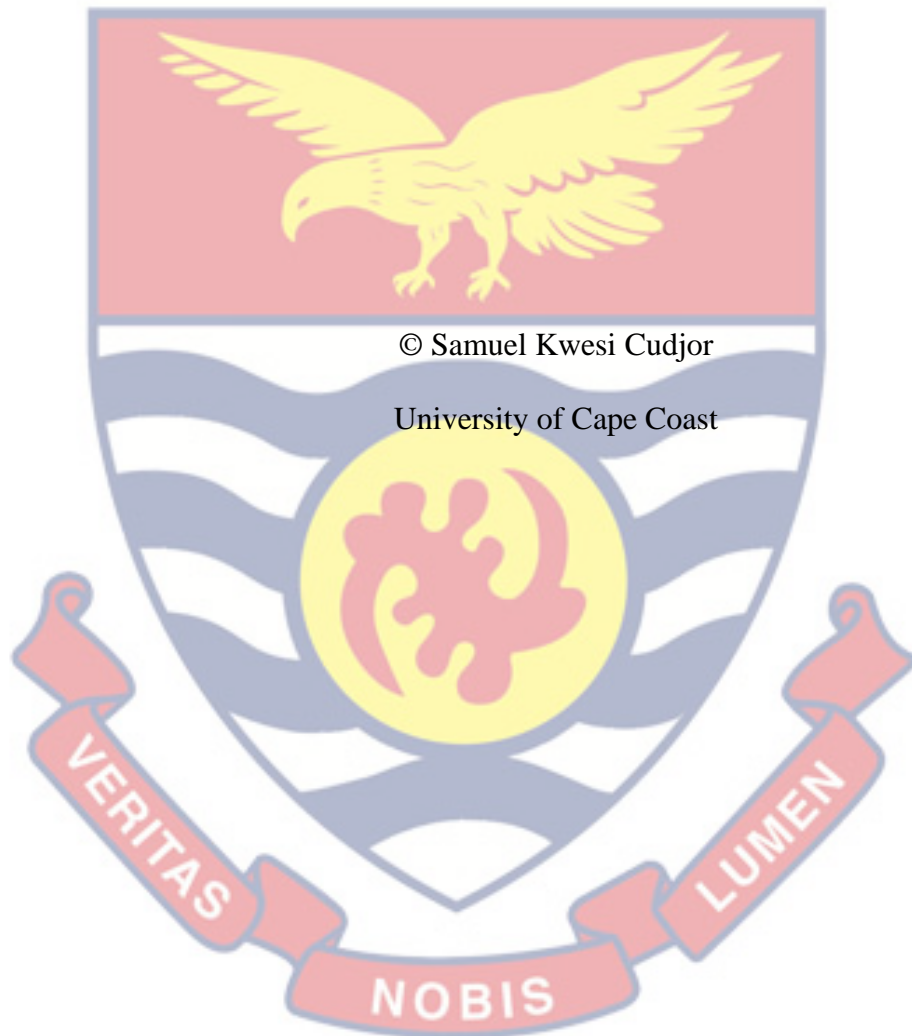
UNIVERSITY OF CAPE COAST

EMPLOYEE REWARDS AND PERFORMANCE OF PUBLIC SECTOR  
NURSES IN GHANA: MEDIATING ROLES OF PSYCHOLOGICAL  
CONDITIONS, EMPLOYEE ENGAGEMENT AND CAUSALITY  
ORIENTATIONS



SAMUEL KWESI CUDJOR

2022



UNIVERSITY OF CAPE COAST

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ORIENTATIONS

BY

SAMUEL KWESI CUDJOR

Thesis submitted to the Department of Human Resource Management of the School of Business, College of Humanities and Legal Studies, University of Cape Coast in partial fulfilment of the requirement for the award of Doctor of Philosophy Degree in Business Administration

NOBIS

May 2022

## DECLARATION

### Candidate's Declaration

I hereby declare this thesis is the result of my own original research and that no part of it has been presented for another degree in this university or elsewhere.

Candidate's Signature ..... Date .....

Name: Samuel Kwesi Cudjor

### Supervisors' Declaration

We hereby declare that the preparation and presentation of the thesis were supervised in accordance with the guidelines on supervision of thesis laid down by the University of Cape Coast.

Principal Supervisor's Signature ..... Date .....

Name: Professor Francis Enu-Kwesi

Co-Supervisor's Signature ..... Date .....

Name: Professor Rebecca Dei Mensah

## ABSTRACT

Psychological conditions, employee engagement and causality orientations play vital roles in the employee rewards- performance relationship. Due to limited knowledge on the roles of these factors in this relationship, it was essential to examine the mediation roles of these factors in the employee rewards-nurses' performance relationship of public sector nurses in Ghana. The mixed methods research approach and the sequential explanatory designs were adopted for the study. The multi-stage sampling technique was used to select 761 respondents. Ten key informants were also selected using purposive sampling. Data were collected using a questionnaire and interview guide. Analysis of the data involved Smart PLS-SEM and inductive thematic analysis. The study found that social reward positively and significantly predicted adaptive performance and contextual performance, while social reward's effect on counterproductive performance was negative and insignificant. Besides, personal value, high moral standard, adherence to rules and reputation damage explained low levels of counterproductive performance. The study also found that psychological meaningfulness and availability significantly and positively mediated the relationships between social reward and contextual performance, while psychological safety did not. Additionally, the study revealed significant and positive serial mediations for social reward, engagement, control orientation and contextual performance. It is recommended that the public sector nurses should request their institutions to institutionalise social rewards, psychological conditions, employee engagement and causality orientations through training and regular employee surveys.

**KEY WORDS**

Causality

Conditions

Employee

Engagement

Orientations

Performance

Rewards

Psychological

Social



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**DEDICATION**

To my wife, Lydia Cudjor





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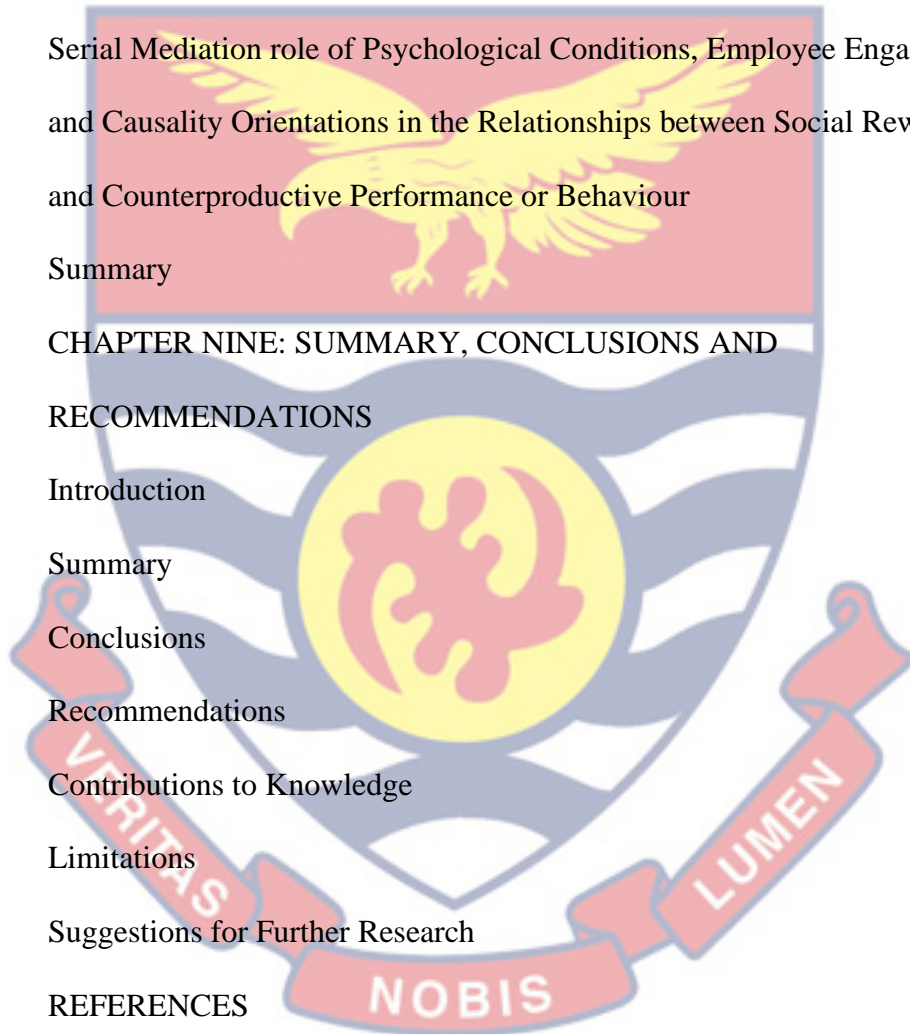
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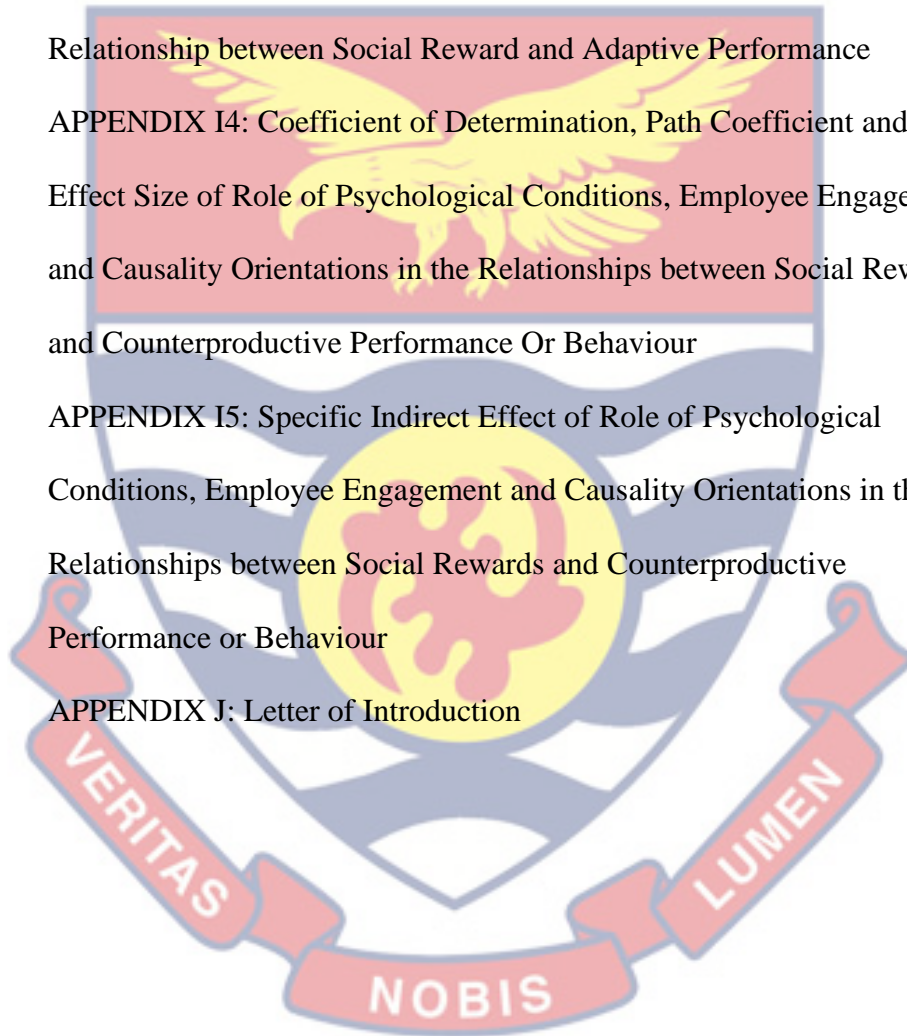
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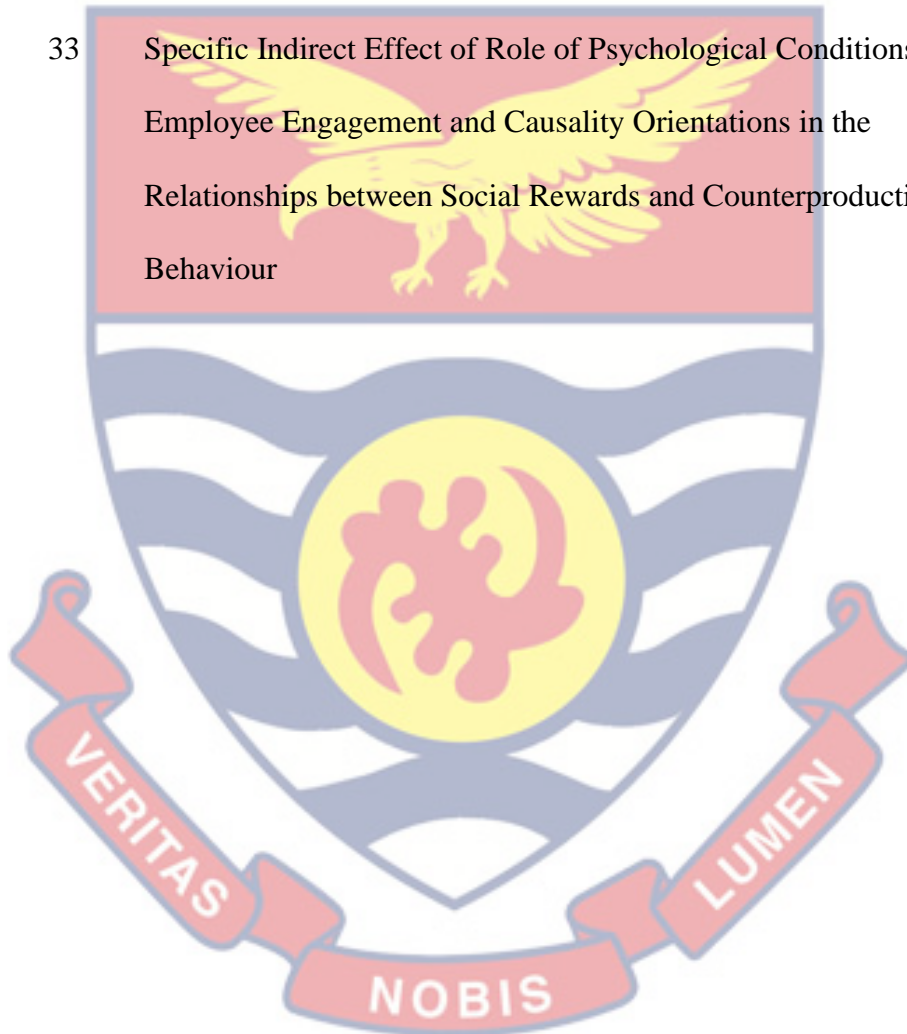
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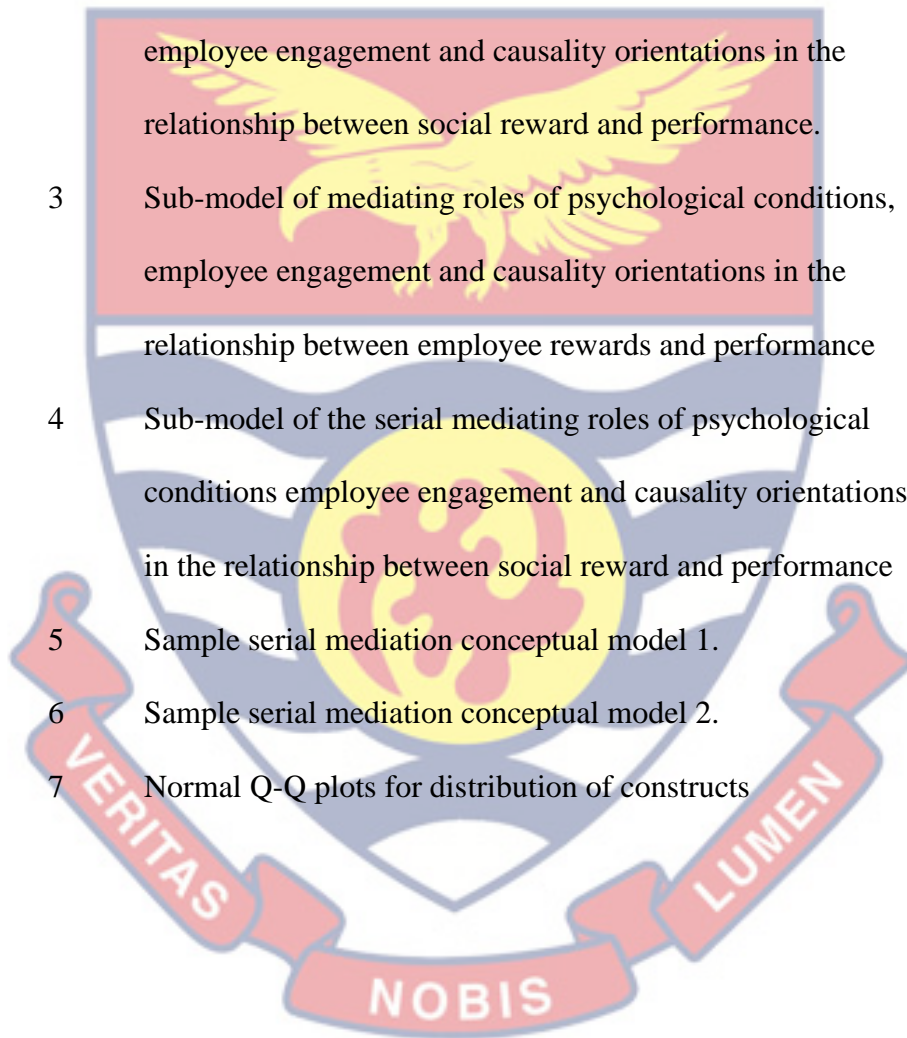
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## LIST OF ABBREVIATIONS

AVE	Average Variance Extracted
CSR	Civil Service Reform Programme
FWSC	Fair Wages and Salaries Commission
GRNMA	Ghana Registered Nurses and Midwives Association
GSGDA	Ghana Shared Growth and Development Agend
HRDGHS	Human Resources Division of the Ghana Health Service
HRMDD	Resource Management and Development Directorate
HTMT	Heterotrait-Monotrait
MMDAs	Metropolitan, Municipal and District Assemblies
MOH	Ministry of Health
PLS	Partial Least Squares
PLS-SEM	Partial Least Squares Structural Equation Model
RGR	Republic of Ghana Report
VIF	Variance Inflation Factor
2SLS	Two-Stage Least Squares



## CHAPTER ONE

### INTRODUCTION

Nurses play a critical role in the health delivery system of any country. Their devotion is vital for effective healthcare (Birtch, Chiang & Van Esch, 2016). Thus, rewarding nurses appropriately to ensure that their performance or behaviours are appropriate cannot be overemphasised. In the Ghanaian situation, a white paper on the Single Spine Pay Policy reports that public sector reward reforms that were aimed in part to ensure performance are not achieving their desired objectives (Republic of Ghana, 2009). Abubakari (2013) opines that employee rewards of nurses have not generated the desired performance results in the health sector. Social exchange theoretical perspectives are used to explain the situation because the Ghana Shared Growth and Development Agenda (GSGDA) II, 2014–2017, indicate that this problem affects the country's economic development. These issues and the importance of the health sector have motivated the study.

#### **Background of the Study**

Employee rewards are critical for organisational success (Ogbonnaya, Daniels & Nielson, 2017). Employee rewards, whether intrinsic or inner feelings derived from executing a job well (Giancola, 2014) and extrinsic incentives that employees receive for performing their jobs (Obicci, 2015), including social rewards, are vital for this success. These rewards, including money, courtesy, concern for employee well-being, emotional support and recognition, serve as tools for reinforcing desired behaviours (Byron & Khazanchi, 2012). Koskey and Sakataka (2015) explain that rewards, including social rewards, ensure that employees receive the returns for their efforts in the

employment relationship. Koskey and Sakataka add that they drive employee efforts and energies within organisations.

Therefore, in Deloitte's (2014) view, employee rewards, including social rewards, have become a pressing issue because they influence performance (Bussin, 2018). Similarly, Park and Park's (2019) view is that social rewards, such as support from supervisors and colleagues, enhance performance (Sounthary, Vijayalakshmi & Sivanesan, 2020). Therefore, Alhmoud and Rjoub (2019) conclude that social reward is one of the best choices in maintaining and ensuring consistency of employees' participation in organisations and hence can be considered a better alternative to other employee rewards. These portray social rewards as an influential determinant of employee performance, including the ability to alter behaviour in response to changing work circumstances, performing beyond prescribed roles and engaging in behaviours that harm the organisation and individuals.

Eisenberger, Armeli, Rexwinkel, Lynch and Rhoades (2001) believe that social reward is linked to performance because it generates employee happiness, a potential sense of obligation, and enhanced psychological attachment to the organisation. The linkage is also because it affects motivation and behaviour at work, just like the other types of rewards (Gupta & Shaw, 2014) and creates feelings of well-being among employees (Salah, 2016). Similarly, the relevance of social reward can be situated in Syrek and Antoni's (2017) elucidation that rewarding is a balancing act that directs employees' minds to fulfil an exchange agreement with employers to perform.

As a result, Mills, Matthews and Henning (2014) explain that social rewards such as supervisor support, including courtesy, kindness, employee well-being and feedback, contribute to performance. This performance includes adaptive performance: employees' ability to adjust quickly and make decisions in response to an emergency, stressful, and unpredictable work situations, contextual: deliberate and positive discretionary employee behaviours, such as helping others, and counterproductive performance: intentional acts by employees, including acting rudely toward someone at work and stealing and falsifying documents. In the employment relationship, therefore, the relationships between employee rewards, such as social rewards and performance, can be viewed as a "give and take affair" in which employees receive rewards for their contributions to the attainment of organisational goals. This is in line with the social exchange theory (Blau, 1964).

In social exchange, Njanja, Maina, Kibet and Njagi (2013) explain that providing rewards, including social rewards, in an exchange relationship channels employee efforts toward attaining strategic goals by enhancing productivity and performance. In doing this, Nunkoo (2016) argues that the aims of employers and employees as actors in the social exchange relationship are to increase outcomes that they positively value and decrease outcomes that they negatively value. Therefore, Nzyoka and Orwa (2016) opine that when employee rewards are effective, they ensure that employees' contributions are commensurate with their rewards. As a result, social rewards such as supervisor supports negatively affect counterproductive performance (Peng, Tseng & Lee, 2011), positively affect contextual performance (Sultana, Rabie, Farooq & Amjad, 2016) and adaptive performance (Park & Park, 2019).



In line with the above, Cropanzano and Mitchell (2005) propose that in social exchange, employees undertake a subjective cost and benefit evaluation of rewards to, for instance, determine their response in terms of performance. This assumption aligns with employee engagement (Kahn, 1990) and the causality orientation (Deci & Ryan, 1985b) postulations in which individuals also undertake subjective evaluations, as the social exchange theory espouses. In making such evaluations in the social exchange postulate, Redmond (2015) explains that employees cannot continually measure benefits, predict the future and evaluate alternatives relying on the assumption of rationality.

Therefore, in order to fully explain the social reward category of employee rewards and performance relations through the social exchange theory, the roles of the psychological conditions and employee engagement (Chikoko, Buitendach & Kanengoni, 2014) in line with the employee engagement theory are critical. Moreover, individual dispositions or causality orientations (Hagger, Koch & Chatzisarantis, 2015) based on the causality orientation theory are vital in explaining the relationship. Similarly, Afshari (2016) implied that theories could explain most things about people but not everything. Consequently, Subedi (2016) proposes that an in-depth supplementation of theoretical explanations offers further elucidation and comprehension of established relationships.

The thrust of the employee engagement theory (Kahn, 1990) is that for drivers, such as employee rewards, to achieve their purpose in the form of employee rewards resulting in expected performance behaviours, the drivers must affect the psychological conditions of employees. The psychological conditions then affect employee engagement, leading to some outcomes. For

instance, Bilal (2017), Franks (2017) and Taylor (2019) assert that the roles of psychological conditions, such as meaningfulness, safety and availability, and employee engagement, are essential in explaining the mechanisms through which the employee reward-performance exchange relationships occur.

In line with the causality orientation theory, other writers, including De Gieter and Hofmans (2015), have also suggested that causality orientations play roles in determining individual responses to rewards (Kuvaas, Buch, Gagné, Dysvik & Forest, 2016) in terms of performance (Ye, Zhang & Hocine, 2014). Ye et al. (2014) posit that causality orientation theory describes relatively stable aspects of employees that determine the extent to which they return employers' gesture of reward in terms of their performance. In other words, causality orientations affect how individuals respond to their environments, including providing employee rewards (Deci & Ryan, 1985b). This implies that individuals' causality orientations, such as control, autonomy and impersonal orientations, also affect employees' evaluations in determining their performance levels in response to employee rewards, including social rewards.

The role of causality orientations in the linkage between social reward and employee performance is vital. For instance, as Wong (2000) explains, control causality orientations affect negative emotions and internal thoughts relating to the consequences of one's actions and failure to achieve objectives. This might have implications for adaptive, contextual and counterproductive behaviours, which are employee activities that are detrimental to the organisation (Chang & Smithikrai, 2010). Additionally, Vandenberghe, St-Onge and Robineau (2008) assert that individual dispositional factors such as control, autonomous and impersonal orientations affect the attractiveness of

different rewards. As a result, De Gieter and Hofmans (2015) argue that individual differences in these causality orientations change satisfaction with rewards and employee performance, including helping others, putting little effort into work and adapting to difficult working conditions.

Besides, linking employee rewards, including social rewards and employee engagement, to employee performance is crucial for organisations. In this vein, Scott, McMullen, Royal and Stark (2010) advance that engaged employees perform higher when compared with employees who are not engaged because when organisations link their employee reward policies to employee engagement, they motivate employees. For that reason, Vosloban (2013) posits that a better way to gain a competitive advantage through employee performance is to maintain a high level of employee engagement, such as working for long periods, deriving inspiration from work and having difficulty in detaching one's self from the job. In concurring, Alfes, Truss, Soane, Rees and Gatenby (2013) explain that when employee engagement levels are high, employees develop positive attitudes toward work due to higher levels of job satisfaction (Arrowsmith & Parker, 2013).

Examining the role of psychological conditions in the reward-performance linkage is also vital. Some studies support this. For example, Kahn (1990) elucidates that psychological conditions create self-efficacy, confidence in one's abilities, status and self-consciousness, which, when relatively stable, can lead to an individual's readiness to engage in role performance fully. Furthermore, psychological conditions arise from employee rewards such as social rewards because, in Chiang and Birtc's (2010) view, they create psychological empowerment that leads to feelings of self-worth. Ignoring

psychological conditions may have dire consequences for organisations. The reason is that they influence employee engagement, which Malik, Butt and Choi (2014) indicate as a precursor to employee performance. Awan and Zamir (2016) agree that they enhance work stamina or the employee engagement aspect of vigour in performance. Some studies support this.

Day-Stirk and Massoud (2014) report that the Global Health Workforce Alliance engaged in extensive consultations to fashion a human resource strategy to enhance the productivity and performance level of the health worker that would be relevant from 2015 to 2030. The report recognised the critical role of health workers' performance in delivering effective health care. The report further identified that non-monetary rewards, including social rewards such as attending to employee complaints, valuing contributions and showing respect, are critical for health worker performance. Additionally, the report pointed out that the work environment and self-esteem, which are vital components of employee psychological conditions and employee engagement, are crucial in ensuring health-worker performance.

Furthermore, Royal's (2014) survey of over 650 reward practitioners shows that employee rewards, including benefits and perquisites, positively impact employee engagement. Brown, Callen and Robinson (2016) also conducted a study to determine the impact of total rewards on employee engagement and performance. The research established that reward practices and processes could enhance employee engagement. Similarly, Sultana et al. (2016) and Rai, Ghosh, Chauhan & Singh (2018), respectively found that the social reward component of supervisor support and employee reward was related to contextual performance through employee engagement.

Besides, Lavigna (2015) contends that a business case policy for public sector employee engagement is critical. He argues that although no one strategy fits the more than 90,000 public sector authorities in the United States of America, employee rewards should form critical components of any such policy. Lavigna asserts that the case for ensuring employee engagement through reward enables managers to hold employees answerable for their performance. In support of Lavigna's assertion, Carter, Nesbit, Badham, Parker and Sung (2018) investigated the effect of employee engagement on employee performance of Australian financial services. The investigation reported that employee engagement explained 39 percent of improvement in product sales over earlier performance. As a result, Carter et al. emphasised the need to enhance employee performance through employee engagement.

Another support was Osborne and Hammoud's (2017) study of a communication service firm in Jackson, Mississippi. They indicated that adopting a policy of a safe working environment, which contributes to psychological safety, and meeting employee needs, including social reward, are the means to elicit employee performance. Similarly, Buchan, Seccombe, Gershlick and Charlesworth (2017) state that reward policy and nurses' engagement are required to sustain the National Health Policy in a United Kingdom health report on health sector sustainability.

As regards the role of causality orientations in the employee reward-performance relationship, Ye et al. (2014), in a study to determine the effect of causality orientations on employee behaviour, revealed that causality orientations were significantly associated with performance. Another survey by Kuvaas et al. (2016) among a Norwegian insurance firm staff revealed that

control motivation or orientation mediated the relationship between employee reward and work effort. In the same way, Chang and Shih (2019) investigated, among other conceptualisations, how individual differences through causality orientations affect creative performance. They argued that employees' job activities are affected by causality orientations.

The recognition of the importance of the linkage among employee reward, employee engagement and performance has found expression in Africa. For instance, Koskey and Sakataka (2015), in a Rift Valley Bottling Company study, revealed that various forms of reward, including monetary and non-monetary, impacted employee engagement. They also indicated that differences in employee perceptions about such rewards resulted in variations in employee engagement. Hoole and Hotz (2016) also studied the relationship between total rewards and employee engagement in South Africa. They indicated that employee engagement, a necessary precondition for performance, was at an all-time low. Thus, they argued that moving from traditional modes of rewarding employees to ensuring that rewards lead to them becoming cognitively, physically and emotionally engaged is critical for employee performance.

Additionally, Mugaa, Guyo and Odhiambo (2018), in their study of employee recognition and performance in Kenya, indicated that there was a positive and significant association between financial incentives and intrinsic rewards and employee performance. In a health sector study in Uganda, Sendawula, Kimuli, Bananuka and Muganga (2018) confirmed that employee engagement, because of its motivational value, resulted in employee performance in terms of their availability and responsiveness, productivity and competence. Furthermore, the recognition of rewards as a strategic tool for

enhancing employee performance was demonstrated by Soliman and Wahba (2018). Their study of Egyptian travel agents revealed that rewards impacted engagement, which significantly affected performance.

In Ghana, the recognition of employee reward as a strategic tool to improve employee performance, to no small extent, explains employee reward reforms, including the Ghana Universal Salary Structure and the Single Spine Pay Policy in the Ghanaian public sector. Since the 1960s, public sector employee rewards have been extensively reformed due to the importance of the public sector, particularly the health sector. For instance, a Health Sector Medium-Term Development Plan (2014-2017) report recognised the health sector as central to Ghana's development agenda (Ministry of Health, 2017).

One common characteristic of pay reforms in Ghana's public sector was linking pay to performance. Ayee (2001, p. 8) reports that the Civil Service Reform Programme (CSRP) had as its overall objective the need to "restructure the civil service in such a way as to make it more productive, effective and efficient....." Ayee further notes that the income policy of the CSRP was aimed at introducing and establishing a pay structure that will introduce merit pay. The motivations for recent reforms, such as those based on Mills Odoi Commission, 1967 (Republic of Ghana (RGR), 1967), Issifu Ali Commission, 1973 (RGR, 1973), Azu Crabbe Commission 1979 (RGP, 1979) and Gyampoh Salary Commission (RGR, 1993) Reports were also aimed to address challenges, including poor management of public sector salary and poor performance.

However, only a little has been achieved with these reward programmes. Therefore, as part of the Broader Public Sector Reform Agenda, the Single Spine Pay Policy Reform was introduced following a government white paper in 2009. The objective of the pay policy, among others, is to ensure fairness and address the absence of a legal framework that adversely affected previous reforms to ensure industrial harmony. These reward reforms in the public sector imply that rewards are recognised to improve employee performance, including that of public sector nurses.

Regarding employee rewards, particularly social rewards, the focus on nurses is crucial because Seitovirta, Lehtimäki, Vehviläinen-Julkunen, Mitronen and Kvist (2017) report that nurses place higher values on nonfinancial rewards such as social rewards, including appreciation and feedback than on other rewards. These nonfinancial rewards, such as appreciation of good effort (Adriaenssens, De Gucht, van der Doef & Maes, 2011) and respect (Battistelli, Galletta, Vandenberghe & Odoardi, 2016), have effects on nurses' performance or behaviours. Consequently, concentrating on nurses' social rewards, particularly during pandemics such as Covid-19, is crucial because they are vital in the public health response (Fernandez et al., 2020) and are at the frontline of health care during such crises (World Health Organisation, 2020).

The concentration on nurses is also critical because, in the views of Ahmad and Oranye (2010) and Cooke and Zhan (2013), nurses are not only inclined to low levels of job satisfaction but also suffer from low levels of engagement with their work. Santos, Chambel and Castanheira (2015) also explain that nurses are one of the most influential groups in the healthcare labour



force by size. Birtch et al. (2016) point out that their commitment to the highly arduous healthcare job is critical to service delivery and healthcare as a whole. Birtch et al. further state that due to the highly demanding nature of nurses' job, their job involves social, emotional and psychological requirements. Due to this, Birtch et al. advance that the need to better understand nurses in the employee-employer exchange relationship through the reward-engagement-performance relationship has become even more crucial.

The Single Spine Pay Policy (SSPP) is the reward system in the Ghana Health Service. Debates about four key areas propelled this reward system. The four areas are the rising cost of the public wage bill, pay disparities within the public services, numerous public sector pay negotiations and the linkage of pay to performance. The SSPP applies to Public Service institutions, including the Ghana Health Service stated under Article 190 of the 1992 Constitution of the Republic of Ghana. The SSPP operates under a 25-level grade structure into which every public sector job affected by the SSPP is placed. This grade structure forms the basis for employees' base pays.

In addition to base pays, the SSPP has four categories of allowances. Category one allowances have been incorporated into employees' base pay based on a job analysis and evaluation exercises. Categories two and three allowances are standardised allowances to ensure equity and effective management of the public wage bill. In order to retain critical skills in short supply, the pay system also pays a market premium to such a category of employees. The objective of the market premium is to retain and attract such critical skills. Another striking component of the reward system is its link with performance. In order to achieve this, the pay policy operates within a public

service performance management, monitoring and evaluation system. Annual salary increases for public servants were to be based on employee performance and not automatic.

Besides performance-based remunerations, the SSSP recognises negotiations on matters relating to base pay, relativities of the single spine salary structure and the standardisation of the categories two and three allowances. These negotiations about base pay and structure relativities are between organised labour on the one hand and the Fair Wages and Salaries Commission, the Ministry of Finance and Economic Planning and the Ministry of Employment and Labour Relations. Apart from this negotiation, there are nine other negotiations on sector-specific negotiations for specific conditions of service.

A further component of the reward system is the establishment of the Fair Wages and Salaries Commission (FWSC). The FWSC was established by the Fair Wages and Salaries Act 2007 (Act 737). The FWSC is responsible for the implementation of the pay policy. To achieve its mandate, the FWSC was to promote best practices in administering pay through the engagement of human resource practitioners. The FWSC coordinates public sector negotiations with support from other public sector agencies.

### **Statement of the Problem**

The use of employee rewards to enhance the performance of the public sector of Ghana in general, and nurses in particular, has suffered many setbacks since the 1990s because of continuous decline in service performance (see Ministry of Health of Ghana, 2018; Public Service Commission of Ghana, 2015, 2016). A study by Abubakari (2013) reports poor performance of public sector

nurses. Alhassan et al. (2013) also indicate, among other things, that staff motivation, which is a precursor to health sector staff performance, including that of nurses, has been lowered. They claim that as a result, the 2015 millennium development goal on health could not be achieved by Ghana. In a related view, Aninanya et al. (2016) contend that performance improvement incentives did not improve motivation radically, hence nurses' performance in the northern region.

Further support by a Ghana News Agency (2018) report indicates a consistent stagnation of performance, which partly reflects employee performance in the Ghanaian health sector from 2014 to 2016. This situation implicitly contributes to the lack of significant improvement in institutional all-cause mortality, which MOH (2018) asserts worsened from 22.8/1000 hospital admissions in 2016 to 23.6/1000 hospital admissions in 2017. The problem with nurses' performance could be attributed to the lack of emphasis on nonfinancial rewards, such as social reward, which is valued by nurses more than other rewards (Seitovirta et al., 2017) and positively affect their performance (Battistelli et al., 2016). Dealing with the neglect of social rewards is crucial because it is more cost-effective than other rewards (Bhanot, Kraft-Todd, Rand & Yoeli, 2018). It also provides a better alternative to focusing on financial employee rewards as the panacea to performance problems, which Younger and Osei-Assibey (2017) have blamed as a cause of substantial fiscal deficits in the public sector.

The identified problems of employee reward and nurses' performance raise issues that define the propositions of the social exchange theory. In expatiating the theory, Cropanzano, Anthony, Daniels and Hall (2017) state that

when the employer provides rewards, they expect employees to reciprocate by performing to achieve organisational goals as part of their obligations in the employment relationship. In order to achieve this, Varey (2015) asserts that employees, based on human rationality, undertake a cost-benefit analysis to determine whether the employee reward, including social reward, provided is worth an increase in performance when compared with the employee's investment of time and effort in the job. Thus, the below-expected performance of nurses may be explained by their interest in maintaining a balance between social reward and performance.

However, based on Redmond's (2015) position that individuals cannot be constantly rational in evaluating cost and benefit, other factors expressed in the causality orientation and employee engagement theories may help to explain the social reward-performance relationship of nurses in Ghana. The reason in De Gieter and Hofmans' (2015) view is that in causality orientation theory, individuals rely on their causality orientations to determine their responses, including performance. For example, Wang and Holahan (2017) found relationships between causality orientations and performance. Nonetheless, Koole, Schlinkert, Maldei and Baumann (2019) argue that causality orientations cannot fuse how different processes jointly work within people. Thus, based on employee engagement theory, psychological conditions and employee engagement can also mediate between rewards and performance (e. g., Chikoko et al., 2014, Franks, 2017; Gatti, 2016).

Nevertheless, empirical studies operationalising the social exchange theory about rewards and performance, such as those by Owor (2016), Sung, Rahim, Bahron and Lee (2018) and Yin (2018), did not take into consideration

how autonomous, impersonal and control orientations, psychological conditions and employee engagement including the ability to handle competing demands and the lack of fear at work can help to explain the employee reward-performance process better. Besides, such studies ignored social rewards, although they impact behaviour more and are more cost-effective than other employee rewards (Anik, Akinin, Norton, Dunn & Quoidbach, 2013).

Furtherance to the above discussions and the results from the related reviewed literature, four significant inferences can be drawn on employee reward and employee performance policies and studies in Ghana. Firstly, even though there are several reward policies and pieces of research on employee reward and performance relationships, there has been minimal mention of social rewards in the policies. Secondly, the literature review did not reveal any systematic research that considered the relationship between social rewards and employee performance. Hence, there is a lack of empirical knowledge about social rewards and performance relationships in Ghana in social exchange contexts and an in-depth explanation of the quantitative results.

Thirdly, none of the studies (e. g., Aninanya et al., 2016; Frempong & Dwomoh, 2017; Hervie & Winful, 2018), to the best of my knowledge, integrated the social exchange theory, engagement theory and causality orientation theory in a single study. Most related studies on rewards and performance relied on single theories in their conceptualisations. Fourthly, in serial and parallel mediations, none of the studies used psychological conditions, employee engagement and causality orientations to investigate the relationship between social rewards and adaptive, contextual and counterproductive work performance. Therefore, because of the theoretical,

methodological and empirical gaps discussed above, this study sought to assess the relationship between social rewards component of employee rewards and employee performance and the mediating roles of causality orientations, psychological conditions and employee engagement in the relationships.

### **Objectives of the Study**

The purpose of the study is to examine mediating roles of psychological conditions, employee engagement, and causality orientations in the relationship between employee rewards and performance of public nurses in Ghana. The specific objectives are to:

1. Determine nurses' perceptions of employee rewards.
2. Determine the level of nurses' performance.
3. Assess effect of employee rewards on nurses' performance.
4. Assess mediating roles of psychological conditions in the relationship between employee rewards and nurses' performance.
5. Examine mediation roles of psychological conditions and employee engagement in the relationship between employee rewards and nurses' performance.
6. Examine mediation roles of psychological conditions, employee engagement and causality orientations in the relationships between employee rewards and nurses' performance.

### **Research Questions**

The research questions are:

1. How do the nurses perceive employee rewards?
2. What are the levels of nurses' performance?

## Hypotheses

Four main hypotheses were developed for the thesis based on the study's objectives. Hypotheses H<sub>1</sub>, H<sub>2</sub>, H<sub>3</sub> and H<sub>4</sub> address objectives 3, 4, 5 and 6, respectively. Due to the test of serial mediations and the number of variables involved in this study, each hypothesis has several sub-hypotheses (see Appendices A1, A2, A3 and A4). The main null hypotheses are that:

H<sub>1</sub> There is no significant predictive relationship between employee rewards and nurses' performance.

H<sub>2</sub> Psychological conditions do not significantly mediate the predictive relationship between employee rewards and nurses' performance.

H<sub>3</sub> Psychological conditions and employee engagement do not significantly mediate the relationship between employee rewards and nurses' performance.

H<sub>4</sub> Psychological conditions, employee engagement and causality orientations do not significantly mediate the relationship between employee rewards and nurses' performance.

## Significance of the Study

In 2018, Ghana spent 12, 798.5 million Ghana Cedis, which constituted 4.3 percent of gross domestic product and 49.7 percent of tax revenue on wages and salaries (Ministry of Finance and Economic Planning, 2019). As a result, the findings of this thesis on the roles of psychological conditions, employee engagement and causality orientations in the relationship between employee rewards and performance would be vital for four main areas. Firstly, the findings on the relationship between social rewards and performance can lay the grounds for policymakers and implementers of public reward and performance

policies to recognise the effect of social rewards in determining performance behaviours at the workplace. In this regard, since the provision of social rewards is at the organisational/departmental level, managers at this level would be guided as to how to complement government efforts of using rewards to promote performance.

Secondly, integrating psychological conditions, employee engagement and causality orientations into employee rewards-performance relationships in Ghana is crucial. Therefore, the results of this study will add to the body of knowledge about the relationship between employee rewards and employee performance through the lenses of psychological conditions, employee engagement, and causality orientations in the context of nurses in the public sector. This will serve as a reference source for policymakers, students, practitioners and researchers.

Thirdly, the study's findings will assist practitioners and managers of employee rewards and performance about the importance of individual differences in managing employee rewards and performance. This will ensure that managers of employee rewards channel the effort of every employee towards the desired expectation for rewarding them for performing. Finally, the findings of this thesis will provide policy alternatives to improve the public sector reward system, enhance employee engagement and improve employee performance. Remarkably, the findings of this research will inform public sector reward managers about the need to pay attention to performance behaviours, which are precursors to the actual expected performance described in employees' job descriptions.



## Delimitations

The study focused on employee rewards and the performance of public sector nurses in Ghana because the problems with nurses' performance have been attributed to reward. There are three types of reward: social reward, extrinsic reward and intrinsic reward. Specifically, the study concentrated on social rewards because nurses prefer social rewards to other reward types. The concentration on social reward allowed for a more focused and extensive study of how social reward affects performance. There are four types of employee performance. The types are task performance, contextual performance, adaptive performance and counterproductive performance or behaviour. However, the study should have concentrated on task performance to make room for analysing how social reward affects voluntary activities regarding adaptive, contextual and counterproductive performance.

The study also examined the roles of psychological conditions, employee engagement and causality orientations in the relationships between social reward and adaptive performance, contextual performance and counterproductive performance. This is due to the difficult nature of nurses' job, which involves social, emotional and psychological requirements, and their performance being a critical factor in the success of the health system. The study was limited to nurses working in public hospitals in Ghana. The study also involved key informants in some selected public hospitals.

## Definition of Key Terms

1. *Employee reward* means anything given to employees, such as salary, feedback and recognition in exchange for their contribution to attaining organisational goals.

2. A *social reward* is a non-monetary related reward that emanates from interaction or relationship with supervisors and colleagues, resulting in happiness with the behaviour of supervisors and colleagues, such as emotional support, courtesy, respect and providing feedback.
3. *Psychological states or conditions* are the internal conditions of employees that influence their motivation to become engaged through experiencing meaningfulness, safety and availability.
4. *Psychological meaningfulness* means viewing the job as important, worthwhile, and valuable and viewing job activities as meaningful.
5. Psychological safety involves a lack of fear to express oneself and opinion at work and whether the work environment is threatening.
6. *Psychological availability* includes the ability to handle competing demands at work, confidence in dealing with problems, thinking clearly, and displaying the appropriate emotion at work.
7. *Employee engagement* is a positive, satisfying, job-related state of mind in role performance characterised by vigour, dedication and absorption.
8. *Employee performance* is the manifestations of employee behaviours that hamper or enhance the achievement of organisational goals.
9. *Adaptive performance* reflects employees' ability to adjust quickly and make decisions in response to emergency, stressful, and unpredictable work situations. In this study, adaptive performance and adaptive behaviour were used interchangeably to mean the same thing.
10. *Counterproductive performance or work behaviours* are voluntary or intentional acts by employees, including acting rudely toward someone at work, publicly embarrassing someone at work and falsifying documents. In

this study, counterproductive work behaviour, counterproductive behaviour and counterproductive performance were used interchangeably to mean the same thing.

11. *Contextual performances or behaviours* are deliberate and positive discretionary employee behaviours, such as helping others who have been absent and adjusting work schedules to accommodate other employees' requests for time off. This study used contextual performance, extra-role performance, organisational citizenship behaviour and contextual behaviour interchangeably to refer to the same concept.

12. *Causality orientations* are permanent characteristics reflecting an individual's belief about behaviour.

13. *Impersonal causality orientation* is the tendency of people to display signs of incompetence when faced with situations requiring that they exhibit certain behaviours. Impersonal causality orientation and impersonal orientation were used interchangeably to refer to the same thing.

14. *Autonomous causality orientation* individuals exhibit behaviours in line with their interests, needs, and values and are interested in demonstrating behaviours that help maintain relationships. Autonomous causality orientation and autonomous orientation were used interchangeably to refer to the same thing.

15. *Control causality orientation* describes behaviours that are influenced by pressure, including rewards, punishment and guilt, and guided by feelings of tension. Control causality orientation and control orientation were used interchangeably to refer to the same thing.

## Organisation of the Study

The study consisted of nine chapters. Chapter one focused on the introduction of the study. The discussion in the chapter includes the background of the study, statement of the problem, research objectives and hypotheses, delimitation, the definition of terms and the significance of the research. Chapter two highlights the literature reviewed on the underpinning theories of the study and the concepts that emerged. The chapter focuses on the social exchange theory, the employee engagement theory and the causality orientation theories as the theoretical underpinnings of the thesis. The chapter then reviewed the literature on employee reward, employee engagement, employee performance, and causality orientations and ended with a chapter summary.

Chapter three continues the literature review focusing on the empirical evidence supporting the thesis and the issues that emerged in the literature review in chapters two and three. The chapter ends with the conceptual framework of the study. Chapter four deals with the research methodology comprising research approach, research and study design, population, sample size, sample procedure, instrument development, data needs, ethical consideration, pre-testing, actual fieldwork, field challenge and analytical techniques. Chapters five, six, seven and eight, respectively, present the data and the analyses of results of the research objectives and corresponding hypotheses and research questions. Chapter nine outlines the summary, conclusions and recommendations.

## CHAPTER TWO

### THEORETICAL FRAMEWORK AND CONCEPTUAL OVERVIEW

#### Introduction

A literature review is a vital component of research. Khoo, Na and Jaidka (2011) define a literature review as a summarised analysis of knowledge about a topic of interest. Khoo et al. stress that literature review is vital because it helps to place research within the context of a specific research community, identify gaps in the literature and provide support for the research. Moreover, Arshed and Danon (2015) explain that a literature review assists in resolving an argument, clarifies a research topic and forms the basis for further research. This review addresses issues on social exchange theory, employee engagement theory, the causality orientation theory and concepts of employee rewards, performance, psychological conditions and causality orientations. The thematic review was adopted and grouped into two: theoretical framework and conceptual overview.

#### Theoretical Framework

Theories explain how and why something functions the way it does (Johnson & Christensen, 2007). In another view, Udo-Akang (2012) defines a theory as a hypothesised statement that brings together a set of interrelated concepts, variables and propositions with the idea of offering a systematic explanation and prediction of phenomena. Hence, theories protect research against unsystematic or unscientific procedures and criticisms that a study might face (Research Council of Norway, 2011). Grant and Osanloo (2014) define theoretical frameworks as theories that underpin the researcher's thoughts regarding the researcher's comprehension of the topic and the plan to research

it. The social exchange theory, the causality orientation theory, and the employee engagement theory form this study's theoretical framework. These theories complement each other in explaining employee rewards-performance relationships.

### **Social Exchange Theory**

The social exchange theory was proposed by Homans (1958) to explain human relationships. The theory's premise is the notion that human relationships are developed based on cost and benefit analysis, which leads to the tendency to repeat performances rewarded in the past (Homans, 1958). In Homans' opinion, the repetition of rewarded actions such as employee performance or behaviours is derived from individual desire to ensure balance in exchange relationships. In this exchange process, Blau (1964) proposes that individuals receive favour such as valuing their contributions and caring for their well-being from another party. When this happens, the party providing the favour expects that the favour provided would be returned in kind, including helping others and offering ideas, based on unspecified obligations (Emerson, 1976).

Sabatelli and Sheshan (1993) state that social exchange theory rests on fundamental assumptions regarding individuals' nature. Cook, Cheshire and Gerbasi (2006) explain that individuals behave rationally by calculating rewards and costs and considering options before acting. In this vein, Nye (1982) clarifies that given the limited information that people possess and their ability to predict the future, they make choices that maximise their benefits. Additionally, Schaffer and Lia-Hoagberg (1994) assert that people are motivated by avoiding relationships in which employee performance, for instance, is more costly to them than rewarding in terms of employee rewards,

including social rewards. In Klein and White's (1996) view, the reason is that people seek their self-interests in exchange relationships. Finally, West and Turner (2010) believe that individuals use different standards to evaluate rewards and costs and will change over time.

Based on the above assumptions, Bolino, Turnley and Bloodgood (2002) opine that the social exchange theory has become a significant research framework for conceptualising the employer-employee relationship in organisational contexts. Along this line, Nzyoka and Orwa (2016) show that in the employment relationship, managers provide rewards, including social rewards, in the hope or belief that they will result in employee performance or behaviours, including adaptive, counterproductive and contextual performance or behaviours provided that such rewards are commensurate with employee efforts. Thus, Olanlokun (2018) explains that social exchange theory has been useful in explaining several social situations that involve two-sided relationships, including the employer-employee relationship that exists through the reward-performance exchange relationship.

Despite the contribution to explaining two-way exchange relationships, the social exchange theory has been criticised in many ways. One notable criticism centres on the theory's assumption of human rationality. For instance, Redmond (2015) asserts that humans cannot consistently measure benefits, predict the future and evaluate alternatives through human rationality. Redmond argues that people calculate costs such as their performance and benefits, including employee rewards, based on their impressions rather than rationality. An argument by inference is that the impressions formed about costs and rewards vary among individuals due to unique causality orientations or

dispositional factors. De Gieter and Hofmans (2015) and Hagger et al. (2015) concur by arguing that orientations affect the relationships between several organisational factors, including rewards and outcomes, including performance.

Secondly, the theory appears not to have given much prominence to the context within which social exchange interactions occur. Although context affects social interactions, Stolte, Fine and Cook (2001) contend that there are doubts about this recognition in social exchange assumptions. That is, social exchange theory assumptions cannot apply in all situations. In agreement, Redmond (2015) expounds that actors such as employees cannot be rational and evaluate alternatives in some exchanges because of the restrictions imposed by roles and context. Therefore, social exchanges are not based on reward and cost evaluations in such cases. Along these similar lines, Cropanzano et al. (2017) conclude that social exchange theory oversimplifies through a reductionist approach human interactions by concentrating on rewards, cost, and profit.

In order to improve the shortcomings of the social exchange theory, contributors including Thibaut and Kelley (1959), Blau (1961, 1964), and Emerson (1972) have worked on advancing the theory since Homans (1958) propounded it. In the early stages of its development, Homans (1958) conceptualised social exchange as a single individual action based on individual self-interest in which an action by a partner in the exchange is either strengthened or punished by the recipient of the action (Homans, 1961). From a reinforcement perspective, Homans argued that the more valuable the reward for an action is to social exchange partners, the more likely the action will be repeated.



Contrary to Homans (1958) individualistic approach to explaining social exchange interaction between parties, Thibaut and Kelley's (1959) main focus was on small groups. Thibaut and Kelley developed the concept of comparison level of costs and rewards to elucidate how the actors in the relationship assess the benefits of the social exchange relationship. That is, in the employee reward-performance relationship, for instance, employees compare their social rewards, including responding to their complaints, noticing a good performance and receiving feedbacks with their performance. Kelley and Thibaut (1978) further argue that the history of such an exchange relationship forms the basis on which the costs and benefits of remaining in the relationship are examined.

Further development was by Blau (1961), who agrees with Homans' reward and cost proposition (1958). However, Blau departs from Homans' proposal that an actor's action rests on previous experience. He instead posits that actors' actions result from anticipatory beneficial rewards and benefits. Also, Blau noted that actors would opt for an alternative cause of action that maximises their benefits and minimises their costs. In line with these thoughts, Blau (1964) argues that social exchange embraces individual voluntary actions that are motivated by the returns they expect from others. Blau distinguished between economic exchanges, which are based on agreements, and social exchange, governed by implicit obligations. Furthermore, due to the uncertainty about when the favour will be returned, Blau (1986) posits that social exchange relationships depend on trust.

Emerson (1962, 1972) also contributed to the social exchange theory. Emerson (1962) recognises the existence of power differences between the actors in a social exchange relationship. Emerson attributes the differences to

the relative reliance of actors on one another for the resources that they value. Thus Emerson (1972) stresses the importance and effects of power and dependence in a social exchange relationship. Therefore, Cook et al. (2006) contend that Emerson's power-dependence principle permits the formulation of predictions about the effects of changing the value of the resources of exchange in the relationship and the availability of alternative sources of resources. Consequently, Coyle-Shapiro and Shore (2007) emphasise that social exchange involves a continuous exchange process in which interdependent actors recognise that providing a benefit generates the obligation to reciprocate.

In line with the above, this thesis uses the social exchange theory to explain the direct relationship between employee rewards such as courteousness, caring for employee well-being, recognising achievement, emotional support and respect, and employee's adaptive, contextual and counterproductive performance. This is because employees consider such social rewards as a response to their efforts toward achieving organisational goals. This use aligns with Blau's (1964) assertion that employees are interested in ensuring a balance between inputs, such as their performance or behaviours and outputs, including rewards. Nevertheless, Shore, Coyle-Shapiro, Chen and Tetrick (2009) argue that individual differences could account for different levels of returning a kind gesture, such as rewarding employees, and consequently, different levels of the outcome, including employee performance. This position finds expression in the causality orientation theory.

### Causality orientation theory

Deci and Ryan (1985b) proposed causality orientation theory as a component of their self-determination theory. Deci and Ryan (1985b) posit that causality orientations are relatively permanent characteristics that reflect an individual's belief about behaviour. In different terms, causality orientation theory portrays that people have relatively enduring aspects of themselves that characterise the origin of initiation and regulation of their behaviours. In Deci and Ryan's (1987) viewpoint, this explains individual differences in comprehending experiences and how behaviours arise. Such differences in how individuals regulate their behaviour and experiences in Ryan's (2009) opinion emanate from differences in how individuals orient to different components in their environments, such as providing employee rewards to control their behaviour, including employee performance. Some assumptions explain these different orientations.

Soenens, Berzonsky, Vansteenkiste, Beyers and Goossens, (2005) expounds that the causality orientation theory operates on the fundamental assumption gleaned from the self-determination theory that individuals are active, growth-minded and have inborn and natural predisposition concerning developing a unified personality or identity. Similarly, Deci and Ryan (2012) clarify that humans behave proactively and in a growth-oriented manner. In the same vein, Legault (2017) opines that this assumption implies that causality orientation theory assumes that all humans have the need to feel that they are useful and connected with others to grow.

In line with causality orientations assumptions, Ryan and Deci (2006) identify three forms of individual orientations: autonomy causality orientation, control causality orientation, and impersonal causality orientation. Ryan and Deci (2006) define autonomous causality-oriented individuals as individuals who orient to their interests and act in line with those interests. In contrast to autonomous orientation, Olesen, Thomsen, Schnieber and Tonnesvang (2010) define impersonal causality orientation as an orientation in which individuals' lack of self-efficacy or confidence regulates their behaviours. Contrary to the autonomous and impersonal orientations, Ye, Zhang and Hocine (2013) expound that the behaviours of control causality orientated individuals are regulated by environmental controls, such as pleasing others, guilt, the possibility of advancement, acceptance of ideas, avoiding problems, shifting of blame and anger.

Comparatively, both the social exchange theory (Blau, 1964) and the causality orientation theory (Deci & Ryan, 1985b) recognise that individuals evaluate organisational factors such as the provision of employee rewards in determining their response, including employee performance. Furthermore, both the social exchange theory (Blau, 1964) and the causality orientations theory (Ryan, 2009) rely on perceptual evaluations of the work environment either in the form of human rationality about cost and benefits in social exchange theory or about the subjective assessment of the work environment based on individual dispositions in the causality orientation theory. Moreover, social exchange's assumption of an individual's desire to maximise reward and minimise cost (Cook et al., 2006) is akin to causality orientation's belief that individuals are growth-oriented (Soenens et al., 2005).

In line with the above, fusing the two theories in understanding the roles of individual dispositions in the reward-performance relationship is vital. As earlier stated, the causality orientation theory offers three individual orientations to examine such roles. Intuitively, one can propose that these three levels of causality orientations might serve as the mechanisms through which employee rewards result in performance. However, researchers seeking to study the reward-performance relationship tend to overlook how individual differences could determine the strength of rewards' effect on performance (De Gieter & Hofmans, 2015). Therefore, in this thesis, the causality orientation perspectives are employed to explain how causality orientations intermediate in the social reward - employee performance relationship.

Therefore, both causality orientations and social exchange theories are essential in studying reward-performance exchange relationships. However, neither the social exchange nor the causality orientation theories explicitly account for the psychological conditions and employee engagement in the process. In Koole et al.'s (2019) contention, although micro theories, including the causality orientation theory, allow for in-depth investigation of the personality process, they cannot fuse how different processes work within people. Additionally, Bilal (2017) and Franks (2017) recognise that psychological conditions and employee engagement are critical factors that affect the process through which antecedents, such as employee rewards, may relate to performance. This position, captured by the employee engagement theory (Kahn, 1990, 1992), is critical in explaining the relationship between employee reward and employee performance in exchange relationships.

## Employee Engagement Theory

Kahn's (1990) employee engagement theory examines the psychological mechanisms through which resources affect employee engagement. The theory states that when specific job resources such as employee rewards are provided, they create three psychological conditions in the employee, leading to employee engagement (Kahn, 1990). Saks and Gruman (2014), therefore, argue that employees focus on meaningfulness, safety and their availability as the basis for becoming engaged (Bailey, Madden, Alfes & Fletcher, 2015), assessing their jobs and performing their tasks (Taylor, 2019).

Rich, Lepine and Crawford (2010) explain that psychological availability is the preparedness of individuals to exert their physical, cognitive, and emotional selves to engage during role performance. On the other hand, meaningfulness is the idea that people want to be proud of their work (Jacobs, 2013) and feel personally accomplished in performance (Shuck & Reio Jr. 2014). In contrast, Agarwal and Farndale (2017) describe psychological safety as a feeling of freedom fueled by organisational norms, trustworthy and predictable situations, supervisor trust and consistency. They elucidate that these feelings assure individuals of their freedom from negative consequences that adversely affect employees' self-image, status and career as they invest their true self in the performance of their jobs.

The engagement theory relies on Hackman and Oldham's (1980) theory, which posits that people's psychological work experiences drive their behaviours and attitudes. Also, Alderfer (1985) stresses that it also uses the idea that personal, interpersonal, group, intergroup, and elements in the organisation combine to affect people's psychological experiences of work. Thus, Kahn

(1990) assumes that employees have perceptions about their work environment or context, which influence the conditions that are relevant for comprehending the reasons for which they become engaged or disengaged at work. The theory further assumes that people employ varying aspects of themselves to the performance of their jobs. That is, engaged employees can harness their cognitive, physical and emotional aspects of themselves to their role performance better than disengaged employees (Kahn, 1990).

Initial supporters of engagement theory include May, Gilson and Harter (2004), and Oliver and Rothmann (2007). May et al. revealed that psychological safety partially mediated the relationship between obeying norms and employee engagement. Olivier and Rothmann also showed that meaningfulness and availability respectfully mediated colleague relations and employee engagement and between resources and engagement. Some Later studies, including those of Koskey and Sakataka (2015), Hoque, Awang, Siddiqui and Salihi (2018) and Borst, Kruyen and Lako (2019), relied on the social exchange theory to provide a theoretical basis for the antecedents and outcomes of employee engagement. However, the theory did not provide for specific psychological variables that mediate to account for the association between particular variables and engagement as Kahn (1990, 1992) originally conceived the concept.

Accordingly, Ababneh and Macky (2015) acknowledge that there is an absence of conceptual clarity regarding antecedents and empirical results of employee engagement. That is, such studies did not explain the psychological conditions through which employees may become engaged (Saks & Gruman, 2017). However, social exchange theory has been noteworthy in explaining

social exchanges such as employee rewards-performance relationships, although usually without accounting for the mediating role of psychological conditions in the process. Therefore, there is a need to fuse the social exchange theory with the engagement theory to examine how employee rewards, such as social rewards, relate to employee performance through the mechanisms of psychological conditions and employee engagement.

In summary, social exchange theory offers a good explanation of social exchange relationships. However, other factors that affect human interactions, such as the psychological conditions, employee engagement and causality orientations, are ignored in social exchanges, such as the social reward-performance exchange in the employer-employee relationship. By examining the roles of causality orientations, psychological conditions and employee engagement in this relationship, an essential contribution to the social exchange theory literature in specifying the potential contribution of individual causality orientations and the psychological mechanisms of exchange will be made. In order to successfully achieve this, the concepts that emerged from the theoretical framework are reviewed.

### **Conceptual Overview**

Luse, Mennecke and Townsend (2012) state that conceptual overviews explain the concepts within a problem and show how concepts are related to one another within the theoretical framework (Grant & Osanloo, 2014). On the other hand, Khan (2018) defines concepts as words that are difficult to measure, such that their meanings may vary across different researchers. Comprehending the multifarious and complex nature of concepts, in Khan's assertion, aids in identifying variables or constructs that can help in the measurement of the



concept. This section of the review discusses the concepts of employee rewards, employee engagement, psychological conditions, causality orientations, and employee performance based on the purpose of this research.

### **Employee Rewards**

Bratton and Gold (2003) define employee rewards as the monetary, non-monetary and psychological payments that employees receive for their contributions. Correspondingly, Byron and Khazanchi (2012) define employee reward as the money, prizes, praise, recognition, and desirable outcomes that serve as tools for reinforcing desired behaviours. These definitions suggest employee rewards as specific awards, such as pay or praise, which are determined by employers. In contrast, Koskey and Sakataka (2015) view employee rewards as employee-dependent by explaining that they consist of everything that employees value as a return for their contribution to the employment relationship. These three definitions suggest that the objective of rewarding employees is to provide some beneficial outcomes by driving employee effort and energy within organisations (Benati & Coccia, 2018).

Apart from driving employee energy and efforts, Scott et al. (2010) note that employee reward is a source of motivation. In Brown and Reilly's (2013) view, it is a critical factor in improving employee engagement. Based on the motivational value of employee rewards, Karami, Dolatabadi and Rajaepour (2013) and Gupta and Shaw (2014) associate employee rewards with positive employee and organisational outcomes. While Karami et al. (2013) posit that employee rewards are catalysts for employee performance and organisational success, Gupta and Shaw (2014) explain that they are preconditions for the success of other organisational policies. In agreement, Deloitte (2014)

associates employee engagement to employee rewards, which Ogbonnaya et al. (2017) consider as critical for survival. Regardless of the expected outcomes of employee rewards to result in positive effects, their effectiveness depends on other intervening factors.

Ganster, Kiersch, Marsh and Bowen (2011) and Armstrong (2012) agree that other factors determine the effectiveness of employee rewards. Ganster et al. (2011) posit that their design and administration determine their effectiveness. Similarly, Armstrong (2012) argues that rewards must be strategic, equitable, and managed to satisfy stakeholders in the employment relationship to achieve expected outcomes. Furthermore, to be effective, employee rewards must be subjected to regular review because, as noted by Aliu, Sahiti and Sahiti (2013), there is a tendency for their motivational significance to diminish with time. Further, a strong supportive organisational culture (Amoatema & Kyeremeh, 2016), how different reward types have distinct impacts (Kuranchie-Mensah, Boye, & Amponsah-Tawiah, 2016) and individual differences (Fulmer & Shaw, 2018) affect the effectiveness of employee rewards.

Similar to the definition of employee rewards, there are also several types and classifications of employee rewards. The main types of employee rewards are intrinsic rewards and extrinsic rewards (Armstrong, 2007). Intrinsic employee rewards are psychological rewards received by employees when they do meaningful work and excel in performance (Thomas, 2009). Similarly, Giancola (2014) defines intrinsic employee reward as an inner feeling derived from executing a job well. These definitions imply that intrinsic rewards are instantaneous experiences. Obicci (2015) contradicts this opinion by arguing

that they are internal career-long experiences that embrace satisfaction, growth, autonomy and self-competence. As a result, Benati and Coccia (2018) conclude that these experiences are embedded in the job itself.

Consequently, Gallie, Felstead and Green (2012) recognise that intrinsic rewards constitute a central factor in employees' evaluations of their jobs and employee outcomes. In this vein, Giancola (2014) espouses that when employees' assessments of their jobs are intrinsically favourable, it can increase performance because of their motivational effects. Similarly, Olori and Edem (2017) argue that intrinsic rewards possess self-esteem that contributes to performance. Thus, intrinsic employee rewards are essential drivers of positive work outcomes. However, other factors can affect their effectiveness.

In Weibel, Katya and Margit (2010) contention, the provision of extrinsic rewards undermines the effectiveness of intrinsic rewards. This undermining effect emerges because, whereas intrinsic reward motivates employees because they consider tasks performance as a moral obligation (Weibel et al., 2010), extrinsic reward reduces the extent to which employees enjoy their task and ultimately performance (Ben-Hur & Kinley, 2016). As a result of the reduced effectiveness of intrinsic rewards because of the provision of extrinsic rewards, both Al-Jarradi (2011) and Gallie et al. (2012) report that extrinsic rewards are receiving much attention. However, due to differences in reward preferences, one reward type cannot be ignored to promote the other. Ajmal, Bashir, Abrar, Khan and Saqib (2015) attribute this to various employee rewards being relevant, subject to need and situation.

On the other hand, Deci, Koestner and Ryan (2001) note that employee rewards, as extrinsic rewards, are a stimulus offered to people to engage them in behaviours that they might otherwise ignore. Unlike intrinsic rewards, Mahaney and Lederer (2006) expound that extrinsic rewards are externally administered tangible rewards or incentives that employees receive for performing their jobs. Obicci (2015) agrees with this definition and explains further that the reward giver determines the size of the reward and whether to give it. Extant literature identifies two main types of extrinsic employee rewards that are at the reward provider's disposal.

Armstrong (2010) identifies extrinsic employee rewards as consisting of direct extrinsic rewards and indirect extrinsic rewards. Al-Jarradi (2011) posits that direct extrinsic reward consists of monetary returns given to employees by the employer. Direct extrinsic rewards include monetary rewards such as variable pay and base pay. Tomar (2011) states that variable pays are the monetary rewards that are contingent on the employees' performance. On the other hand, Armstrong (2012) opines that base pay is the fixed salary based on the value of the job. In the view of O'Boyle and Aguinis (2012), these monetary rewards are essential for performance because, in Long and Shields (2010) perspective, they help to improve employee well-being. Contrary to this opinion, Aguinis (2013) contends that direct extrinsic rewards do not always result in expected outcomes. In support, Frey, Homberg and Osterloh (2013) link them to counterproductive behaviour.

Individual psychological and management or organisational system issues have been adduced to explain why direct extrinsic rewards do not continually improve performance. For instance, Obasan (2012) raises a

psychological argument by advancing that when employee rewards are performance-determined, they amount to treating employees differently. To Obasan, this treatment lowers employee morale and, ultimately, performance because people hate differential treatments. Relating to organisational issues, Belle (2015) contends that non-market-oriented organisations resist variable pay. On the other hand, Spano and Monfardini (2018) explain that issues about design, the form of the reward and what constitutes performance indicators for the rewards' effect could result in adverse effects. These contestations indicate the importance of intervening factors in analysing the impact of direct extrinsic rewards (Cainarca, Delfino & Ponta, 2019).

In addition to direct extrinsic rewards, extrinsic rewards can also be indirect. Dulebohn, Molloy, Pichler and Murray (2009) define indirect extrinsic rewards as benefits, including services, health insurance, and pension. Zhaohong, Trenberth and Kelly (2010) categorising these benefits indicate that they may be non-legally defined ones such as supplementary insurance, appreciation, decorated work area and vacation pay provided by employers. In contrast, Mazumder and Mazumder (2013) identify that legally defined benefits include social security insurance payments, medical insurance, disability insurance, sick leave and maternity leave. Regardless of this distinction, Klonoski (2016) adds that whether indirect extrinsic rewards are legally or non-legally defined, they are additions to base pay and are unrelated to task completion or extra duties. Nevertheless, indirect extrinsic rewards affect organisations.

Rutigliano (1986) argues that indirect extrinsic rewards enhance organisational performance by promoting employee loyalty. Along similar lines, Chan, Gee and Steiner (2000) posit that they can positively affect the bottom line. In Coff and Kryscynski's (2011) contribution, the effects of indirect extrinsic rewards emanate from their motivational effects on employees and the enhancement of human capital development. These advantages notwithstanding, Coff and Kryscynski note that benefits or indirect extrinsic rewards cannot motivate employees equally due to differences in how employees perceive them. Messersmith, Patel and Crawford (2017) also argue that employee benefits impede new organisations' survival due to the inherent additional cost.

Extrinsic rewards also encompass symbolic rewards in terms of support in relationships with colleagues and supervisors: social rewards (Jorunn, 2010; Mottaz, 1985). Mottaz (1985) defines social reward as non-monetary related factors such as the relationship with supervisors and colleagues. This definition converges with that of Dailey and Kirk (1992), who view social rewards as having a supportive relationship with managers or supervisors and peers or co-workers. Malhotra, Budhwar and Prowse (2007) state that supportive supervisors connote the extent of employee satisfaction with supervisors, which expresses how employees are happy with the behaviour of supervisors toward them. On the other hand, Miao, Newman, Sun and Xu (2013) explain that co-worker support is the emotional support and feedback provided by colleagues. These supports from colleagues and supervisors suggest that social rewards signify respect, courtesy and kindness towards others (Ramirez-Marin & Shafa, 2018), which have some positive effects.

Eisenberger, Huntington, Hutchinson and Sowa (1986) and Eisenberger et al. (2001) expound that when employees are happy with social rewards, there is a potential for it to create a sense of obligation and enhance employees' psychological attachment to the organisation. Similarly, Salah (2016) explains that social rewards create feelings of well-being among employees. In light of this, Alhmoud and Rjoub (2019) explain that these feelings of well-being affect employees' working environment, enabling them to have feelings of competence and self-efficacy in performance. Therefore, Alhmoud and Rjoub conclude that social reward is one of the best choices in maintaining and ensuring consistency of employees' participation in organisations and hence can be considered a better alternative to other rewards. These views point to the importance of social rewards as an influential determinant of employee performance.

Accordingly, Anik et al. (2013) encourage academics and policy formulators to consider social rewards. This encouragement emanates from their impact on behaviour, cost-effectiveness and value to individuals compared to other employee rewards. For example, Bhanot et al. (2018) explain that financial rewards at the individual level can be more costly than their effectiveness compared to the minimal or no cost involved in social rewards. Furthermore, compared with the value of extrinsic rewards, which is determined by employees' ability to afford the basic needs of life (see Hua, Cheng, Hou, & Luo, 2019), the value placed on social rewards could be subjective. This means that employee evaluations and responses to social rewards might be influenced by causality orientations, psychological conditions and employee engagement.

Despite this possibility, generally, much of the academic work on rewards and performance did not consider this possibility.

### **Employee Performance**

Employee performance encapsulates manifestations of employee behaviours that do not only enhance the achievement of organisational goals but which also hamper goal attainment (Motowidlo, Borman & Schmit, 1997). In concurring, Aguinis (2009) stresses that employees' performance should be about the behaviours exhibited and not about production or the results of an employee's work. On the contrary, Thao and Hwang (2011) note that employee performance is about employees' contributions toward the attainment of organisational goals, which from Afshan, Sobia, Kamran and Nasir's (2012) standpoint, must be judged against pre-determined standards and efficient use of provided resources. Anitha (2014) agrees with this opinion of employee performance but adds that it must be regarded as an indicator of financial results that directly relates to organisation accomplishments.

The various definitions encapsulate employee performance as a multidimensional concept. For example, Borman and Motowidlo (1993) and Campbell, McCloy, Oppler and Sager (1993) describe the concept as a multi-component concept that encompasses process performance and outcome performance. Koopmans (2014) asserts that process or behaviour performance involves the actions, including courtesy, helping others and adapting to new circumstances exhibited to accomplish a job, whereas the outcome component deals with the results, such as goal attainment of the individual action or behaviour. Koopmans further indicates that the process aspect of employee performance includes three dimensions or behaviours or performance, namely



contextual performance, adaptive performance and counterproductive work behaviour. In contrast, the outcome performance is one dimensional, namely task performance.

Campbell (1990) and Williams and Anderson (1991) define task performance as exhibited behaviours that are directed at honouring the expectations of an organisation prescribed in an employee's job description. Campbell further notes that task performance is revealed in the tasks, duties and responsibilities that are embedded in the organisation's salary system. In the same vein, Borman and Motowidlo (1993) explain task performance as formally recognised job activities but add that task performance contributes to an organisation's technical core. Borman and Motowidlo explain that technical core or activities are the activities that define employees' technical proficiency.

Furthermore, Zhu (2013) clarifies that task performance is determined against set standards, including output quality and quantity, safety, punctuality, or absenteeism records. Meeting these standards, in Díaz-Vilela et al.'s (2015) contention, is indicative of the level of self-efficacy with which jobholders engage in activities that contribute to attaining organisational core goals. Nevertheless, viewing employee performance as a required activity to achieve goals ignores the processes leading to the goal attainment. As a result, Jundt, Shoss and Huang (2014) criticise task performance as a static concept because it overlooks these processes and the socio-psychological environments within which employees are expected to meet the set standards. Consequently, Podsakoff, Podsakoff, MacKenzie, Maynes and Spoelma (2014) favour expanding the traditional models of employee performance to include voluntary behaviours, such as contextual performance.

Podsakoff, MacKenzie, Moorman and Feter (1990) conceptualise that contextual performance or behaviours are deliberate and discretionary employee behaviours that are usually neither rewarded nor part of the formal role requirements. Reilly and Aronson (2012) agree with this definition and differentiate contextual behaviours from task performance in that contextual behaviour activities are non-goal specific activities, such as helping others and pride in the organisation. Although contextual performance is a non-goal specific activity, it is associated with task performance. For instance, Mshellia, Malachy, Sabo and Abu-Abdissamad (2016) explain that contextual performance enhances task performance through employee exhibition of behaviours that support the social, organisational and psychological environments in which task performance occurs.

Besides the impact on task performance, Organ, Podsakoff and Mackenzie (2006) add that contextual performance contributes substantially to business growth, affects the bottom line, and ensures operational efficiency. Along similar lines, Dekas, Bauer and Walle (2013) and Kataria, Garg and Rastogu (2013) explain that contextual performance aids in better coordination of organisational activities, enhances productivity and efficient utilisation of limited resources. Consequently, Kim, Van Dyne, Kamdar and Johnson (2013) claim that many organisations encourage contextual performance because it serves as a catalyst to task performance.

Due to the relevance of contextual performance, researchers want to make more explicit the dimensions of contextual performance. Podsakoff and Mackenzie (1994) conceptualise contextual performance as consisting of helping behaviours, civic virtue and sportsmanship. Helping behaviours include

encouraging, making peace and assisting others. Civic virtue, on the other hand, includes making suggestions and actively participating in teamwork. Sportsmanship signifies choosing to endure rather than arguing in teamwork. Relatedly, Coleman and Borman (2000) identify three groups. The first group is behaviours that are beneficial to organisational members, including altruism, cooperation and interpersonal facilitation. The second group is beneficial organisational behaviours, including adherence to rules and procedures and allegiance. The last group is behaviours that are beneficial to the job or task, such as extra effort and dedication.

Many contributors, including Allen, Barnard, Rush and Russell (2000), perceive contextual performance positively. On the contrary, others such as Rioux and Penner (2001) and Vigoda-Gadot (2007) also doubt labelling it as an entirely positive concept because the intensions that drive contextual performance might be harmful. For instance, Rioux and Penner (2001) advance that what one sees as contextual behaviour may be an impression management tactic to make one look good and make others look bad. In confirming this view, Vigoda-Gadot (2007) asserts that contextual performance may be driven by self-serving motives that can negatively affect employees. Thus, Peng and Lin (2016) argue that in conceptualising contextual performance or behaviour, it is vital not to view it as an entirely positive behaviour that helps the optimal performance of a task since it could also be negative.

Along with the above opinions, Motowidlo et al. (1997) iterate that employee performance should also be explained in terms of employee behaviours that hinder the achievement of organisational goals. Collectively, these behaviours are described as counterproductive work behaviours. In

supporting Motowidlo et al., both Fox and Spector (1999) and Chang and Smithikrai (2010) interpret the concept as harmful behaviours that emanate from premeditated actions. Fox and Spector (1999) opine that counterproductive work behaviours are employees' deliberate behaviours that infringe organisational rules and threaten the organisation, members, and supervisors' good. Relatedly, Chang and Smithikrai (2010) explain them as voluntary and intentional behaviours that injure the organisation's interest. These definitions mean that counterproductive work behaviours are volitional and deliberate, similar to contextual performance.

Employees exhibit counterproductive work behaviours in several forms. The forms include Murphy's (1989) loss of productivity, damage, avoiding work, and Hunt's (1996) theft and disorderly behaviours. Lee and Allen (2002) also cite cursing, playing mean prank and religious and ethnic remarks as indicators. Similarly, Kelloway, Francis, Prosser and Cameron (2010) identify that individual and collective counterproductive work behaviours are derived from organisational members' protests in response to dissatisfaction with organisational justice. Kelloway et al. indicate that individual counterproductive work behaviours are characterised by leaving work early, working slowly, stealing and destroying equipment. On the other hand, collective counterproductive work behaviours include working to rule, taking long lunch breaks, legal strikes and sabotage (Kelloway et al., 2010). One critical issue is the source of these behaviours.

Hafidz (2012) argues that since counterproductive work behaviours are choices that individuals make, individual dispositional factors or causality orientations are likely to influence counterproductive work behaviours

significantly. Other authors have attributed counterproductive work behaviours to stressful conditions (Mary, 2012), abusive supervision (Sulea, 2013) and work-life balance issues (Shakir & Siddiqui, 2014). Regrettably, Tufail, Muneer and Manzoor (2017) point out that few studies on employee rewards, including social rewards, have been investigated as the drivers of counterproductive work behaviours.

Discussions so far on the dimensions of employee performance have focused on three main areas. These areas are fulfilling job description requirements, going beyond the expected performance through contextual behaviour activities and engaging in behaviours that are disadvantageous to individuals and the organisation. However, Murphy and Jackson (1999) emphasise that these dimensions do not include the entire range of behaviours required for employee performance in uncertain environments. Subsequently, Charbonnier-Voirin and Roussel (2012) stress that employees need to adjust to the uncertainty and the interdependence associated with the work environments. As a result, Park and Park (2019) assert that employees need to exhibit adaptive performance or behaviours to deal with alterations in the environment.

Adaptive performance, in the view of Allworth and Hesketh (1999), involves employees' ability to alter behaviours due to job conditions and requirements. Pulakos, Arad, Donovan and Plamondon (2000) also define adaptive performance as performance that reflects employees' ability to adjust quickly and make decisions in response to new, uncertain and ambiguous situations and events. These definitions conform to that of Chan (2000). Chan defines adaptive performance as work behaviour modifications such as feeling at ease when tasks change, keeping calm during a stressful situation and keeping

one's focus during emergencies. Implied in these definitions is that adaptive performance is a reactionary behaviour. Conversely, Jundt et al. (2014) explain that adaptive performance embraces behaviours that individuals assume in answer to or in expectancy of changes that are relevant to job-related tasks.

Adaptive performance is relevant due to its link to several organisational and individual benefits that result from it. At the organisational level, Dorsey, Cortina and Luchman (2010) reveal that adaptive performance is associated with influential organisational variables, including performance assessment, managing change and team effectiveness. On the other hand, at the individual level, Shoss, Witt and Vera (2012) show that adaptive performance enhances employee capabilities and, consequently, task performance. However, employees' ability to predict or react to changes in the work environment and adapt appropriately is vital in reaping these benefits. Thus, individual variations occur in adaptive behaviour and, hence, its effects. For instance, Calarco (2016) contends that some people find it harder than others to adapt to environmental changes. Calarco's assertion signifies the critical role of individual dispositions or orientations in adaptive performance.

Organisational and individual factors also influence adaptive performance. Cullen, Edwards, Casper and Gue (2014) identify organisational factors that affect adaptive performance to include social rewards, including supporting managers or supervisors and promoting learning. In contrast, Marques-Quinteiro, Ramos-Villagrasa, Passos and Curreal (2015) state that individual factors, including self-efficacy or confidence, influence adaptive performance. Eldor and Harpaz (2016) also note that employee engagement is an individual factor that affects adaptive performance. However, being a

volitional performance, other factors might concurrently influence the decision to engage in an adaptive performance. Therefore, integrating how employee rewards, mainly social rewards, interact with causality orientations, psychological conditions and employee engagement to predict adaptive performance might be worthwhile.

### **Causality Orientations**

Causality orientations are distinct individual personalities based on the tendencies to react to different sources of behaviour initiation and regulation (Deci & Ryan, 1985b). Similarly, Deci and Ryan (2000) explain that causality orientations are dispositional factors that influence how individuals understand and assess their work environment. Relatedly, Ryan (2009) and Legault (2017) agree that they are individual motivations that emanate from how individuals respond to their environments. For example, Ryan (2009) describes causality orientations as how different people regulate their behaviours in response to various aspects of their environments, and which explain how "prior stimuli activate certain orientations in people, affecting subsequent motivation" (Ryan, 2009, p. 2). Similarly, Legault (2017) asserts that causality orientations develop over time from thoughts about the work environment and become drivers of motivation.

Ryan (1982) explains that the work environment's characteristics such as praise, criticism and rewards are informational or controlling and produce distinct causality orientations. Along this line, Deci and Ryan (2000) explain that people are inclined toward environmental cues. They further note that individuals' interpretation of these cues results in three distinct general causality orientations: impersonal orientation, autonomous orientation and control

orientation. However, Hagger and Chatzisarantis (2011) argue that these orientations reflect a continuum ranging from high to low rather than a deterministic characteristic about an individual. In this vein, Ye et al. (2013) maintain that an individual can possess a combination of these orientations, causing variations in individual actions in different contexts.

Deci and Ryan (1985a) advance that impersonal causality orientation is the tendency of people to display signs of incompetence, relying on past experiences, precedence, feeling isolated, unnoticed and doubting their ability when faced with situations that require that they exhibit certain behaviours. Soenens et al. (2005) and Olesen et al. (2010) support Ryan's definition. Soenens et al., for instance, assert that people who are high on impersonal causality orientation are usually anxious, experience feelings of ineffectiveness, and cherish the maintenance of the status quo. Olesen et al. also posit that impersonal orientation concerns individual beliefs that achieving expected results is beyond their control. Therefore, contrary to autonomous oriented individuals, impersonal oriented individuals experience a sense of helplessness and are usually detached from their work and act without volitional intentions (Legault, 2017).

On the other hand, autonomous causality-oriented individuals exhibit behaviours in line with their interests, needs and values (Ryan & Deci, 2006). They are interested in demonstrating behaviours that help to maintain relationships, accept responsibility, become disappointed with poor performance and likes taking their own decisions (Ryan & Deci, 2006). Olesen et al. (2010) explain that such behaviours emanate from the individual's standards and beliefs. As a result, Deci, Olafsen, and Ryan (2017) elucidate that



autonomous oriented people work based on a high level of willingness, preference and choice. Consequently, Jerkovic, Rihtaric and Kranzelic (2017) posit that when people are high on autonomy orientation, their actions originate from their interests, needs and values. Similarly, Ryan and Deci (2017) explain that the high autonomous orientated know the value of their jobs, feel like part-owners, and receive detailed feedback and support.

In contrast to autonomy and impersonal orientations, control causality orientation involves behaviours that are influenced by pressure, including rewards, punishment and guilt, and guided by feelings of tension (Ryan, 1982). In a similar definition, Wong (2000) explains that a control orientated individual is concerned with rewards, pressure, and social demands and is controlled internally by feelings of worthlessness. Thus, Soenens et al. (2005) postulate that individuals who are high on control causality orientation tend to depend on rewards and are more oriented to what others want than pursuing what they desire. Therefore, individual differences in the relationship between employee rewards and performance are due to differences in causality orientations (De Gieter and Hofmans, 2015). However, others (e.g., Franks, 2017) have argued that employee engagement and psychological conditions are also critical in such relationships.

### **Employee Engagement and Psychological Conditions**

The concept of employee engagement has generated considerable interest among practitioners, consulting firms and academics since the 1990s. Divergent views have been expressed about employee engagement depending on whether the concept is defined by practitioners, consulting firms, or academics. Bakker and Schaufeli (2008) attribute these differences to variances

in practitioner or firm interests and academic interests. Practitioner definitions were related to aligning the definition of employee engagement with commercial interest (Zigarmi, Nimon, Houson, Witt & Diehl, 2009) and industry size (MacLeod & Clarke 2009). Factors that enhanced employee engagement and the effects of employee engagement on the bottom line also formed the basis for practitioner definitions (Shuck & Wollard, 2010). On the other hand, academic definitions of employee engagement aimed to ensure validity and consistency in the definitions (Ghadi, 2012).

From the practitioner perspective, Hewitt Association (2004), Macey (2006), Richman (2006), and MacLeod and Clarke (2009) share related insights about employee engagement as a devotion of employees to the organisation. For instance, Hewitt Association (2004) defines employee engagement as an emotional and intellectual commitment to a group. The Hewitt Association further explains that it is characterised by saying positive things about the group, a strong desire to remain with the group, and going beyond assigned tasks to achieve group success. Along similar lines, Macey (2006) defined it as going beyond assigned tasks through commitment and pride. In concurring, MacLeod and Clarke (2009) opine that employee engagement connotes a commitment to organisational goals.

Others viewed the concept as an employee's motivation, satisfaction, involvement, and performance attitude. For instance, Roberts and Davenport (2002) explain that employee engagement is a personal identification with one's job characterised by motivation and involvement. Relatedly, Towers Purrin (2003) agrees with employee engagement as a motivational concept but adds that it also captures individual emotions and the satisfaction derived from the

work environment. Robinson, Perryman and Hayday (2004) also comprehend employee engagement as a two-way employee and employer relationship that is characterised by positive employee attitudes. Correspondingly, Gallup (2009) defines employee engagement as working with passion and a solid connection to the job. From the practitioner perspective, there appears to be consensus on employee engagement as positive characteristics of an employee that contribute to attaining organisational goals.

Regardless of practitioner consensus, there were disagreements about the utility of the concept. These disagreements resulted from two significant sources. Firstly, the concept was equated to other established concepts, including workaholism, job involvement, burnout, job satisfaction, and organisational commitment. For example, Newman, Joseph and Hulin (2010) contend that employee engagement is an old concept with a new name. Secondly, there were doubts about the usefulness of the concept. For instance, Keenoy (2013) describes employee engagement as socio-political and corporate tools to exploit employees. Furthermore, Valentin (2014) did not only doubt the existence of employee engagement but described it as propaganda and deceitful.

However, through discriminant validation, academics have shown that employee engagement is useful and lacks overlap with other concepts. For instance, as regards workaholism, Truss et al. (2006) assert that employee engagement and workaholism connote passion for work. Although both concepts involve a positive, energetic and enthusiastic approach toward a job, Gorgievski, Bakker and Schaufeli (2010) argue that workaholism requires compulsion, an uncontrollable desire to work and an exaggerated assessment of work that poses a danger to health and reduces happiness.

In another breadth, employee engagement is differentiated from burnout. Maslach, Schaufeli and Leiter's (2001) view is that employee engagement characteristics of energy, immersion and efficacy are directly opposite to the burnout dimensions of exhaustion, cynicism, and inefficacy. Similarly, Schaufeli and Taris (2005) and Gikonyo (2018) agree that, while burnout is characterised by an unwillingness to perform, lack of energy and becoming emotionally disinterested, employee engagement is characterised by capability, self-worth, enthusiasm, high concentration and willingness to perform. Any similarity between the concepts can, at best, be relational (Falkoski, 2012) rather than conceptual.

Employee engagement is also distinct from commitment, job satisfaction and involvement. Saks and Rotman (2006) expound that employee engagement differs from commitment in that, whereas commitment relates to attitudes and attachment to an organisation, employee engagement is not an attitude. Rich et al. (2010) also posit that employee engagement is a broader construct and one that demands a total investment of the whole self as against job satisfaction and job involvement, which require a lesser representation of employees' self during the performance of jobs. In agreement with Rich et al., Kang and Sung (2017) argue that although employee engagement and involvement represent a psychological relationship between the employee and the job, involvement captures only the employees' cognitive aspect, while employee engagement captures the cognitive, emotional and behavioural aspects of employees.

The construct validations of employee engagements were based on academics' interests in making the concept's meaning explicit. Kahn (1990) defines employee engagement as "the harnessing of an organisation members' selves to their work roles" (p. 694). Kahn further explains that employees are engaged when they physically, cognitively and emotionally immerse themselves in the performance of their jobs. Closely related to Kahn's (1990) definition are those by Rothbard (2001) and Schaufeli, Salanova, Gonzalez-Roma and Bakker (2002). Rothbard (2001), for instance, explains that employee engagement is a psychological concept that involves mental readiness, the amount of time spent thinking about a role, and the intensity of focus on performance. Similarly, Schaufeli et al. (2002) posit that employee engagement involves a positive and job-related state of mind that is characterised by vigour, dedication and absorption.

Gara, Sharma and Saini (2019) explain that, while vigour involves feeling high levels of energy and mental resilience while working, dedication refers to being actively involved in one's work and experiencing a sense of significance, enthusiasm, and challenge. On the other hand, absorption means being entirely concentrated and engrossed in one's work. These definitions agree with Saks (2006) and Marcey and Scheineider's (2008) conceptualisations of employee engagement. Saks (2006) asserts that when employees are engaged, they bring their unique mental, physical and emotive selves to their work. Similarly, Marcey and Scheineider (2008) conceptualise employee engagement as having a positive outlook of work and life, described as trait engagement, a sense of vitality and absorption, described as state engagement, and behavioural engagement that is concerned with extra-role activities.

Both Dalal, Brummel, Wee and Thomas (2008) and Christian, Garza and Slaughter (2011) disagree with the “traits” and “states” conceptualisation of employee engagement. In Dalal et al.’s (2008) opinion, such a conceptualisation erodes clarity about the construct. As a result, Christian et al. (2011) contend that a better way to conceptualise employee engagement is to describe it as a reasonably stable and concurrent deployment of an employee's physical, mental and emotive energies during role performance. In contrast, Ababneh (2015) suggests that trait engagement should be understood as an individual dispositional driver of state engagement. Ababneh proposes behavioural engagement as an engagement outcome. Ababneh, thus, concludes that employee engagement is a means to an end. The various definitions notwithstanding, employee engagement denotes emotional, physical and mental strengths on the job.

However, in the academic field, employee engagement is yet to be fully understood for several reasons. For instance, in Little and Little's (2006) view, there is a question of whether to recognise employee engagement as a behavioural or attitudinal concept. Additionally, Kular, Gatenby, Rees, Soane and Truss (2008) raise the issue of whether its source is within or outside the organisation. In another breadth, Saks (2008) argues that the construct's division into three dimensions creates confusion about their antecedents, outcomes and connotes a repackaging of old constructs. In light of this, Wollard and Shuck (2011) doubt whether its drivers should be individual or organisational. As a result, Cole, Walter, Bedeian and O'Boyle (2012) conclude that employee engagement infringes the principle of thriftiness or parsimony in research.

Despite the contentions in the academic community about the concept's uniqueness in conceptualisation and usefulness (Truss, Shantz, Soane, Alfes, & Delbridge, 2013), there is groundswell support for employee engagement from both practitioners and academics in the management field (Crawford, Rich, Buckman & Bergeron, 2014). The reason for the upsurge in interest is that engaged employees affect organisational and employee outcomes. At the organisational level, employee engagement contributes to profitability and competitiveness (Bailey et al., 2015) and organisational effectiveness (Gupta, 2017). Employee engagement affects several employee outcomes at the employee level, including performance (Gulyani & Sharma, 2018; Iddagoda & Opatha, 2016), and organisational citizenship and counterproductive work behaviours (Chhetri, 2017). However, one issue still on the minds of researchers is the drivers of employee engagement.

Saks and Rotman (2006) state that the early studies of employee engagement included antecedents such as job characteristics, perceived organisational support, perceived supervisor support, reward and recognition. On the other hand, Madhura and Deepika (2014) identify leadership as a driver of employee engagement. In addition, while Bailey et al. (2015) posit job-design related factors, individual perception of organisational activities and individual psychological conditions as antecedents of employee engagement, Popli and Rizvi (2016) consider leadership styles as critical antecedents of employee engagement. In another breadth, Franks (2017) identifies psychological conditions as drivers of employee engagement.

Psychological conditions involve the perception of the work environment and individual characteristics that influence internal motivation and individual employees' readiness to decide whether to be engaged or not (Kahn, 1990). Kahn identifies three psychological conditions, namely psychological meaningfulness, psychological safety and psychological availability. These psychological conditions in the assessments of Shuck and Wollard (2010) and Alagaraja and Shuck (2015) enable the attainment of organisational goals because they first create three types of employee energy: cognitive energy, emotional energy, and behavioural energy, collectively described as employee engagement. For this to occur, drivers of psychological conditions, including employee rewards, in the opinion of Gatti (2016), are vital in explaining the linkage between psychological conditions and employee engagement.

Kahn (1992) defines psychological meaningfulness as employees' evaluation of the degree to which they obtain meaning from their work and feel that they are receiving a return on investment that is commensurate with the investment of the self in the performance of the job roles. Similarly, Saks and Gruman (2014) describe psychological meaningfulness as employee feelings about their work created by their assessment of how they are valued, the extent of their usefulness and not being taken for granted. While Asiwe, Rothmann, Jorgensen, and Hill (2017) agree with Saks and Gruman's definition, they argue that experiencing meaningfulness is based on employees' awareness of working towards a clear purpose and social good.

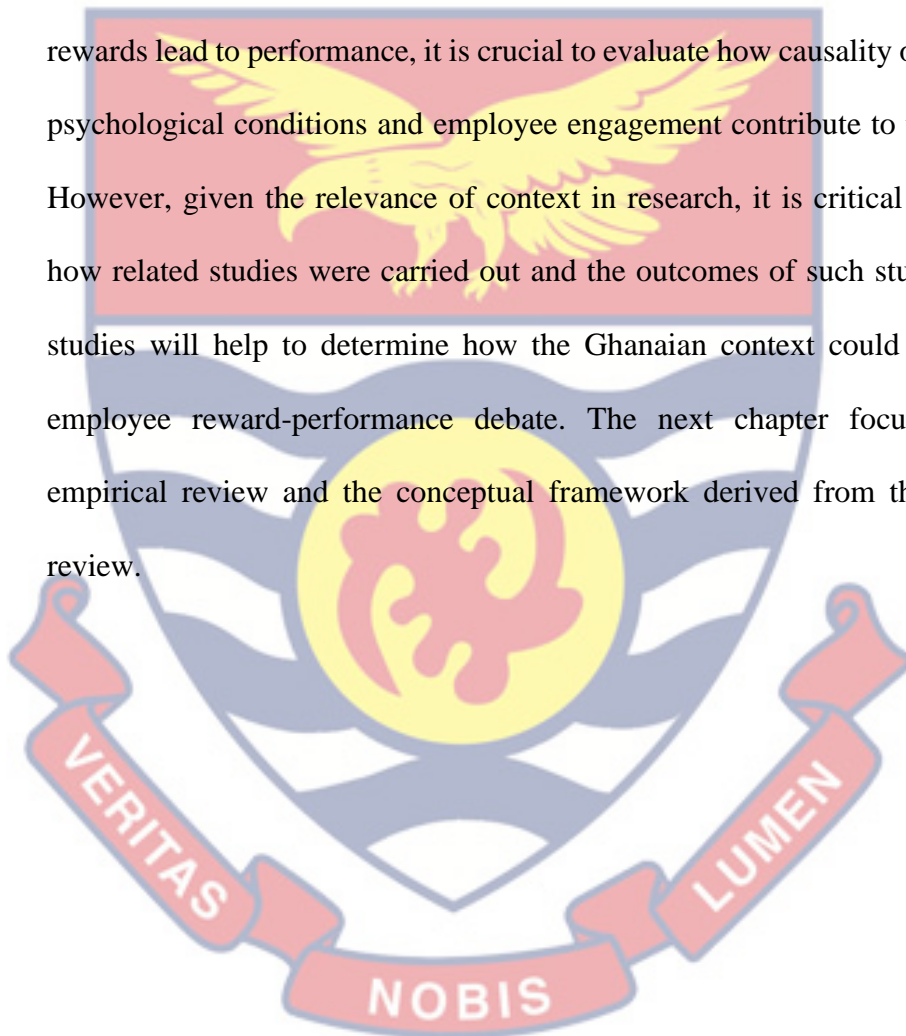


Another type of psychological condition is psychological safety. Carmeli, Brueller and Dutton (2009) conceptualise that psychological safety involves a feeling of comfortability of being oneself and experiencing freedom from the fear of harm to self-image, career, or status. In corroborating this definition, Zhang, Fang, Wei and Chen (2010) define psychological safety as individuals' feeling of confidence that the workplace relationships pose no threats and would not embarrass or punish them when expressing themselves in performance. Similarly, Koopmann, Lanaj, Wang, Zhou and Shi (2016) define psychological safety as "shared perceptions that the team is safe with respect to interpersonal risk" (p.94). Besides the safety from interpersonal risks, Probst (2015) suggests that psychological safety is related to supervisor support, a component of social rewards.

The third psychological condition of internal motivation is psychological availability. In contrast to psychological meaningfulness and psychological safety, Saks and Gruman (2014) explain that psychological availability is a belief or confidence of employees that they possess the physical, emotional, and psychological resources required to perform. The definition by Saks and Gruman conforms to that of Rich et al. (2010). They define psychological availability as the preparedness of individuals to exert their physical, cognitive, and emotional selves to engage during role performance personally. Factors such as security (Rothmann & Rothmann, 2010), absence of distraction and contradictions at work, and self-awareness are necessary for psychological availability (Kahn, 1990). Psychological availability is crucial because it creates confidence in one's abilities, which can lead to an individual's readiness to engage in role performance (Kahn, 1990) fully.

## Summary

The discussions presented in this chapter focused on the social exchange theory, the causality orientation theory and the employee engagement theory. The chapter also discussed the related concepts of employee reward, employee engagement, psychological conditions, causality orientations and employee performance. The review revealed that to fully comprehend how employee rewards lead to performance, it is crucial to evaluate how causality orientations, psychological conditions and employee engagement contribute to the process. However, given the relevance of context in research, it is critical to examine how related studies were carried out and the outcomes of such studies. These studies will help to determine how the Ghanaian context could fit into the employee reward-performance debate. The next chapter focuses on the empirical review and the conceptual framework derived from the literature review.



## CHAPTER THREE

### EMPIRICAL EVIDENCE AND CONCEPTUAL FRAMEWORK

#### Introduction

Empirical evidence and conceptual framework are standard components of academic studies. Walliman (2011) argues that empirical reviews help to grasp the current level of knowledge in an area of interest. Neuman (2011) and Griffiee (2012) explain that knowing the current level of knowledge in an area aids in identifying gaps and placing one's findings within the context of other ones. The chapter begins with related empirical reviews on the social exchange theory that underpin the relationship between employee reward and performance. The two sections that follow are related empirical reviews on the causality orientation theory and the employee engagement theory. The chapter concludes with a summary of the issues that emerged and a conceptual framework based on the summary.

#### Related Empirical Review on Social Exchange Theory

In the view of Blau (1964), social exchange theory proposes that when an individual receives favour from another party, the party providing the favour expects that the favour provided would be reciprocated in kind in the future based on implicit obligations. This reciprocation is based on the assumption that humans are rational and will undertake a cost-benefit analysis to determine their response (Varey, 2015) to the provision of employee rewards. This section examines the empirical evidence of the operationalisation of the theory using the works of Owor (2016), Sung et al. (2018), Asghar and Asif (2018), Rai, et al. (2018), Yin (2018) and Khoreva and Wechtler (2018).

Owor (2016) investigated the relationship between human resources practices, including employee reward, employee engagement and organisational citizenship behaviour, or contextual performance in selected Ugandan organisations. The theoretical underpinning of the study was the social exchange theory and the employee-organisation relationship frameworks. Owor hypothesised that human resource factors, including employee rewards, positively correlate with employee engagement, with employee engagement positively correlating with organisational citizenship behaviour or contextual performance. Owor (2016) further hypothesised that employee engagement mediated between human resource factors and contextual performance.

The study was quantitative and cross-sectional in design. The researcher sampled 317 employees based on Krejcie and Morgan's sample size determination table from a targeted population of 1,773 employees of soft drink and sugar firms in two districts in Uganda. Data were collected using standardised quantitative measurement scales used in related studies. The data collection instrument was a questionnaire. The data were analysed using Pearson correlation and hierarchical regression techniques. The result revealed that high rewards or recognition were related to employee engagement at  $r = 0.53$ . Furthermore, the result revealed that employee engagement accounts for unique variances in the relationship between reward fairness and contextual performance.

Owor's (2016) study contributed to comprehending how various human resource practices individually contribute to employee engagement. However, the study limited the engagement outcome variable to just one dimension of employee performance. Additionally, the sample size of 317 accounted for only

17.89 percent of the targeted population. A larger sample might be more appropriate for generalisation across the selected firms for a study that targeted four firms in two districts. Besides, each firm's population and how the sample sizes allocated to the firms were derived were missing. Further research using a more representative sample size and concentrating on other reward components, including social reward and performance components of adaptive performance and counterproductive work behaviour, may add to existing knowledge.

Another study by Sung et al. (2018) investigated the relationship between monetary reward and salespersons' performance in the Malaysian retail sector. They conceptualised based on the social exchange postulation that salespersons' performance is a response to the provision of rewards by their employers. The study's primary purpose was to examine the role of organisational commitment in the relationships between rewards and salespersons' performance. They hypothesised, among others, that there were significant relationships between employee rewards and salesperson's performance and that various components of organisational commitment mediated the relationships.

The study used quantitative and cross-sectional designs. The study population was an unspecified number of salespersons from three retail shops. Two hundred and twenty salespersons selected through the purposive sampling technique were involved in the study. The data collection instrument was questionnaires developed from adapted existing instruments. Data analysis based on the structural equation model revealed two significant findings. Firstly, the study found that employee reward had a significant relationship with salespersons' performance. Secondly, the study revealed that only one

component of organisational commitment, normative commitment, mediated the relationship. A key conclusion of the study was that whereas rewards generally had a significant relationship with the performance of salespersons, salary did not.

There are four grounds on which to criticise Sung et al.'s (2018) study. Firstly, by not stating the study population, one would wonder how a sample size of 220 was representative of the population. This omission affects the generalisation of the findings to the retail shops studied. Secondly, a nonprobability sampling method in quantitative study was a bit out of the norm, given quantitative studies' stringent structural requirements. That is, the sampling method introduced subjectivity into a study whose research approach was quantitative. Thirdly, the study lacked a theoretical explanation for the introduction of the mediating variable into the study. Finally, Sung et al.'s (2018) study, comparable to Owor's (2016) study, treated employee performance as a one-dimensional concept. This conceptualisation makes it challenging to decipher how employee reward contributes to each component of employee performance.

Related to Owor's (2016) study that concentrated on contextual performance, Asghar and Asif (2018) also studied salaries, altruistic behaviour and employee performance in China. However, contrary to Owor's (2016) concentration on contextual performance, Asghar and Asif's (2018) study incorporated just an aspect of contextual behaviour in their study. The study's purpose was to establish the links among salary, job performance, and altruistic or helping behaviour of employees. The social exchange theory was the underpinning theory of the study.

The study was quantitative and longitudinal in design. The study population was all players from thirty basketball teams made up of 1,566 players that participated in four basketball seasons. The salaries of players published on the internet were the source of data. Through regression analysis, the study made two significant findings. Firstly, the study found a positive relationship between helping behaviour, which is a component of contextual performance and task performance. Secondly, the study revealed that helping behaviour had a significant and positive effect on task or job performance and mediated the relationship between salary and job performance.

They concluded that when employees are happy with their pay, they devote their time to extra roles. Contrary to the previous studies, Asghar and Asif's (2018) study examined how a component of contextual performance, altruistic behaviour, mediated the relationship between salary and task performance. Their study contributed to further understanding of the reward-task performance relationship by showing how salary, a dimension of employee reward, affects job performance. However, Asghar and Asif's study has methodological flaws. The study did not explain how altruistic behaviour and job performance were measured.

In another study, Rai et al. (2018) examined the relationship between employee rewards, recognition and performance of salespersons of retail shops in India. In doing so, Rai et al. relied on the social exchange theory and job demand resource theory. They conceptualised that when employees receive decent salaries, training opportunities and recognition, they become obliged to respond by channelling their efforts towards performance. The study was quantitative and cross-sectional. Questionnaires for the study relied on

established scales. Two hundred and forty-seven retail salespersons selected from a survey of 35 retail shops in five cities were involved in the study. The simple random sampling technique was used for the selection of the respondents.

Hierarchical regression analysis based on Baron and Kenny's (1986) propositions revealed that employee engagement perfectly mediated the relationships between rewards and recognition and in-role performance and extra-role performance. They concluded that incorporating personality variables as possible moderators is critical to the relationship. Rai et al. (2018), contrary to Owor (2016), Sung et al. (2018), and Asghar and Asif (2018), treated employee performance as a multidimensional concept in their investigation. That notwithstanding, other performance components, including adaptive performance and counterproductive work behaviour, were excluded. Besides, the study did not consider how social rewards and variations in employee engagement based on the extent to which employee experiences of meaningfulness, safety and psychological availability could affect in-role performance and extra-performance.

Similar to Rai et al.'s (2018) study, Yin (2018) investigated the outcomes of employee engagement in small and medium-sized computer parts organisations in Nanjing in China. The social exchange theory was the theoretical underpinning of the study. The investigation's main objective was to examine the relationships between employee engagement and task performance, organisational citizenship behaviour, burnout, and counterproductive work behaviour. Yin conceptualised that employee engagement would result in task performance, extra-role performance, burnout,



and counterproductive work behaviour, with organisational justice moderating the relationship.

The study used quantitative and cross-sectional designs. Yin randomly selected 48 organisations out of 276 computer part sales companies in the study. Already established scales used in other studies formed the basis for the questionnaires. The data analysis technique used was the structural equation model. The results indicated that higher employee engagement leads to higher in-role or task performance with a path coefficient of 0.26 ( $p < .001$ ). Moreover, Yin (2018) reported, among others, that higher employee engagement led to higher extra-role performance but led to lower counterproductive work behaviours with path coefficients of 0.41 ( $p < 0.001$ ) and  $-0.21$  ( $p = 0.003 < 0.01$ ), respectively.

Contrary to Rai et al.'s (2018) study that measured performance as a single construct, Yin included three components of employee performance. This inclusion helped to clarify the contribution of employee engagement to each of the components of employee performance. However, compared to other studies (e.g., Owor, 2016, Rai et al., 2018) that studied employee engagement, the psychological mechanism through which employees become engaged was missing in the study. Besides, the theoretical conceptualisation did not include an antecedent variable, such as the provision of reward, which employees must value before they become engaged.

In another study, Khoreva and Wechtler (2018) assessed the relationship between human resource practices and performance. The study's purpose was to analyse the link between human resource's skill-enhancing, motivation-enhancing (conceptualised to include employee reward) and opportunity-

enhancing dimensions and in-role performance and innovative performance. The psychological, physical and social well-being of employees were mediators. Through the social exchange theory lens, Khoreva and Wechtler proposed that when employees feel loved through human resource practices, they develop a sense of obligation, which translates into in-role and innovative performance.

The research approach and study design were quantitative and cross-sectional, respectively. All the 444 employees in the professional service company in Finland were involved in the study. Thirty-four immediate supervisors were also involved in the study. The questionnaire items were adopted from standardised Likert scale measures. The analysis of data used structural equation modelling. The results indicated that the relationship between motivation-enhancing human resource practices, including employee rewards, was partially mediated by psychological employee well-being.

Khoreva and Wechtler (2018) concluded that each human resource practice in their study affects employee well-being differently and that each of the dimensions impacted positively but differently on performance. Khoreva and Wechtler's (2018) contribution to literature relates to simultaneously investigating the effect of different dimensions of human resource management on performance. Additionally, they explained how employee well-being, a psychological aspect of employees, relates to performance through the mechanism of employee well-being. The study, however, did not fully explain its methodologies. The effect of this is possible doubts about the validity and reliability of the findings.

In summary, using the social exchange theory as the theoretical framework for the related reviews on employee reward-performance relationships relied primarily on the obligation to return a kind gesture. There was a taken-for-granted assumption by all the authors that all employees would respond to reward in the same direction and measure in returning the kind gesture in the form of performance. These studies did not consider how individual differences through causality orientations could determine the extent of obligation and, consequently, the strength of the relationship between employee reward and performance across different employees. Therefore, extending the reward performance relationship to include how causality orientations could result in employee variations in performance levels might deepen the theoretical and empirical understandings of the reward-performance relationship.

### **Related Empirical Review on Causality Orientation Theory**

Hagger and Hamilton (2020) assert that the causality orientation theory had received somewhat less research attention regarding its effects on behavioural outcomes, including employee performance. Consequently, empirical evidence related to the use of causality orientation theory to explain the role of causality orientations in the relationship between employee reward and employee performance is mainly from the lessons learned from other fields. This section reviewed empirical literature based on studies by Ye et al. (2014), Hagger et al. (2015), Li, Liu, Han and Zhang (2016), Kuvaas et al. (2016), Weske and Schott (2016) and Malinowska and Tokarz (2020).

Ye et al. (2014) investigated how general causality orientations predicted creative performance. In line with causality orientation theory, Ye et al. viewed causality orientations as social experiences that culminate in individual differences referred to as autonomy causality orientation, control causality orientation and impersonal causality orientation. Creative performance was conceptualised as an idea or product that is characterised by novelty and predictability for an organisation. They hypothesised that well-being mediated the relationship between causality orientations and creative performance.

The research approach adopted for the study was quantitative. One hundred and sixty-eight respondents from an unspecified population were selected from 20 high-tech organisations using convenience and simple random sampling techniques. Creative performance was measured using an existing creative performance scale. Causality orientation was measured using the general causality scale. Data analysis through regression revealed that autonomy orientation strongly predicted creative performance. The study further revealed that control orientation was not significantly correlated with creative performance and that impersonal orientation was negatively related to creative performance. The results further showed that well-being mediated the relationship between autonomy orientation and creative performance.

Ye et al.'s (2014) study could be faulted on three main grounds. Firstly, they did not explain the basis of selecting 20 high-tech enterprises. Secondly, the population of the sample was missing in the study. As a result, the generalisation of their findings to the population is problematic. Furthermore, the causality orientation theory proposes the influence of the social environment

in creating individual differences in orientations, impacting differently on behaviour, including employee performance. Ye et al. did not factor this into their study. In light of this gap, it will be vital to investigate how individual causality orientations mediate with other factors to explain the relationship between an organisational activity such as rewarding employees and employee performance.

Relatedly, Hagger et al. (2015) used self-determination theory and causality orientation propositions to study the effect of causality orientations and positive performance-enhancing feedback on intrinsic motivation. They explain that autonomous causality-oriented individuals experience higher intrinsic motivation levels, a precursor to performance, than control causality-oriented individuals. The study designs were the quantitative research approach and the experimental study design. One hundred and sixty student participants were selected and grouped into autonomy causality and control causality-oriented individuals.

In the first of their two-stage approach to data gathering, autonomy-oriented and control-oriented students solved puzzles with the provision of feedback to determine how positive performance-enhancing feedback affected each group's intrinsic motivation. Other participants that formed the control group received no feedback. In the second stage, data were collected based on questionnaires derived from validated scales. The analysis of data based on the experiment and multivariate analysis of variance revealed, among others, that autonomy and control causality orientations and positive feedback stimulated intrinsic motivation.

Hagger et al.'s (2015) work pointed out that responding to organisational practices tends to be affected by individual differences in causality orientations. Also, by inference, the study indicated that autonomous orientation and control orientation because of their relationships with motivation might have a link with employee performance. However, Hagger et al.'s study could be criticised on the grounds of the unexplained sampling procedure. One could not also determine the sample size's representativeness because of the omission of the study population.

Li et al. (2016) also examined the role of autonomous orientation in the relationship between empowered leaders and organisational citizenship behaviour or extra-role performance. The study was premised on the need to provide organisational contexts that could promote organisational citizenship behaviour, which is crucial for performance in business organisations' complex and uncertain operational environment. The study conceptualised that autonomy orientation moderated the relationship between empowering leadership and thriving at work, leading to change organisational citizenship behaviour.

In line with their conceptualisation, the study was quantitative and cross-sectional in design. The population of the investigation was 1,500 employees from an information technology organisation in China. Three hundred and fifty employees and four managers were involved in the study through sample size determination and sampling procedures that were not explicit. The means of data collection were structured interviews and questionnaires. The questionnaires were based on established validated continuous scales, including

the general causality orientation and change-oriented organisational citizenship behaviour scales.

The data analysis methods were hierarchical regression and bootstrapping methods. In addition to others, the results indicated that autonomous orientation moderated the relationship between empowering leadership and thriving at work. The authors further noted that high autonomous orientated employees tend to thrive better at work and would exhibit change organisational citizenship behaviours or contextual performance. The study added to knowledge by showing how empowering leadership, autonomous orientations and thriving at work contributed to contextual performance. The study thus recommends that managers who want to encourage organisational citizenship behaviour must first determine whether employees have a high autonomous orientation or not.

However, besides unexplained sampling procedures, which could affect the results' validity, the study took place in a single country and organisational contexts. Generalisation across countries and even within the same industry could be problematic because context affects behaviour. Moreover, the conceptualisation of causality orientation as a one-component concept has left gaps in understanding how the other components affect organisational citizenship behaviour or contextual performance. Additionally, autonomous orientation was related to only one component of employee performance.

Contrary to the one-dimension conceptualisations of causality orientations in Li et al.'s (2016) investigation, Kuvaas et al. (2016) argued that autonomous and control orientations affect behaviour. They relied on the self-determination theory, the macro theory of the causality orientation theory. They

conceptualised pay-for-performance as base pay, annual variable pay and quarterly variable pay as independent variables. The dependent variable, employee outcome, was conceptualised as work effort and intention to quit. Kuvaas et al. hypothesised that autonomous motivation or orientations mediated the relationship between base pay and work effort. They proposed that control motivation or orientation mediated the relationship between annual variable pay, quarterly variable pay, work effort, and intention to quit.

The study was quantitative and longitudinal in design. The study involved 700 salespersons from a Norwegian insurance company identified by simple random sampling. Data collected over two years used questionnaires derived from already existing instruments. The data analysis technique was the structural equation model. The results showed, among others, that autonomous motivation perfectly mediated the relationship between base pay and rise in work effort. The results further revealed that control motivation orientation negatively mediated the relationship between annual variable pay and alteration in work effort. A significant strength of Kuvaas et al.'s (2016) study was its longitudinal design. Collecting data in two years over different periods ensured the development of variable patterns over time and also improved validity.

The study contributed to understanding how various reward components were affected by differences in individual dispositions in determining employee outcomes. However, the investigation did not evaluate how causality orientations could mediate the relationship between employee reward and employee outcomes, including performance behaviours of counterproductive work behaviour, adaptive and contextual performance. Additionally, the study investigated only the monetary components of employee rewards. It might



prove worthwhile to investigate how nonmonetary rewards such as social rewards are affected by causality orientations in the relationship between reward and employee performance behaviours.

Weske and Schott (2016) also investigated the effect of autonomous and controlled motivation on different individuals in Dutch Municipalities. Weske and Schott (2016) argued that different people have different motives and are motivated differently. Based on the causality orientation theory, they hypothesised that different people concurrently are driven by different motives. They also hypothesised that the relevance of each motive changes for different groups of people. The research was quantitative and exploratory in design. The study population was 158, 000 public servants in 48 municipalities in the Netherland. Online surveys were administered to all the 1,041 staff from two municipalities. Data were collected using a five-point continuous Likert scale of an already established measure.

The results revealed, among others, that different employees have different causality orientations. Weske and Schott (2016) proposed that future research should consider these differences when investigating motivation, such as individual differences in their preference for employee reward. However, it is not clear how differences in causality orientations could result in differences in motivational outcomes, including employee performance. In this regard, the connections between social reward, causality orientations and employee performance or behaviours become even more pressing.

Additionally, Malinowska and Tokarz (2020) examined how general causality orientations explain differences in employee engagement levels in response to the provision of job resources of outsourcing staff in Poland. The

driving theories of the study were the job-resource theory and the causality orientation theory. Malinowska and Tokarz, contrary to Kuvaas et al.'s (2016), hypothesised, among others, that the causality orientations of autonomous, impersonal and control orientations moderated the relationship between job resources and employee engagement. The study was quantitative and cross-sectional in design. A total of 1,020 respondents were unevenly distributed among eleven outsourcing firms in finance, information technology, human resource management, customer service and accounting.

The participants were selected using the convenience sampling technique. The data collection instruments were questionnaires derived from existing continuous scale measures. The questionnaires were distributed and retrieved online. Data analysis technique was hierarchical regression analysis. Data analyses revealed that the association between job resources, including social support and feedback, and employee engagement was weaker with high autonomous and impersonal orientations than with lower autonomous and impersonal orientations. The study also showed that control orientation did not moderate the association between job resources, including social support and feedback employee engagement. The study concluded that causality orientations play roles in how individuals understand their social environment, which in turn has implications for potential motivational outcomes.

Furthermore, unlike Kuvaas et al.'s (2016) and Weske and Schott's (2016) studies, Malinowska and Tokarz's study investigated all the causality orientations in a single study. However, there was no explanation for the unequal distribution of the sample size among the firms. Thus, generalising and concluding about the heterogeneous population raises questions about the

findings' validity and reliability. Also, the use of convenience sampling in a quantitative study is a problem because of the subjectivity it introduces into the quantitative study. These shortfalls leave a methodological gap about the moderating role of causality orientations in the relationship between job resources, such as social reward, and their motivational outcomes, such as employee performance or behaviours.

### **Related Empirical Review on Employee Engagement Theory**

Employee engagement theory proposes that three psychological conditions experienced by employees lead to employee engagement (Kahn, 1990). Saks and Gruman (2014) employee engagement has become a critical factor in ensuring that employees psychologically, physically and emotionally direct their energies toward organisational goals. This section focuses on discussing the related empirical evidence on the relationship among employee reward, psychological conditions, employee engagement and engagement outcomes. The studies to be focused on in doing this are by Chikoko et al. (2014), Gatti (2016), Bilal (2017), Franks (2017), Asiwe et al. (2017) and Chhetri (2017).

Chikoko et al. (2014) studied the psychological conditions that predict employee engagement among the staff of tertiary institutions in South Africa. The study aimed to investigate the relationship between employee engagement and the three psychological conditions of meaningfulness, availability, and safety. Additionally, the authors examined the mediating role of the three psychological conditions in the relationship between employee engagement and job characteristics. The underpinning theory of the study was the employee engagement theory. Chikoko et al. proposed that some antecedents of

psychological conditions, including the relationship with colleagues and supervisors, could lead to employees becoming engaged in their roles' performance when they create the three psychological conditions.

The research designs for the study were quantitative, non-experimental and cross-sectional. Respondents were selected using convenience sampling from a population of over 500 employees. Primary data were collected using questionnaires based on existing continuous scales. Based on multiple regression analysis, the study found that psychological meaningfulness has a significant and positive relationship with employee engagement. The study also revealed that, whereas psychological availability had no significant relationship with employee engagement, psychological meaningfulness was the strongest predictor of employee engagement among the three psychological conditions. Thus, the study concluded that it is vital to invest in psychological resources to ensure employee engagement through psychological meaningfulness. One such resource is the social reward.

Chikoko et al.'s (2014) study has three main shortcomings. Firstly, drawing 149 samples from 500 employees from a nonhomogeneous university requires a larger sample size based on proportional allocation to permit the generalisation of the findings. Secondly, the use of convenience sampling and not stating the procedure for sample size determination breaches the scientific rigour in quantitative studies. Thirdly, there was no full exploration of the theoretical underpinning of the study. That is, the employee engagement theory did not imply a psychological conditions-employee engagement model, but an antecedent - psychological condition - employee engagement - employee-engagement outcome framework. Therefore, exploring the engagement theory

model through the employee rewards-psychological conditions-employee engagement-employee performance framework would be rewarding.

Gatti (2016) also evaluated the role of psychological conditions in predicting employee engagement. The study was motivated by insufficient research to identify the mechanisms through which employee engagement factors relate to it. Contrary to Chikoko et al. (2014), who ignored a driver of psychological condition in their conceptualisation, Gatti used the employee engagement theory to explain that psychological conditions mediated the relationships between their antecedents and employee engagement. The research approach adopted was quantitative. The study design was cross-sectional. One hundred and twenty-nine participants were involved in the study. The sampling was based on potential participants' voluntary decisions to take part in the study. Data were collected through questionnaires derived from validated Likert scale measures.

Gatti (2016) relied on Pearson correlation and Hayes and Preacher's (2014) macro for simple mediation analysis. Overall, the results revealed that psychological meaningfulness mediated the relationship between its antecedent variables and employee engagement. The study further found that psychological availability did not mediate the relationship between its antecedent and employee engagement. Gatti's investigation followed the psychological condition antecedent-psychological conditions-employee engagement framework as proposed by the engagement theory.

However, the study ignored the effects that other human resource practices, such as rewarding employees, could have on psychological conditions. Similar to Chikoko et al.'s (2014) study, the study also ignored the

outcome of employee engagement in the conceptualisations. This means that employee engagement was viewed as an end itself instead of the means to an end. Furthermore, the unspecified population places some doubts on the sample's representativeness and the generalisability of the results to the population. Finally, the use of voluntary participation, a non-probability sampling, as the sampling procedure goes against the researcher's independence in quantitative studies.

Bilal (2017), on the other hand, gave attention to employee engagement outcomes by investigating the relationship between employee engagement and employee performance with human resource management practices as moderating variables in private universities in Pakistan. The study focused on determining the associations between employee engagement and performance dimensions of counterproductive work behaviour, task performance and contextual performance. The study also assessed how employee reward or compensation, performance appraisal and training moderated these relationships. The driving theory of the study was the employee engagement theory.

The research design was quantitative and cross-sectional. The population of the study was 1,215, comprising faculty members of twelve Pakistani private universities. The study's sample size was 293 employees based on Krejcie and Morgan's sample size determination formula. The sample was proportionately distributed among the twelve universities. The sampling technique used for the study was simple random sampling. Questionnaires derived from established continuous scale measures were used for data collection. Bilal (2017) used Pearson Correlation Coefficients, step-wise

multiple regression and multiple hierarchical regression techniques to analyse the data.

Bilal's (2017) research found that employee engagement was negatively related to counterproductive work behaviour at -0.65, but positively and significantly related to contextual performance at  $r = 0.45$ . The study further revealed, among others, that an increase in the level of compensation led to an increase and decrease in contextual performance and counterproductive work behaviour, respectively. The study concluded that adequate compensation or reward systems were crucial in the attainment of organisational goals.

Unlike Chikoko et al. (2014) and Gatti's (2016) studies, Bilal's study included engagement outcome variables implied in the engagement theory in the study's conceptualisation. However, similar to Chikoko et al.'s (2014) study, an antecedent to psychological conditions that lead to employee engagement was missing. Thus, the study did not take cognisance of the implied serial mediation postulation in the engagement theory. Additionally, although employee performance was considered a multidimensional concept, other dimensions, including adaptive performance, were excluded.

Franks (2017) also investigated the relationship between the drivers of the three psychological states of meaningfulness, safety and availability, and employee engagement. The study's purpose was to evaluate how the psychological conditions mediate the relationship between their antecedents and employee engagement of community college staff in Mississippi in the United States of America. Franks hypothesised that such variables as resources, job enrichment, self-consciousness, and co-worker relationships were related to the psychological conditions based on the employee engagement theory. The study

further hypothesised that the psychological conditions served as mediators between their determinants and employee engagement.

The study relied on quantitative and cross-sectional survey designs. A sample size of 492 maintenance employees in the fifteen community colleges in Mississippi was used. They used the 200-300 minimum range required to use the structural equation model for analysis as the basis for the sample size. Participation in the study was voluntary. The measurements of variables were based on already validated continuous scales. The data collection instrument was a questionnaire. The analysis of the data found, among others, that apart from psychological safety, both psychological meaningfulness and availability were positively related to employee engagement. The study also found that psychological meaningfulness fully mediated the relationship between its determinants and employee engagement, whereas psychological availability did not. Franks concluded that further research was required to confirm the relationships revealed in the study.

Contrary to Chikoko et al.'s (2014) and Bilal's (2017) studies, but similar to Gutti's (2016) study, Franks'(2017) investigation included the antecedents to psychological conditions. This is in line with the propositions of employee engagement theory. The study, further in line with the theory, explored the mediation roles of psychological conditions in the relationship between its determinants and employee engagement. Nevertheless, Franks' exclusion of engagement outcomes in the study's conceptualisation eliminated the simultaneous mediation roles of psychological conditions and employee engagement to link their antecedents to employee engagement outcomes, including employee performance.



Furthermore, although the study investigated various antecedents to psychological conditions, it did not explore how the social reward component of employee rewards predicts psychological conditions, which could lead to engagement and engagement outcomes, including employee performance. Additionally, the study did not state the study population and the procedure for sample size determination. This shortcoming leaves a methodological gap that must be explored. As a result, the findings and conclusions could not be generalised to the population since the sample size's representativeness could not be ascertained.

Furthermore, Asiwe et al. (2017) investigated employee engagement of a research organisation in South Africa. The primary purpose of the study was to examine the relationship between psychological conditions and employee engagement. They hypothesised that workplace relationships and job design predicted psychological meaningfulness, while effective relationships predicted psychological safety. The study further proposed that the psychological conditions predicted employee engagement and mediated the relationships between their antecedents and employee engagement.

The study was quantitative and cross-sectional in design. The study involved 443 employees of a research organisation. The sampling technique adopted for the study was the convenience sampling technique. The study measured variables such as psychological meaningfulness, availability and safety on established continuous scales. Data were analysed using the structural equation model. The data analysis showed, among others, that psychological meaningfulness and psychological availability were related to employee

engagement. Asiwe et al., therefore, concluded that psychological safety and availability were essential for employee engagement.

Similar to Franks' (2017) study, the researchers' breached scientific rigour in research by not stating the study population and the procedure for arriving at the sample size. Also, the use of convenience sampling in a quantitative study was unusual. Additionally, they conceptualised the psychological conditions as mediators between their determinants and employee engagement. However, the outcomes of employee engagement were excluded in their conceptualisation. Being a construct that captures employees' cognitive, emotional and physical aspects, truncating their conceptualisation at the employee engagement level might erroneously present employee engagement as an end itself. It would be vital to extend the conceptualisation to capture employee engagement outcomes, including adaptive performance, contextual performance and counterproductive work behaviour.

Contrary to Asiwe et al.'s (2017) investigation, Chhetri (2017) examined the drivers and outcomes of employee engagement of Nepal's bank staff. The theoretical foundation of this study was the employee engagement theory. Chhetri viewed the antecedents of employee engagement as consisting of core self-evaluation and perceived organisational support. In Chhetri's view, these antecedents relate to employee engagement, which then correlates with employee performance dimensions of task performance, organisational citizenship behaviour or contextual performance and counterproductive work behaviour.

The study adopted quantitative and cross-sectional designs. The population of the study was employees from selected banks in Nepal. Data were collected from the 600 staff of selected licensed banks. The data collection instruments were questionnaires derived from already validated continuous scales. The analysis technique involved hierarchical multiple regression analysis and bootstrapping through macros. The results revealed, among others, that employee engagement partially mediated the relationship between core self-evaluation and task performance, organisational citizenship behaviour and counterproductive work behaviours. On the other hand, Chhetri reported that employee engagement fully mediated the association between perceived organisational support and task performance and counterproductive work behaviours.

The linkages established between employee engagement and the employee performance components in the study suggest that employee engagement impacts each employee performance component differently. Chhetri viewed the relationships between antecedents of employee engagement and the corresponding outcomes as direct relationships. However, this approach ignored the three psychological states of meaningfulness, safety and availability, which in line with employee engagement theory, are the mechanisms through which some antecedents must relate to employee engagement and then to organisational outcomes. Filling this gap in terms of investigating the simultaneous mediating roles of psychological conditions and employee engagement in the relationship between employee rewards and employee performance will be vital to deepening the operationalisation of the employee engagement theory.

Tables 21, 22 and 23 (Appendix B) indicate the summary of the eighteen empirical investigations reviewed in this study. The summary covers author/year, purpose, theoretical basis, research approach and study design, sampling, measures and data collection, analysis procedure, major findings and gaps. The review revealed that theoretical, empirical and methodological gaps exist in the role of psychological conditions, employee engagement, and causality orientations in the relationship between employee rewards and performance.

Theoretically, the conceptualisation of the employee rewards and performance relationships mainly focused on cost and benefit analysis and implied obligations in the social exchange theory. The studies did not account for how different processes within employees, such as their psychological conditions, employee engagement and causality orientations, can help to explain the employee rewards-employee performance relationships fully. Thus, a grey area exists in integrating the social exchange, employee engagement and causality orientation theories in a single study to investigate employee rewards and performance relationships.

Empirically, although the review indicated that employee rewards were related to employee performance, attention was not paid to the effects of social rewards on performance types, such as contextual, adaptive and counterproductive work behaviours. Additionally, notwithstanding the attention given to the role of causality orientations on performance, the main focus was on creative performance, innovative performance and motivation. Therefore, there is an empirical gap in the roles causality orientations play in the relationship between social rewards and performance behaviours. As a result, a

methodological grey area is evaluating how causality orientations mediate the relationship between social rewards and employee performance behaviours. Furthermore, there was a lack of attention to the simultaneous mediating roles of psychological conditions and employee engagement in the relationship between social rewards and employee performance.

### Lessons Learnt

From the empirical reviews, it emerged that two of the studies used longitudinal design. The longitudinal designs were used where there was the need to collect data over different periods to ensure the development of variable patterns over time and improved validity. Two of the studies were exploratory. The rest of the studies were cross-sectional in design. In contrast to the longitudinal design, the cross-sectional designs were used to collect data within a short period. It also emerged that the non-experimental designs were mostly used because there were no treatment groups in the studies. A study relied on the experimental design to gather data on autonomy-oriented and control-oriented individuals to determine their impact on positive performance-enhancing feedback.

Furthermore, it became apparent from the empirical review that the investigations relied on the quantitative research approach to investigate the relationship between employee reward and employee performance. The quantitative research approach was also used to examine the roles played by psychological conditions, employee engagement and causality orientations in the relationship. The quantitative research approach was used because it permitted the quantification of data and the use of statistical techniques to establish relationships among the studied variables.

The review also indicated that many sampling and sample size determination approaches were used in the studies. The sampling approaches included convenience sampling and simple random sampling. In some of the studies, respondents were identified based on voluntary participation. Regarding the sample size, whereas all the studies indicated their sample sizes, not all of them indicated their determination methods. In some cases, the census was used, while in another case, the minimum sample size required for using the structural equation model was the justification for the sample size. One major lesson learnt here is that although stating the sampling procedure and sampling size determination are required for scientific rigour and the validity of research findings, not all the studies reviewed regarded it as such.

Regarding measurements, data collection instruments, and statistical analysis, the studies relied on already-existing continuous scales, questionnaires, and regression analysis. In one study, however, continuous scale questionnaires were combined with experimental data. The continuous scales and questionnaires were used in the studies that involved establishing the relationships between employee rewards and performance and the roles of psychological conditions, employee engagement and causality orientations. On the other hand, the experiment was used to distinguish between autonomous-oriented and control-oriented individuals. The regression analysis was applied to analyse variables measured on a continuous scale to establish relationships.

In terms of conceptualisations of variables, some multidimensional constructs such as employee rewards and employee engagement were mainly conceptualised as one-dimensional constructs. Others such as employee performance, psychological conditions and causality orientations were

conceptualised as one-dimensional variables in some cases and multidimensional in other instances. In each case, indicators were derived from already established scales. Indices for the variables were through the summation of individual indicator scores for each respondent.

Another lesson learnt was that the measurement scales used, such as the general causality orientation scale and the employee engagement scale, could not capture the varied number of indicators that define the constructs. In order to cover a more considerable extent of the variables used in this study, the instruments for this study mimic's the structure of the scales used but relied largely on indicators reviewed in the theoretical and conceptual reviews. This is important because it allows the findings of this study to be situated within the theoretical, conceptual and empirical literature.

### **Conceptual Framework of the Role of Psychological Conditions, Employee Engagement and Causality Orientations in Employee Reward- Employee Performance Relationships**

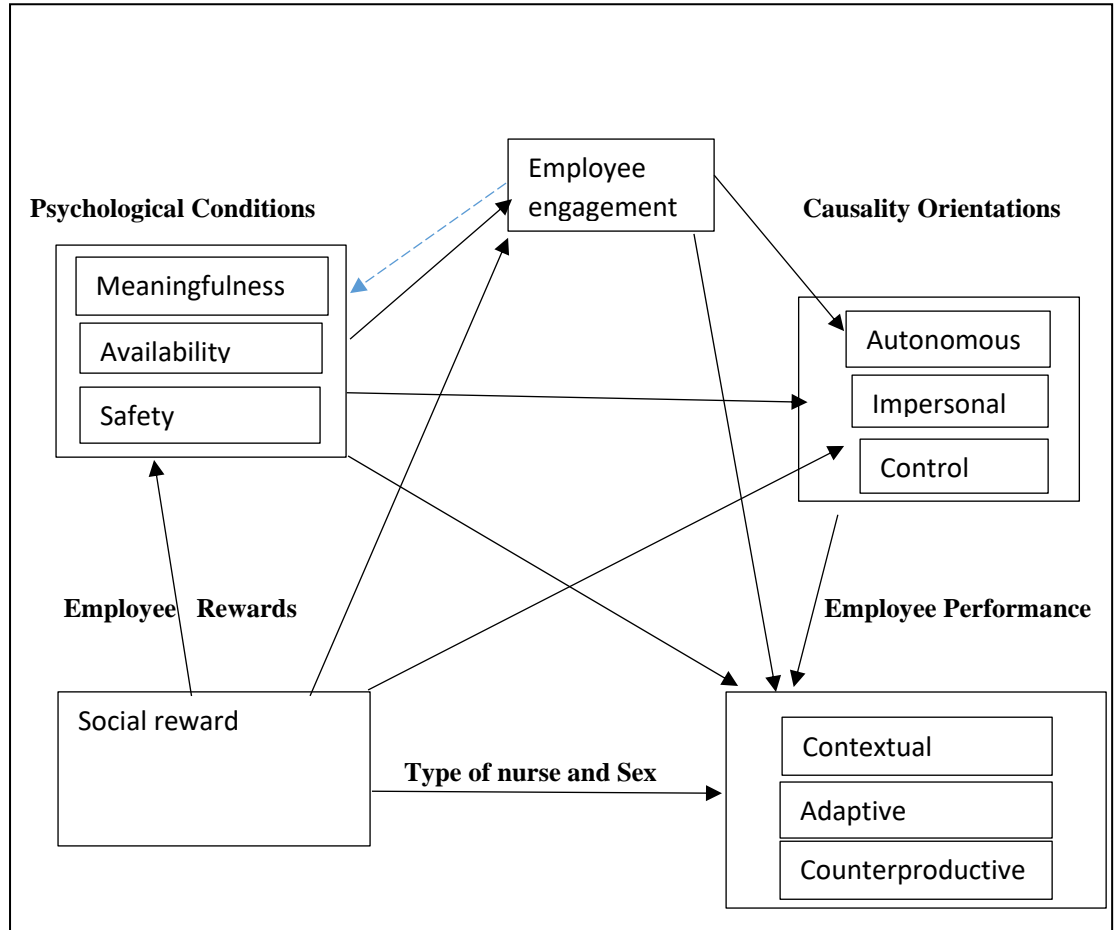
Prior research revealed that employee rewards are essential in eliciting employee performance (e.g., Owor, 2016; Sung et al., 2018). The social exchange theory has explained this relationship. The operationalisation of the theory in previous studies based on implied obligation and the assumption of reasonable cost and benefit analysis has helped explain employee rewards-performance exchange relationships. However, due to employees' inability to engage in ongoing costs and benefits analysis (Redmond, 2015), other variables, including psychological conditions, employee engagement and causality orientations may be required to serially mediate the employee rewards-performance relationship process. Therefore, based on the examples of serial

mediation conceptual models (Figures 5 and 6, Appendix H1, pg. 392) of Qadri et al. (2021) and Pan et al. (2022), this study's conceptual framework (Figure 1) aims at addressing four main issues.

Firstly, from the conceptual framework (Figure 1), social rewards directly link with employee performance or behaviours as captured in objective three of the study. This linkage suggests that social rewards will elicit specific performance responses from nurses under the social exchange theory proposition. Along this line, Both Blau (1964) and Rai et al. (2018) postulate that the theory in explaining exchange relationships, such as the employment relationships, employees are under an implied obligation to reciprocate the kind gesture. There is a possibility that this relationship may be different for males and female nurses and for registered and enrolled nurses.

Secondly, the provision of employee rewards might or might not directly result in the expected employee performance. Research has shown through engagement theory that when drivers, including social rewards, affect employees' psychological conditions, the psychological conditions become the mechanism through which the driver may lead to various employee outcomes, such as employee performance. Therefore, as the conceptual framework (Figure 1) shows, the relationship between social reward and nurses' performance or behaviours is mediated by the psychological conditions of nurses. The fourth objective concentrated on this mediation relationships.





*Figure 1:* Conceptual framework on the roles of psychological conditions, employee engagement and causality orientations in the relationship between employee rewards and performance

Source: Author’s construct (2021) based on reviews of various authors (e.g., Pan et al. 2022; Qadri et al., 2021).

**Key:**

- > Relationships
- - - - -> Feedback loop

Thirdly, as further proposed by the employee engagement theory, psychological conditions result in employee engagement, which, because it is embedded with motivation, leads to employee outcomes, such as employee performance (Asiwe et al., 2017; Kahn, 1990). This means that psychological

conditions, psychological meaningfulness, psychological safety and psychological availability, and employee engagement are serial mechanisms through which drivers, such as social rewards, may result in employee outcomes, including employee performance.

Therefore, as the conceptual framework (Figure 1) proposes, the relationship between social rewards and performance is serially mediated by psychological conditions and employee engagement. The fifth objective examined these relationships. Additionally, although employee engagement is commonly treated as an outcome of psychological conditions, there is a possibility that the relationship could be nonrecursive such that employee engagement may determine the level of psychological conditions. This relationship is shown by the feedback loop in the conceptual framework (Figure 1) and captured as a sub hypothesis of objective five.

The lessons learnt from the empirical reviews, particularly that of Kuvaas et al. (2016), suggest that causality orientations could also serve as the mechanisms through which organisational activities, such as the provision of social reward, could impact expected employee outcomes, such as performance. In this social reward-nurses' performance relationship, the process is possibly influenced by individual dispositions, as suggested by the causality orientation theory (Kuvaas et al., 2016; Li et al., 2016). Therefore, as illustrated by the conceptual framework (Figure 1), there is a possibility of causality orientations serving as third serial mediating variables that links the serial mediation roles of psychological conditions and employee engagement to employee performance, which is captured in the sixth objective.

## CHAPTER FOUR

### RESEARCH METHODOLOGY

#### Introduction

This chapter aims to discuss the methodology used to achieve the purpose of the study. Sarantakos (2005) delineates research methodology as to how research should proceed built on one's belief about the nature of reality and knowledge development. Similarly, Bist (2014) explains that research methodology provides an organised plan that describes the essential techniques required to complete research. In order to justify the techniques adopted for this study, this chapter sequentially addresses issues about research approach, research design, study design, study population, sample size and sample procedure, data needs, data collection instrument, validity and common method variance, pre-testing, ethical consideration, actual fieldwork, field challenge, data processing and analysis, and summary of the chapter.

#### Research Approach

A research approach is the process that a researcher adopts in collecting, analysing, and interpreting (Saunders, Lewis & Thornhill, 2009). There are three main research approaches: quantitative, qualitative, and mixed methods (Bryman, 2012). Bryman (2012) defines quantitative research as an approach to investigation that uses numbers and quantifies data both in collection and analysis. In terms of ontology, which describes the nature of social reality, quantitative researchers believe the objective ontologists' view that reality is centred on experiences and truths (Kothari, 2004). Epistemologically, they hold the objectivist epistemological view that knowledge can be developed primarily from sensory experiences, which lead to law-like conclusions about social

reality (Saunders et al., 2009). Therefore axiologically, quantitative researchers are independent of their study (Creswell, 2003).

Established on the ontological, epistemological and axiological underpinnings, quantitative researchers use numerical analysis to establish relationships among studied phenomena (Muijs, 2004), including the linkage between employee rewards and nurses' performance (Abubakari, 2013). The approach relies on description, explanation and prediction of the social realities under study (Muijs, 2004). This includes explaining the roles of psychological conditions and employee engagement (e.g., Franks, 2017) in the employee reward- performance relationship (e.g., Owor, 2016) as espoused by objective epistemology. The quantitative approach also relies on testing hypotheses and theories, including the social exchange, employee engagement and causality orientation theories, probability sampling and inferential statistical analysis to generalise the results to the population (Cooper & Schindler, 2011; Muijs, 2004).

Grounded on objective ontological and epistemological assumptions, Connolly (2007) opines that quantitative research promotes data analysis that is less time-consuming compared to the qualitative approach. The approach allows data collection from a large sample size, such as the 854 public sector nurses involved in this study. If representative, this large amount of data in quantitative investigations will permit the generalisation (Leedy & Ormrod, 2010) of the findings on the employee rewards-psychological conditions-employee engagement-causality orientations-performance relationships to the public sector nurses in Ghana. This was exemplified by related empirical studies

reviewed in the literature (e.g., Chhetri, 2017; Khoreva & Wechtler, 2018; Malinowska & Tokarz, 2020).

The realist or objective ontology formed the basis of related studies such as those of Bilal (2017) and Franks (2017) in studying the psychological conditions of meaningfulness, safety and availability, and employee engagement outcomes. They believed that these social phenomena exist external to human consciousness. Along the same line, studies such as those of Kuvaas et al. (2016) and Weske and Schott's (2016) that involved causality orientations relied on the quantitative approach because these orientations, which exist in the world ontologically, can be measured quantitatively and analysed statistically. Similarly, employee rewards and performance investigations such as those of Owor (2016), Sung et al. (2018) and Khoreva and Wechtler (2018) used the quantitative approach based on these objective ontological assumptions.

Epistemologically, the objectivist epistemology belief of knowledge development implies that the realities of psychological conditions and employee engagement (Chikoko et al.; Gatti, 2016), causality orientations (Malinowska & Tokarz, 2020), rewards and performance (Rai, et al. 2018; Sung et al., 2018), are governed by universal laws that are external to the researcher (Burrell & Morgan, 2005). That is, the role of psychological conditions, employee engagement and causality orientations in the employee reward-performance relationship, are truths that can be quantified and statistically analysed based on objective ontology and objectivist epistemology in an axiologically value-free manner (e.g., Chikoko et al.; Gatti, 2016; Malinowska & Tokarz, 2020; Rai, et al. 2018; Sung et al., 2018).

Nevertheless, quantitative research is susceptible to shortcomings. According to Guba and Lincoln (1989), one weakness is that relying on numerical data and inferential statistics eliminates meanings and explanations. Johnson and Onwuegbuzie (2004) also argue that quantitative research results may not consider contextual issues, which enable the reliance on the opinions and experiences of people to construct social reality (Walsham, 2006). These shortcomings founded on the ontological, epistemological, and axiological assumptions apply to this study because the public sector nurses' opinions, experiences, and the researcher's involvement may impact the study (Palagola, 2016). Thus, the quantitative approach may not be appropriate for this study.

On the other hand, Polit and Beck (2012) assert that qualitative research uses non-quantifiable data to understand the social world. This approach relies on the subjective ontological assumption that the reasons people assign to their behaviours, actions, and interactions with others through their lived experiences and perceptions affect the world that is investigated (Guba & Lincoln, 1989). This is based on the notion that reality is constructed (Guba & Lincoln, 1989). Consequently, Leitch, Hill and Harrison (2010) stress that the qualitative research approach is associated with subjective constructive ontology (Maxwell, 2006). In other words, in investigating social realities of psychological conditions, employee engagement and causality orientations in the reward and nurses' performance relationships, the nurses' thoughts, experiences and perceptions may affect interpretations of these constructs.

Qualitative research also hinges on the interpretivist epistemology that social realities under investigation, including investigating employee rewards, performance, employee engagement and performance of nurses, can be

constructed through the comprehension of their experiences and not discovered (Gray, 2004). Axiologically, Lin (1998) ascertains that the researcher is a participant in the research. This means that the researcher is involved in the study through non-probability sampling and data collection methods, such as interview guides and analysis relying on emerging themes (Leitch et al., 2010).

One strength of qualitative research, traced to its subjectivist ontology and interpretivist epistemology, unlike quantitative research, is that it permits researchers to understand different perspectives of a problem under investigation (Richardson, 2012). This is achieved through participants' thoughts and feelings (Austin & Sutton, 2015). For instance, different perceptions of public sector nurses' unique viewpoints include the reasons they might assign to their perception of rewards provided and their level of performance. Applying the qualitative research approach to the issues of rewards and nurses' performance helps to overcome the lack of meaning and explanation (Johnson & Onwuegbuzie, 2004), which are associated with quantitative research. Therefore, the literature review showed that peoples' perceptions and the meaning assigned to their work environment determine their adaptive performance (Calarco, 2016; Jundt et al., 2014).

However, qualitative research findings based on subjectivist ontology and interpretivist epistemology are not representative and lack generalisability to the population due usually to the small sample size involved (Harry & Lipsky, 2014). If used for this study, the approach will also result in researcher bias due to high researcher involvement or personalisation of the research process enshrined in the axiology assumption of qualitative research (Mays & Pope, 1995). Consequently, relying on the qualitative approach to explore the

employee rewards, psychological conditions, employee engagement, and causality orientation of public sector nurses' performance in Ghana will prevent generalising the results to public sector nurses (Harry & Lipsky, 2014). Unlike the quantitative approach, which permits the explanation of the process of linkages among variables (Muijs, 2004), this might not be the case for the reward- performance linkage using the qualitative approach.

Another research approach to overcome the drawbacks and utilise the strengths of the qualitative and quantitative approaches is the mixed-methods approach. Mixed methods are defined by Johnson, Onwuegbuzie and Turner (2007) as the blending of the techniques, procedures, and principles of qualitative and quantitative research into one study. This is centred on the objectivist epistemology assumptions that social reality, including rewards and performance, are observable realities (Denzin, 1989). These can be measured and rigorously analysed statistically while accounting for participants' feelings and experiences (Denzin, 1989). This is based on the subjective ontology of acknowledging that human experiences, perceptions and interpretation of employee rewards and performance are relevant in examining the nature of the social reality of employee rewards and performance issues (Palagola, 2016).

Using quantitative and qualitative techniques in mixed methods is in line with pragmatism, which recognises that multiple worldviews might be employed in investigating an issue depending on the research design (Creswell & Plano-Clark, 2011). Accordingly, the current study concerning employee rewards and performance of public sector nurses can be assessed by mixing the subjective ontology and objectivist epistemology. This is because employee reward and performance issues have actual existence and character that can be



measured through surveys and analysed using inferential statistics to generalise the findings. Additionally, these issues can lend themselves to qualitative data, such as those derived from key informant interviews and analysed through thematic analysis to complement the quantitative results (Kothari, 2004; Leedy & Ormrod, 2010; McCusker & Gunaydin, 2014).

The researcher's research approach determines the choice of research design. As a result, different research approaches are associated with different research designs. Researchers oriented toward the quantitative approach adopt positivism (Sobh & Perry, 2006). On the other hand, qualitative researchers are symbolic interactionism and interpretivism-inclined (Nind & Todd, 2011). Those oriented toward pragmatism adopt both quantitative and qualitative approaches described as mixed-methods research approach (Creswell & Plano-Clark, 2011). Therefore, researchers can choose from three alternative research designs in social science.

### **Research Philosophy**

An important task that follows the identification and definition of a research problem is the research philosophy, helps in choosing a research design (Creswell, 1994). Kerlinger (1986) views research design as a plan or strategy concerning what the researcher does about hypotheses, operationalisation and data analysis while investigating a research question or problem. In the viewpoint of Guba and Lincoln (1989), research philosophy is about the nature of social reality and knowledge development. Similarly, Saunders et al. (2009) explain that research philosophy concerns reality and knowledge development. Uddin and Hamiduzzaman (2009) and Scotland (2012) indicate that in social

science research, the predominant research philosophies are positivism, interpretivism, and pragmatism.

According to Hassard (1993), positivism entails believing that social phenomena have an actual existence and an orderly character. Positivism relies on the objective ontology assumption that social reality and truth have an objective external existence that can be appropriately measured (Burrell & Morgan, 1979). This is done by collecting numerical data using structured interviewing, quantitative observation, and questionnaires (Creswell, 2003). Thus, positivists rely on empiricist epistemology, believing that knowledge emanates primarily from sensory experiences (Psillos & Martin, 2010). They also rely on the assumption that the process of discovering knowledge is axiologically not influenced by the researcher's subjective involvement in terms of the meaning, experiences and constructions of what is being studied (Lin, 1998).

Positivists aim to uncover how two or more phenomena are linked (Lin, 1998). Therefore, Bryman (2012) posits that positivism guides the quantitative research approach using numerical data and inferential statistical tools such as parametric and non-parametric tests relationships. The issues of employee rewards and performance (e.g., Owor, 2016; Rai, et al., 2018), psychological conditions and employee engagement (e.g., Chikoko et al., 2014; Franks, 2017) and causality orientations (e.g., Malinowska & Tokarz, 2020; Ye et al., 2014) were investigated relying on the positivist philosophy. This was because they were studied in a value-free manner and measured using quantified data and inferential statistics that allowed for generalisations. This suggests that the employee reward, psychological conditions, employee engagement, causality

orientations and performance of public sector nurses in Ghana can be studied using positivism.

However, positivism ignores the subjective influence of research participants' experiences in knowledge development, which Sarantakos (2005) recognises as a significant factor in social science. Therefore, when examined within the positivist context, the issues of explaining the employee rewards and performance relationship of the public sector nurses in Ghana will prevent the comprehension of the nurses' thoughts and meanings of the issues established on their subjective experiences (Palagola, 2016). The recognition of research participants' subject views is captured in interpretivism.

Interpretivism, unlike positivism, relies on subjective constructive ontology, which contends that social reality is context-specific, based on people's constructions, interpretations and experiences (Maxwell, 2006) and not aimed at law-like generalisations (Bryman, 2012). Data is qualitatively measured and collected through methods including key informant interviews and focused group discussions (Leitch et al., 2010). Regarding the role of value or axiology, the questions posed and the researcher's values and experiences influence the findings from the analysis. These experiences are deepened or shaped by the values, opinions and experiences of the participant's interactions with the researcher (Lin, 1998). Leitch et al. (2010) stress that interpretivism research is usually associated with the qualitative research approach.

A major advantage of interpretivism is that the experiences and sentiments of people permit the interpretation of the reasons for the actions of research participants (Denzin, 1989). Thus, when the issues of reward and performance are analysed from the perspective of interpretivism, the nurses'

peculiar perceptions and feelings about the provision of employee rewards and their performance might reveal the real reasons behind possible varied feelings toward employee rewards and the level of performance. This was shown in Jundt et al. (2014) and Calarco (2016) assertions in the literature review that individual perspectives, probably due to experiences and thoughts, about the work environment, such as providing employee rewards, account for performance. However, interpretivism is subject to researcher bias and lack of generalisability of findings, thus limiting the utility of the results of issues under investigation in this research.

In addition to the mutually exclusive positivist and interpretivist perspectives is pragmatism. Pragmatism provides a middle position by arguing based on the epistemological position that there is no single way of learning because there are multiple realities (Saunders, Lewis & Thornhill, 2012). Knowledge development processes are centred on combining quantitative and qualitative approaches. Ontologically, pragmatics combine subjective and objective ontologies and believe that subjective biases influence reality (Johnsons & Onwuegbuzie, 2004; Rorty, 1990). Thus, pragmatists rely on probability and non-probability sampling and collect numerical and non-numerical data through questionnaires and key informant interviews. They analyse data using inferential statistics and narratives, such as thematic analysis. In light of this, pragmatism is associated with mixed-methods research approaches (Johnson et al., 2007).

Many human resource management investigations rely ontologically on objectivism and epistemologically on positivists/postpositivism (Correia, 2015; Palagola, 2016). Nevertheless, human resource practices are influenced by

people's experiences and beliefs (Palagola, 2016). Consequently, how individual employees perceive and respond to social reward, for instance, will be determined through statistical inferences and participants' subjective understandings and experiences. This requires a complementary approach, which can be achieved through pragmatism, which was adopted for this study. The assumptions of pragmatism align more with the purpose of the study. The study's focus on issues about rewards and performance of public sector nurses and the roles of psychological conditions, employee engagement, and causality orientations requires collecting quantitative data and examining some qualitative data.

From the preceding discussion, the mixed methods, particularly the explanatory sequential design with a tilt on the quantitative side, was adopted for this study. The reason is that mixed-methods roots in pragmatism and subjective ontological and objectivist epistemological viewpoints align with the purpose of this study. This is because the issues of the relationships among employee rewards, psychological conditions, employee engagement, and causality orientations can be measured and analysed statistically independent of the researcher (e.g., Chhetri, 2017; Gatti, 2016; 2017; Li et al., 2016; Owor, 2016). Simultaneously, the nurses' subjective experiences, feelings and thoughts are utilised to complement some of the quantitative findings.

Correia (2015) asserts that mixed methods are relevant to provide balanced findings on issues that can be measured objectively and, at the same time, subjectively through human feelings and experiences. This study adopted a pragmatism research philosophy and the mixed methods research approach in line with this view. As a result, the research design for this study was non-

interventional. These involved a quantitative survey of public sector nurses and a qualitative study involving key informant interviews (Draucker, Rawl, Vode & Carter-Harris, 2020).

The survey of the public sector nurses was used to capture facts and experiences on the roles of psychological conditions, employee engagement and causality orientations in the employee rewards-performance relationships in line with positivism/objectivism epistemology. The interview data assisted in determining the nurses' perceptions about the provision of rewards and their level of performance. The data also helped to interpret the quantitative results on the employee-reward performance relationship in objective three in line with the sequential explanatory design and subjective interpretivism. In order to permit a faster comprehension of the results, the interpretation and reporting of the results were linked at the sections where the qualitative result offered further elaboration of the quantitative results (Fetters, Curry & Creswell, 2013).

### **Study Design**

The study design of an investigation is informed by the research approach adopted. According to Ranganathan and Aggarwal (2018, p. 184), a study design "is a framework or the set of methods and procedures used to collect and analyse data on variables specified in a particular research problem." Prior empirical studies evaluating the issues of employee rewards and performance using the social exchange theory (e.g., Owor, 2016; Sung et al., 2018) relied on the survey design. Similarly, the same design was adopted regarding the issues of psychological conditions and employee engagement based on the employee engagement theory (e.g., Rai et al., 2018; Yin, 2018). Other studies operationalising the causality orientations theory also adopted the

survey design (e.g., Hagger et al., 2015; Li et al., 2016). These studies showed that the survey design was the dominant design in the relationships that this study seeks to establish.

However, Palagola (2016) explains that people's experiences and beliefs also influence human resource management phenomena. Consequently, the sequential explanatory design was adopted for this study. These involved a quantitative survey of public sector nurses, followed by a qualitative study involving key informant interviews (Draucker et al., 2020). The quantitative aspect relied on the analytical survey design because the reviewed empirical studies on employee rewards and performance (e.g., Khoreva & Wechtler, 2018; Yin, 2018) and other related extant literature (e.g., De Geiter & Hofmans, 2015; Taylor, 2019) revealed that more needs to be learnt about the predictive effect of the reward type of social reward on employee performance.

Additionally, the extant literature suggests that the relationship did not essentially consider the roles of psychological conditions, employee engagement and causality orientations, particularly, in the Ghanaian context, in the relationship (e.g., Aninanya et al., 2016; Frempong & Dwomoh, 2017; Hervie & Winful, 2018). Therefore, the quantitative analytical surveys aspect of the sequential explanatory design helped to test hypotheses to establish the relationship between variables (Omar, 2015). This was in line with this study's objectives to analyse how the employee reward and performance relationships are affected by psychological conditions, employee engagement and causality orientations.

As a result, there is a need to expand the dynamics of employee rewards and performance and the mechanisms that influence the predictive relationship from the Ghanaian perspective. Accordingly, the quantitative analytical component of the sequential explanatory design concentrated on analysing employee rewards and performance within Blau's (1964) social exchange theory framework. Depending on the employee engagement theory, there was a focus on the roles of psychological conditions and employee engagement in the relationship (Kahn, 1990). Moreover, in line with the causality orientation theory (Deci & Ryan, 1985a), this aspect of the design focused on analysing the roles of the causality orientations in the relationships.

Furthermore, the sequential explanatory design involved a qualitative aspect. This aspect used key informant interviews to further elaborate on some of the findings from the survey, particularly the relationship between employee rewards and performance. The interview data were also used to analyse the nurses' perceptions of rewards and their level of employee performance. The study was cross-sectional because the massive amounts of data from individuals during the quantitative stage were collected at a particular time over the same period without recourse to changes over time (Denscombe, 2003).

### **Study Population**

A study population is a complete set of elements from which participants are selected (Welman, Kruger & Mitchell, 2005). The population that comprises individuals with identical characteristics that the researcher can study is known as the unit of analysis or the target population (Blumberg, Cooper & Schindler, 2008; Creswell, 2014). The target population of this study was enrolled and registered nurses working in public health facilities in Ghana. The total



population of registered and enrolled public nurses was 37, 190 (MOH, 2018). Registered nurses have a three-year diploma and degrees in nursing after three and four years of training, and the enrolled nurses are nursing certificate holders with two years of training. In this study, nurses refer to enrolled and registered nurses.

Nurses in Ghana's public sector operate under the Ghana Registered Nurses and Midwives Association (GRNMA). The GRNMA is a professional association embracing all categories of nurses in Ghana. The association was incorporated by the National Redemption Council (NRC) Decree 143. The association's membership is open to all nurses or midwives registered with Ghana's Nursing and Midwifery Council. Under the Professional Regulatory Bodies Act, 2013 (Act 857), the council ensures high practice standards and nursing and midwifery training in Ghana. The target population for the qualitative aspect were senior nurses who were part of the decision-makers concerning nurses and could provide further information about the issues at the core of this study.

### **Sample Size and Sample Procedure**

An appropriate sample size is required to ensure the results from a study are valid and can be generalised to the population. In order to determine the appropriate sample size, Israel (1992) recommends consideration for the study's objective, population size, the level of accuracy expected, the confidence level and the degree of variability in the population attributes. Determining the appropriate sample size considers factors such as population, accessibility, sampling techniques and the mode of analysis (Al-Subaihi, 2003). In the present study, the sample size was determined considering PLS-SEM's requirements for

sample size and general approaches required to ensure the sample's representativeness to the population.

Ringle, Sarstedt and Straub (2012) assert that to use the PLS-SEM for data analysis, the "10-times" rule of thumb proposed by Hair, Ringle and Sarstedt (2011) must guide the selection of the sample size. The "10-times rule" operates on the assumption that the sample size should exceed 10 times the maximum number of inner or outer model links pointing to any latent variable in the model (Kock & Hadaya, 2018). For this study, the largest number of paths towards anyone construct, employee performance, is 8. This requires at least 80 sample units in order to obtain reliable results.

In addition to using the 10-times rule, Cohen (1992) recommends power analysis in determining the minimum sample size. For example, based on Cohen's consideration, for a statistical power of 80%, a significant level of 5%, the maximum number of links to a construct and factor loadings largely above 0.7, 54 participants were needed for  $R^2$  value of 0.05. Roscoe (1975) also recommends that in cases where the sample has to be split into groups such as male/female and registered/enrolled nurse, a minimum sample size of 30 per group is appropriate. In the present study, there are two groups: sex of nurses and type of nurse for multi-level analysis. Thus, the minimum required sample size is 60.

Moreover, Hair, Black, Babin, Anderson and Tatham (2006) propose that in a complex model, with a large number of parameters to be estimated and with up to five constructs, a sample size of 100 to 150 is appropriate. They also recommend that with more than six or more than three items in each construct, the sample size should exceed 500. As a result of these propositions, the present

study has more than three or six items in each construct and requires a sample size of more than 500. Notwithstanding, Reinartz, Haenlein and Henseler (2009) and Sarstedt, Hair, Ringle, Thiele and Gudergan (2016b) argue that sample sizes recommended for PLS-SEM have resulted in unacceptable results. The reason is that researchers have utilised the sample size required in PLS-SEM, ignoring the size of the population even when the population is large and is accessible (Hair, Ringle & Sarstedt, 2013).

Relying on the general approach to determining sample sizes, the sample size was determined using Cochran's (1963) formula for a large population. Relying on Cochran's (1963) sample size formula of  $n_0 = Z^2 pq / e^2$ , a confidence level of 95 % and desired level of precision at 5 %, the sample size is 385. In the formula,  $n_0$  is the sample size,  $Z^2$  is the cut-offs of the area under the normal curve that cuts off at the desired confidence level,  $e^2$  is the level of precision,  $p$  is the maximum degree of variability and  $q=1-p$ . According to Naing, Winn and Rusli (2006), Cochran's sample size determination formula relies on a simple random sampling technique.

Therefore, Cochran (1977) explains that using it for other sampling techniques, such as the multistage sampling method, requires that the sample size determined is multiplied by the design effect. The design effect is the variance ratio under a particular design to that under simple random sampling (Kish, 1965). In other words, it is the figure used to correct an estimated sampling error in a survey that is different from that under a simple random sampling. The design effect provides a representative sample for multistage sampling since the larger sample size required in multistage sampling permits

the same level of precision if the simple random technique were used (Naing et al., 2006)

Shackman (2001) states that although the design effect could be as high as 30, it generally varies from one to three. Due to the cross-sectional nature of this thesis and resource constraints, this study's design effect was two. With a design effect of two due to multistage sampling (Shackman, 2001), the sample size increases to  $385 \times 2 = 770$ . Allowing for 10 percent non-response (Naing et al., 2006), the final sample size is  $770 + (10/100 \times 770) = 770 + 77 = 847$ . In order to arrive at the final sample size for this study, Hair et al.'s (2006) 500 samples for complex models and Sarstedt et al.'s (2016b) advice to consider the population and representativeness of the sample to the population in PLS-SEM were considered. The sample size for this study was 847 based on Cochran's (1963, 1977) sample size formula and recommendation for multistage sampling, 10 percent for non-response, and a design effect of two.

The respondents were identified using multistage sampling. This technique was appropriate because public nurses in Ghana are a geographically dispersed population. The sampling involved five stages. In the first stage, Ghana was divided into 16 administrative regions. The 16 regions formed the first sampling frame. When the population is small, a minimum of 30 percent of the population is appropriate for a sample size (see Nardi, 2003; Neuman, 2007). This minimum provided a sample size of 4.8, approximately five regions. Gogtay (2010) argues that due to the possibility of errors in the sample, a safety factor in increasing the sample size as determined by the researcher is appropriate (Gogtay 2010). Based on Gogtay's suggestion, a safety factor of

three regions was added to five regions to arrive at eight regions, which formed the sample size in the first stage.

After numbering the 16 regions, eight were selected using the lottery method of random sampling. The numbers were written on 16 identical pieces of paper, and the papers were placed in a box. Eight papers, each representing a region, were randomly selected from the box one after the other. The randomly selected eight regions were the Oti, Northern, Greater Accra, Eastern, Bono East, Bono, Western and Volta regions. These eight regions comprise 140 metropolitan, municipal and district assemblies (MMDAs). The number of MMDAs per each selected region is depicted in Table 1.

**Table 1: Number of MMDAs in Selected Regions**

Region	Number of MMDAs
Bono	12
Eastern	32
Greater Accra	29
Northern	16
Volta	18
Bono East	11
Western	14
Oti	8
<b>Total</b>	<b>140</b>

Source: Field survey (2021)

The second stage involved randomly selecting 14 MMDAs from the 140 MMDAs. Bullen (2021) argues that 10 percent of the population is recommended as an appropriate sample size if it does not exceed 1000. Ten

percent of 140 MMDAs is 14 MMDAs. The 14 MMDAs were selected because the 140 Metropolitan, municipal and district assemblies (MMDAs) from eight regions still covered a wide geographical area that will be costly to cover in terms of time and financial resources and the cross-sectional nature of the study. This reason is consistent with Saunders et al.'s (2009) view that geographical dispersion and resource constraints are reasons for adopting multistage sampling. Therefore, selecting the 14 MMDAs was appropriate.

In the third stage, occasioned by the assumption by Fox, Hunn and Mathers (2007) that when heterogeneity characteristics of respondents are not very wide, selecting respondents from subsets of a district, for example, could be representative of the district. Depending on this suggestion, one district hospital or major health facility was selected through simple random sampling from each of the 14 selected MMDAs. The 14 selected hospitals or health facilities formed the next sampling frame. The fourth stage involved preparing a sampling frame of nurses in each selected hospital or health facility.

Pandey and Verma (2008) asserted that equal distribution of sample size is well accepted in sampling literature because, in Glasgow's (2005) opinion, sample size distribution based on the size of the group population is desirable when the aim is to arrive at a precise estimate for the larger populations. Glasgow (2005) further argues that this does not regularly provide the most accurate parameter estimates, even if this is the case. Therefore, particularly in the case of the present study, where the focus was not on comparisons among the selected hospitals but on the sample's representativeness to the national population of public sector nurses, the sample size was equally distributed among the 14 MMDAs. This constituted  $847/14=60.50$  nurses, approximately

61 respondents per hospital or health facility. Therefore, the final sample size was 854.

The fifth stage involved the identification of nurses in each selected hospital or health centre through simple random sampling. The selection relied on the procedure described by Alvi (2016). This involved using numbers from the staff list to identify each nurse in the selected hospitals. Numbers were selected randomly from each hospital list and traced to nurses who became the respondents. Questionnaires were then administered to nurses that were identified. The selected hospitals from which the respondents were identified and their districts and regions are shown in Table 24 (Appendix C). Table 25 (Appendix C) summarises the number of respondents per the randomly selected regions and the total number of retrieved and useable questionnaires per region.

The quantitative stage of the study concentrated on how the employee reward type of social reward served as predictors of employee performance types of contextual, adaptive and counterproductive performances or behaviours. In the qualitative stage, ten key informants were purposively selected, established on the judgement that they possess some striking characteristics and relevant information that were required from the informants (Zikmund, Babin, Carr & Griffin, 2013). The key informants were senior nurses who were part of the decision-makers concerning nurses and could provide further information about the issues at the core of this study.

In the qualitative stage, an interview guide (see Appendix E) was used to solicit the other factors that explained the adaptive, contextual and counterproductive performance and further elaborate on the reasons behind the public sector's adaptive, contextual, and counterproductive performance. They

were used to explore in-depth the results from the statistical tests about the effect of social reward on contextual, adaptive and counterproductive performances or behaviours. The key informants' data were used to supplement the interpretation of some of the survey results, particularly the results on the employee rewards and performance relationships.

### Data Needs

Data are information or facts that are required to answer research questions or to attain the research objectives. In line with the conceptual framework and the study's objective, data were required to analyse the effect of employee reward on employee performance and the mediation role of psychological conditions in the relationship. Additionally, data were needed to examine the serial and parallel mediation roles of psychological conditions, such as job value and employee engagement, including being carried away while working. Data were also collected on causality orientations, such as assertiveness and blaming others, in the relationship between employee rewards, including social rewards, and performance. There are two significant data sources: primary and secondary data (Collis & Hussey, 2003), that can be used for this study.

Primary data are new data for particular research purposes, while secondary data already exists (Borges & Nilsson, 2016; Kabir, 2016). In order to achieve the objectives of examining the roles of psychological conditions, employee engagement and causality orientations in the relationships between employee rewards and public sector nurses' performance, primary data were the only source of data. The primary data were gathered from fieldwork with public nurses in the Ghana Health Service. Primary data were preferred over secondary



for this study because the issues, particularly psychological conditions, employee engagement or causality orientations, could not have been obtained as secondary data.

As a result of the pragmatic philosophical stance and the explanatory sequential mixed methods design adopted for this study, the data comprised quantitative and qualitative primary data. That is, the issues under examination regarding employee rewards, psychological conditions, employee engagement, causality orientations and performance are social realities that can be measured numerically in data collection and analysis (Bryman, 2012). Other issues embedded in the study, such as the reasons public sector nurses assign to their performance and perceptions about the reward due to their interactions with others, their lived experiences and perceptions required non-numerical responses. These data were used to answer the first and second research questions and to elaborate further on the results of the third objective regarding the effect of employee reward on nurses' performance.

Two types of primary quantitative data, namely categorical and numerical data, were involved in the study. Whereas categorical data comprise classifications or groups such as one's sex (Agresti, 2007), numerical data are data in values or numbers (Leedy & Ormrod, 2010). The categorical data were necessary for classifying the public sector nurses involved in this study into their sex and nurse category. These were used to examine sex and category of nurse differences in the relationships between rewards as social rewards and adaptive, contextual and counterproductive performance.

The quantitative numerical data, which depended on the social exchange, employee engagement and causality orientation theories, on the other hand, were required to analyse the predictive relationship between employee reward and nurses' performance. The data were also used in the mediation roles of the psychological conditions of meaningfulness, safety and availability, employee engagement and the causality orientations of autonomous, impersonal and control orientations in the relationship. These align with the lessons learnt from the empirical literature concerning their measurements (e.g., Chikoko et al., 2014; Gatti, 2016; Li et al., 2016; Ye et al., 2014).

Consequently, in line with this study's explanatory sequential design, the primary quantitative data involving categorical and numerical primary data were required to address the quantitative aspect of the study. The primary qualitative data involved non-numerical data in the form of the nurses' experiences, interactions and actions relating, for instance, to their perception of employee rewards and the level of performance. The primary quantitative data were obtained from public sector nurses using a questionnaire. In contrast, the primary qualitative data were obtained from key informant public sector senior nurses using an interview guide. The section that follows addresses in detail these data instruments and the justification for their use.

### **Data Collection Instruments**

This study relied on a questionnaire for the quantitative aspect, while the interview guide was for the qualitative aspect. The questionnaire was used for this study in that the targeted population of the study are public sector nurses because of geographically dispersion (Abbasi, 2011) of 16 regions of Ghana, enough literacy of the nurses, generalisation of findings (Zikmund et al., 2013)

and anonymity (Patten, 2017). The questionnaire consists of an introduction, which describes the study's purpose and assurance of confidentiality of information provided by respondents. The rest of the questionnaire was divided into four parts. The first part collected data on the sex and category of nurses that were involved in the study. This part aimed to collect data that assisted in accounting for sex and nurse category differences in the findings of the study's objective relating to the predictive relationships between employee rewards and performance.

Part II consisted of items that measured employee reward and employee performance. The objective of this part was to collect data to address the effect of employee rewards on employee performance. The data collected for this part were used in mediation analyses involving psychological conditions, employee engagement and causality orientations. Specifically, this study concentrated on social reward because, despite the advantages of social reward over the other employee reward types (Anik et al., 2013; Bhanot et al., 2018), the lessons learnt in the literature review suggested that social reward was the employee reward type with the least attention in empirical studies.

Items on social rewards were developed using indicators revealed in the literature, particularly those of Eisenberger et al. (1986), Eisenberger et al. (2001), Malhotra et al. (2007), Miao et al. (2013), Salah (2016), and Ramirez-Marín and Shafa (2018). The scale was scored on a 7-point Likert scale varying from 1 (weak agreement) to 7 (very strong agreement). Some of the items are supervisors' attention to complaints, notice or recognition by supervisors, taking pride in accomplishments, appreciation of extra efforts, colleagues' emotional

support, provision of feedback, showing kindness and courtesy, being respectful.

The aspects of contextual, adaptive, and counterproductive performance of employee performance were studied. The contextual performance or organisational citizenship behaviour scale depended on the literature review, particularly from Podsakoff and Mackenzie (1994) and Coleman and Borman (2000). The scale consists of 23 items measured on a five-point Likert scale varying from 1(never) to 5(always). Some examples of the indicators are making peace, assisting others and making suggestions. This study adopted the four components of Pulakos et al.'s (2000) adaptive performance scale regarding adaptive performance. These four scale components are managing work stress, dealing with uncertain work situations, adaptability to uncertain, unpredictable situations, and handling emergencies and crises. The 7-point Likert scale was utilised, varying from (1) weak agreement to (7) very strong agreement.

The 19-item scale by Bennett and Robinson (2000) was adopted for the measurement of counterproductive behaviour. The scale is a five-point Likert scale varying from 1(never) to 5 always. This scale covered to a significant extent, indicators reviewed in the conceptual and empirical literature, particularly those of Owor (2016), Asghar and Asif (2018) and Yin (2018). Higher scores indicate that respondents frequently engage in counterproductive work behaviours. Scale items include acting rudely toward someone at work, publicly embarrassing someone, and falsifying documents.

Part III of the questionnaire focused on the psychological conditions and employee engagement (Section), which was grouped into two sections based on the constructs revealed in the employee engagement theory (Kahn, 1990) and

related literature reviews (e.g., Fang, L. T., Shi, K. & Zhang, 2010; May et al., 2004; Saks & Gruman, 2014). The psychological conditions included psychological meaningfulness, psychological availability and psychological safety. The indicators of psychological meaningfulness include a job having a clear purpose, being useful, not taken for granted, job activities being meaningful (Saks & Gruman, 2014) and working for social good (Asiwe et al., 2017).

The indicators of psychological availability include displaying appropriate emotion at work, the ability to handle physical demands and the confidence to think clearly at work (Kahn, 1990; Saks & Gruman, 2014). On the other hand, Carmeli et al. (2009) operationalised psychological safety as a feeling of freedom from negative consequences that adversely affect employees' self-image, status, and career that stems from organisational environments. Such environments are supportive, trustworthy, non-threatening, not embarrassing, freedom from interpersonal risk, safe and predictable as employees invest their true selves in the performance of their jobs (Jacobs, 2013; Rich et al., 2010).

The psychological conditions were measured based on May et al.'s (2004) psychological conditions scale derived from the employee engagement theory and other indicators from the conceptual and related empirical reviews. The items were rated on a 7-point Likert scale varying from 1 (very weak agreement) to 7 (very strongly agree). This allowed data collection on all constructs crucial to the employee engagement theory using various sources to measure those constructs (Heggstad et al., 2019).

Another construct is employee engagement (Section D). The indicators of these dimensions include enthusiasm about the job, being carried away when working, having a positive view of work, investing the physical and emotional self in job performance and difficulty in detaching from the job. In this study, employee engagement was used as a mediating variable in the relationship between social rewards and performance. Schaufeli et al.'s (2002) 17-item Utrecht Work Engagement Scale was adapted to measure employee engagement. The scale was lengthened to accommodate other indicators reviewed in the literature (e. g., Gikonyo, 2018; Schaufeli & Taris, 2005) due to a lack of universal validity (Vallières, McAuliffe, Hyland, Galligan & Ghee, 2017). The items were scored on a 7-point frequency rating scale varying from 0 (never) to 6 (always). Sample items include being full of energy at work and deriving inspiration from the job.

Part IV of the instrument was on questions for measuring causality orientations, autonomous (Section E), control (Section F) and impersonal (Section G), as mediation variables in the sixth objective of the study. Specifically, the objective sought to explain the serial mediation roles of the causality orientations in the relationship between employee reward and employee performance. The causality orientations were measured using scales resulting from the causality orientation theory (Deci & Ryan, 1985b; Deci & Ryan, 1987) and indicators reviewed in the literature (e. g., Hagger et al., 2015; Li et al., 2016; Ye et al., 2014). Items were scaled on a 7-point Likert scale varying from 1 (least likely) to 7 (very likely). Some items on the scales include accepting responsibility, and relying on blaming oneself.

In addition to the questionnaire, an interview guide aided the collection of the qualitative data (see Appendix E) to further investigate key issues that emerged from the analysis of the questionnaire data on employee reward and performance relationships. The interview guide was preferred to the interview schedule because, unlike the interview schedule, the interview guide was more flexible: allowed the interviewer to ask probing questions in order to obtain detailed information on some issues (Taylor, Sinha & Ghoshal, 2006). The interview guide was developed after the questionnaire administration and data analysis. The significant findings on the predictive relationships between social reward and adaptive performance, contextual performance and counterproductive behaviour informed the design of the interview guide.

The interview guide consisted of four aspects: social reward, contextual performance, adaptive performance, and counterproductive performance. On social reward, the interview guide was used to probe satisfaction with the construct, promoting factors and importance. The aspect of adaptive performance was used to probe what nurses do when unexpected situations come up in their work, reasons, factors that promote or hinder adaptive performance and social reward's influence in such situations. For Contextual and counterproductive performance, an interview guide was used to probe their levels, reasons or factors and the role of social reward.

### **Validity and Common Method Variance**

Academic rigour is a requirement for an empirical study to pass the test of scrutiny. The ways to ensure rigour include ensuring validity and also dealing with common method variance. Uys and Basson (1991) explain that data instruments are valid when they measure a particular concept or variable

precisely. Drost (2011) identifies three types of validity: internal validity, construct validity, and external validity that should concern a researcher. In Trochim's (2002) view, construct validity deals with how well a construct is operationalised. Trochim (2002) proposes that overcoming construct validity includes the verification of content validity and face validity.

Kimberlin and Winterstein (2008) opine that content validity concerns the extent to which the items developed represent all the samples of items that measure the construct. Content validity is, thus, the means to ensure that the indicators of a construct cover the exact meaning of the construct as operationalised by the researcher (Almanasreh, Moles & Chen, 2019). In order to deal with content validity, the study relied on the advice of supervisors and other subject matter experts, as proposed by Kothari (2004), since Kimberlin and Winterstein (2008) stress that there are no tests in statistics to determine content validity. In contrast, Oluwatayo (2012) explains that face validity involves subjective evaluation of the items' relevance, reasonability, and clarity in a measuring instrument. For face validity, the study adopted/adapted already tested instruments and indicators of variables in extant literature.

External validity refers to the extent to which sample results can be generalised to represent the population from which the sample was taken (Burns & Groves, 1999). Internal validity deals with the validity of the research itself, as revealed in the research's ability to sustain causal conclusion claims as the true reflection of the situation on the ground rather than due to some chance variables (De Vaus, 2002). In order to deal with external validity, this study adopted the approach proposed by Calder, Phillips and Tybout (1982) by ensuring that the research methodology estimates the extent of correspondence



between measurement and the concepts they represent and to identify and correct errors.

Apart from validity, common method variance has some effects on the credibility of research results. Podsakoff, MacKenzie, Lee and Podsakoff (2003) expound that evaluating independent and dependent variables in cross-sectional studies can result in common method variance. Common method variance is the number of spurious correlations between variables due to measuring variables using the same method (Craighead, Ketchen, Dunn & Hult, 2011). Hildenbrand (2016) identifies common method variance sources to include using the same subject rating of the independent and dependent variables and using the same response format.

In order to control common method variance, this study adopted the approaches proposed by Podsakoff et al. (2003) and Podsakoff, MacKenzie and Podsakoff (2012). Firstly, the questionnaire was designed to reduce task difficulty using clear and concise language. Further, a preamble was provided to explain the study's purpose, how the information provided was used, and the benefits to be derived by the organisation. Self-expression was encouraged by stating that there was no wrong or correct answers on the questionnaire. Lastly, by assuring anonymity, socially desirable bias was circumvented.

### **Pre-Testing**

Pre-testing is a trial run of a research instrument of a major study (Salkind, 2010). Pre-testing is relevant because it enhances the quality and effectiveness of the main study (In, 2017). This pre-testing aimed to discover problems with the instruments and correct them before the main study. The pre-testing was conducted among 30 nurses of the Cape Coast Metropolitan

Hospital. The nurses were not involved in the main study, but they resembled those involved in the main study. The pre-testing helped to identify some weaknesses or challenges.

A weakness was identified with the items on psychological meaningfulness questionnaires. The weakness was that some items that appeared similar to others were mostly not answered. These items were slightly modified to bring out the distinction. Another challenge was the volume of the questions. Many of the responses on the questionnaire were not ticked due to complaints about the length of the questionnaire. The questionnaire size was not reduced, but sufficient time was allowed for answering and returning the administered questionnaires. The respondents were allowed to answer and return them at their own pace. Cronbach's reliability tests of constructs varied from .700 to .964 (see Table 26 in Appendix F). Construct reliabilities were attained based on Cronbach's Alpha reliability criteria close to or more than 0.7 (Leedy & Ormrod, 2010; Pallant, 2011).

### **Ethical Considerations**

In order to ensure ethical behaviour in the conduct of this research, firstly, ethical clearance was sought from the University of Cape Coast's Institutional Review Board before the beginning of fieldwork. Respondents' consents regarding the administration of the questionnaire were sought at the beginning of administering the questionnaire and again after completing the questionnaire. These were done through a consent letter. Respondents were informed about the purpose of the research, how it was to be conducted and their protection from physical harm by taking part in the study. Additionally, respondents who agreed to participate in the research were informed about their

definite rights, protections and the voluntary nature of their participation. Participants, too, were notified about the confidential nature of the study because the data provided were solely used for academic purposes.

In order to ensure confidentiality, participants were asked not to provide personal information, such as names, contact numbers and personal addresses, on the questionnaire. Participants were also informed that the serial numbers that were indicated on the questionnaires during collection were for counting purposes only and would not reveal their true identity. Furthermore, to ensure confidentiality, information obtained in connection with this study was analysed and reported alongside other participants' information. Participants were further informed that the information they provided was not linked to their names in any verbal or written reports of this study.

To address possible risks and discomforts and benefits that participants might face, they were assured of no physical, social or psychological risks when they took part in the study. Besides, should the participants find some of the questions personal and experience some discomfort when answering, they were under no obligation to answer uncomfortable questions. Participants were further made to understand that there were no direct benefits to participating in the study. However, findings on the relationships between the variables under study may benefit them indirectly through decisions at the national level regarding the design of employee rewards and performance systems.

### **Actual Field Work**

Eleven field assistants were recruited between 17<sup>th</sup> March 2021 and 24<sup>th</sup> March 2021. The field assistants were Higher National Diploma and first degree holders with good interpersonal skills. The field assistants' training was

conducted online on 26<sup>th</sup> March 2021 on ethical behaviours in questionnaire administration and the questionnaire's content. The training also equipped them with the ability to offer a uniform interpretation of the questionnaire to respondents. The training lasted for a day. After the training programme, the researcher and the field assistants moved to the districts for the data collection. Reports on the progress of work were regularly received from the field assistants.

The quantitative data collection lasted for 44 days, from 27<sup>th</sup> March 2021 to 11<sup>th</sup> May 2021. The data were collected from 854 public sector nurses in eight regions, involving 14 MMDAs. Out of the 854 questionnaires distributed, 761 useable ones were retrieved. The collection of the data took place concurrently in the 14 MMDAs. This involved the researcher and 11 field assistants. The researcher was responsible for collecting data from three of the MMDAs. The questionnaires were sent via email after the training. Each field assistant was assigned to one district.

The field assistants and the researcher were assisted by a nurse in each of the public health facilities visited. The nurses assisted the researcher and the field assistants in locating their colleagues. The nurse assistants helped to limit the number of personal contacts of the researcher and field assistants with several people to reduce the risk of Covid-19 infection. The researcher assisted in the recruitment of the nurses. Due to the length of the questionnaires, the respondents were allowed to complete and submit the questionnaires at their convenience. However, they were encouraged to do so in one week. Progress of work reports were regularly received from the field assistants and nurses recruited as liaisons.

The researcher collected the qualitative data using an interview guide (Appendix E). The interview lasted for 10 days, from 15<sup>th</sup> May to 25<sup>th</sup> May 2021. Ten interviews were conducted. The interviewees were contacted via telephone calls. The interviewees were located at Peki Government, Adidome Government, Tafo Government, Akuse Government, Dodowa District and Tamale Central Hospitals based on the willingness of the informants to participate in the qualitative aspect of the studies. The informants included two senior nurses, each from the Peki, Tafo, Dodowa District and Tamale Hospitals, while one informant each was from the Akuse and Adidome Government Hospitals. The distribution of the informants was based on their availability and willingness to participate in the qualitative stage. The interviews lasted between 31 minutes and 60 minutes each.

### **Field Challenge**

Data collection was relatively successful except for two main challenges that were faced. The first challenge was recruiting the nurses to liaise between data collectors and the respondents. The liaisons were vital because they minimised the contacts that the data collectors had with the respondents in order to reduce the exposure to the risk of Covid-19 infection. However, many nurses contacted were reluctant to accept the roles discussed. This problem was surmounted through persistence and persuasion, especially when manager nurses assisted in their recruitment and persuasion. The second challenge was that there was a delay in receiving some completed questionnaires from nurses in one of the hospitals because they went into quarantine due to Covid-19 infections after receiving the questionnaires.

## Data Processing and Analysis

In this study, data were collected using a questionnaire for the quantitative aspect and an interview guide for the qualitative part. The data management involved inspecting the questionnaires to detect and correct possible errors. The data management also involved the entry, analysis of the questionnaire data for the quantitative data and the transcription of reports from the interviewing key informants, coding and theme identification. Quantitative data and qualitative data were collected. The analysis thus involved quantitative and qualitative analyses. The quantitative data entry was preceded by examining for non-response to the questionnaire. 854 questionnaires were administered, out of which 761 useable ones were retrieved for the analyses. The qualitative analysis relied on data provided by 10 key informants.

The quantitative data collected were analysed in two stages. Firstly, preliminary data analysis was conducted, and descriptive statistics were presented. These provided general information about participants' answers to the questionnaire. In the second stage, Structural Equation Modelling was used to test and analyse the relationships among the variables in the conceptual model at an alpha level of  $p < 0.05$ . There are two types of structural equation modelling: covariance-based structural equation modelling and variance or partial least square-based structural equation modelling (PLS-SEM). The PLS-SEM was used for the analysis. This is because PLS-SEM maximises the explained variance in the endogenous constructs (Hair et al., 2011) instead of replicating the theoretical covariance matrix (Ringle, Wande & Becker, 2015).

The objective of this study was to analyse the predictive significance of the employee rewards and performance relationships and examine the mediating roles of psychological conditions, employee engagement and causality orientations, which were captured in objectives three to six. The PLS-SEM was beneficial because the model involved predictive analysis (Anderson & Gerbing, 1988) and an explanation of variance (Hair, Hult, Ringle & Sarstedt, 2014). The model also involves relatively complex data (Garson, 2016), usage of composite variables (Nitzl, 2016) and is at an early stage of development or has not been tested extensively (Henseler, Ringle & Sarstedt, 2012). In addition, the two-stage least square with instrumental variables was used to analyse the non-recursive relationship in the conceptual framework (Figure 1).

The evaluation of the research model was carried out in two stages. The first stage involved assessing the measurement model, while the second stage involved the assessment of the structural model. The objective of the measurement model was to determine whether the data had passed the quality standards for empirical research (Urbach & Ahlemann, 2010). As Lewis, Templeton and Byrd (2005) proposed, the measurement model was assessed by examining the internal consistency, indicator reliability, convergent validity and discriminant validity. Internal consistency was measured using Chin's (1998) composite reliability. Nunnally and Bernstein (1994) state that composite reliability values below 0.6 show a lack of reliability. Following this criterion, the internal consistencies were adequately met (see Table 27 in Appendix G1), implying that all the construct items were internally consistent.

Indicator reliability was assessed to determine the extent to which variables measure what they are intended to measure. Factor loading estimates between 0.5 and 0.7 is acceptable for indicator reliability (Hair, Black, Babin & Anderson, 2010). The significance of the indicator reliability ( $t > 1.96$ ) was tested using bootstrapping. Using these criteria, the indicator reliability shows that the indicators of the constructs in this study significantly contributed to measuring the constructs (see Table 27 in Appendix G1). Convergent validity was also assessed using Fornell and Larcker's (1981) average variance extracted (AVE).

There is convergent validity when the AVE is not below 0.5. Table 27 in Appendix G1 indicates that convergent validities were achieved. Discriminant validity, on the other hand, describes how a construct is distinct from other constructs. Discriminate validities were checked using the heterotrait-monotrait ratio of correlation (HTMT) proposed by Henseler, Ringle and Sarstedt, (2015). The discriminant validity results in Appendix G1 show that hypothesised paths in the structural models of the study were real and not the result of some statistical inconsistencies because HTMTs were less than 0.85 (Zmnako & Chalabi, 2019). Common method bias was determined by a variance inflation factor (VIF). Common method bias is avoided when VIF is less than 5 (Kock, 2015). Relying on Kock's recommendation, Appendix G1 shows that this study had no threats of common method bias.

The structural model was evaluated using Smart PLS 3 to determine whether the data supported the hypothesised models. The evaluation was done using the coefficient of determination,  $R^2$  and path coefficients. Chin (1998) proposed that  $R^2$  is substantial at around 0.67, moderate at around 0.33 and weak



at around 0.19. It was used to, for instance, explain the percentage variation in employee performance that was explained by employee rewards. Backhaus, Erichson, Plinke and Weiber (2003) expatiate that the coefficient of determination serves as a goodness of fit measure against empirical data.

Effect size ( $f^2$ ) is used to ascertain the increase in the coefficient of determination ( $R^2$ ) concerning the portion of the changes in the dependent variable, employee performance, which is not explained. For the effect size ( $f^2$ ), Cohen (1988) proposes the threshold values as 0.02 small, 0.15 as moderate and 0.35 as strong. These show whether additional path(s) affects the dependent variable's shared variance (Cohen, 1988). The validations of the hypotheses were by considering the path coefficient and the t-values. The predictive sample reuse was used for the model's predictive relevance ( $Q^2$ ) based on the blindfolding procedure (Chin, 2010). When the predictive relevance is greater than zero, the model has predictive relevance (Shanmugapriya & Subramanian, 2015). The cross-validated redundancy and the cross-validated community results indicate that the criterion for predictive relevance has been met ( $Q^2 > 0$ ).

The purpose of mediation in objectives four to six in this study was to explain (Henseler, Hubona, & Pauline, 2016) the mediation roles of psychological conditions, employee engagement, and causality orientations in the predictive relationship between employee rewards and employee performance. In undertaking multiple mediations in smart PLS-SEM, the specific indirect mediation results were used instead of the total indirect effect result because it accounted for the strength of the mediation of each hypothesised mediation being tested. The default bias-correlated and accelerated bootstrap confidence interval was used because it offers the best

means for discovering mediating effects when mediation is present (Hayes & Scharkow, 2013). In order to detect mediations, hypotheses mediations were accepted when the t value exceeded 1.96.

As advised by Ramayah, Cheah, Chuah, Ting and Memon (2018), the mediation analyses of objectives four, five and six involved testing direct relationships, some of which might have been tested in previous sections. In this study, relationships established in earlier sections were not reported in subsequent sections. Furthermore, in deciding whether to determine the type of mediation for objectives four, five and six, this study relied on the recommendation by Rungtusanatham, Miller and Boyer (2014). They endorse avoiding such classification as partial mediation or complete mediation in hypothesising.

This study further explained at the multi-level, female and male nurses, and registered nurse and enrolled nurse differences in social reward-performance relationships for the predictive effect of employee rewards on nurses' performance. Partial least squares multi-group analysis (PLS-MGA) was used to perform this analysis. Henseler, Ringle and Sinkovics (2009) recommend a p-value of less than 0.05 as a statistical significance difference criterion, while a p-value of more than 0.05 shows a statistically insignificant difference. The parametric and Welch- Satterthwait tests were used to confirm the PLS-MGA results.

The qualitative aspect involved thematic analysis of 10 key informant interview data. The data were used to explain some of the quantitative results regarding the effect of employee rewards on nurses' performance and to ascertain the nurses' perceptions of rewards and their level of performance.

Regarding the qualitative analysis, each key informant interview was recorded and transcribed verbatim. The thematic analysis of the qualitative data indicated the nurses' feelings about employee rewards and performance levels. The data was also used to further elaborate the results on the effects of employee rewards on nurses' performance.

The thematic analysis depended on the inductive approach: interviews determined the themes (Thomas, 2006). The analysis involved familiarisation through transcribing and reading the text, coding, creating themes, reviewing created themes, defining and naming themes and writing up (Yukhymenko, Brown, Lawless, Brodowinska & Mullin, 2014). The issues covered included social reward, adaptive performance, counterproductive performance or behaviour and factors that promote them. The qualitative results were used to answer the two research questions about nurses' perception of rewards and their levels of performance. The results were also integrated into the quantitative results of the third objective of the study.

### **Summary**

This chapter examined the research methods adopted for this study. The chapter discussed vital issues regarding research design and philosophy. The chapter also focused on the justification for adopting the pragmatism philosophy. The chapter further justified the preference for the mixed-methods approach ahead of the qualitative and quantitative approaches. The chapter further discussed specific methods for ensuring validity and reliability, overcoming common method variance, sample design and instruments. The chapters following this chapter discuss the quantitative and qualitative data

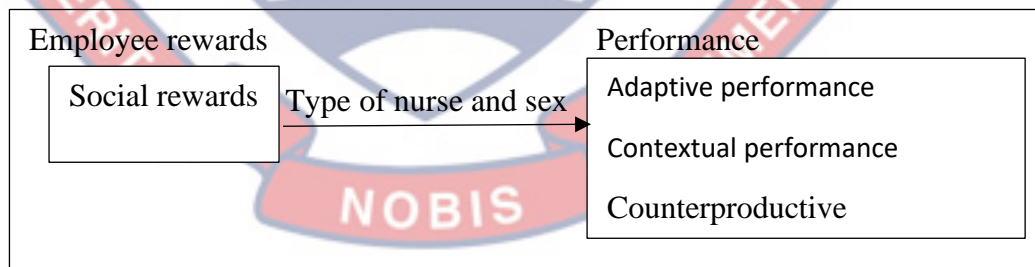
results presentation, followed by a summary of findings, conclusions, and recommendations.



**CHAPTER FIVE**  
**EMPLOYEE REWARDS AND PERFORMANCE OF PUBLIC**  
**SECTOR NURSES IN GHANA**

**Introduction**

The objective of this chapter was to find answers to research objectives one, two and three. The chapter was also devoted to background characteristics and a preliminary examination of the data. Specifically, the chapter focused on employee rewards, contextual performance, adaptive performance, and counterproductive performance issues. The theoretical underpinning of objective three was the social exchange theory (Blau, 1964), which argues that in social exchanges such as the employee rewards-performance relationship, employee rewards rely on the expectation that it will result in performance (Njanja et al., 2013). This theory supported in assessing the effect of employee rewards on employee performance, relying on data from 761 respondents out of the 854 respondents and 10 key informant interviews. Figure 2 represents the sub-model of the conceptual framework (Figure 1).



*Figure 2:* Sub-model of the mediation roles of psychological conditions, employee engagement and causality orientations in the relationship between social reward and performance.

Source: Author’s construct (2021).

The analysis of the issues in objective three relied on the quantitative research approach, which involved statistical inferences in the relationship between social reward and performance. The Smart PLS-SEM analytical tool was used as the analytical technique to assess the measurement model and evaluate the structural model to test the proposed hypotheses. Additionally, multi-group analysis based on PLS-MGA was used to account for differences in the path models for sex and type of nurse. The analysis also involved thematic induction analysis of 10 key informant interviews that were aimed at addressing objectives one and two on the nurses' perceptions of employee rewards and level of performance, respectively. The thematic analysis was further used to explain some of the results in this section. The discussion of the background characteristics of respondents and the preliminary examination of the data preceded the presentation of the results.

### **Background Characteristics of Respondents**

The background characteristics of the respondents examined include sex and type of nurse. Table 2 presents the background characteristics of the sex distribution and the type of nurses involved in the study. The sex characteristics of the public sector nurses as the respondent in this study was that out of the 761 respondents, 34.6 percent were males, while 65.4 percent were females. This distribution reflects the dominance of females in the health sector worldwide. Boniol et al.'s (2019) analysis of the health workforce in 104 countries revealed that females formed a higher percentage of 67 percent of the health workforce globally.

**Table 2: Sex and Type of Nurses**

Variable	Options	Frequency	Percentage (%)
Sex	Male	263	34.6
	Female	498	65.4
	Total	761	100
Type of nurse	Enrolled nurse	219	28.8
	Registered nurse	542	71.2
	Total	761	100

Source: Field survey (2021)

Of the sex distribution of nurses in Africa, they report that a higher percent of 65 percent were females. Therefore, the sex distribution of nurses in this study echoed the African trend. Table 2 also revealed that most of them, representing 71.2 percent, were registered nurses, whilst 28.8 percent were enrolled nurses.

**Preliminary Examination**

Before examining the measurement model, a preliminary examination of the data was conducted. Visual inspection and SPSS were the procedures used for data screening. The data screening and cleaning involved checking for errors and finding and correcting errors in the data file. Checking for errors was done to discover values that were not within the range of possible scores. An inspection identified answers to questions out of the original questionnaire's range of values. The finding and correcting errors in the data file were by discovering where in the data file the errors had occurred. Errors were then corrected or deleted.

The distribution of the variable presented in Figure 5 in Appendix H suggested approximately normal distributions for adaptive performance, autonomous causality orientation and impersonal causality orientation. The distribution for psychological safety, availability and meaningfulness, counterproductive behaviour, employee engagement and contextual performance were not normally distributed (see Appendix H). However, with large samples of 200+, the normality of distribution does not make a significant difference in the analysis (Pallant, 2016). The SMART-PLS SEM analytical technique used for the quantitative aspect of the study is normality distribution neutral.

The descriptive statistics of the constructs are presented in Table 28 (Appendix G2). Employee reward was evaluated as a composite measure with the 16-item social reward scale on a seven-point scale varying from 1 (weak agreement) to 7 (strong agreement). The descriptive result shows a mean score of 5.06 and a standard deviation of 1.07, indicating pretty high satisfaction with social reward, with registered nurses (5.09) and male nurses (5.13) having higher mean satisfaction with the reward than the enrolled nurses (4.98) and female nurses (5.02) nurses. The relatively high satisfaction with employee rewards on the social reward scale is in line with Seitovirta et al.'s (2017) finding on a scale varying from one to five that registered nurses in Finland value these rewards with a mean score of 4.44.

Employee engagement was measured on a scale varying from zero, never engaged, to six, always engaged. The mean value of 4.72 and a standard deviation of 0.79 indicates that respondents' were engaged in their work roles. The score was slightly higher for registered nurses (4.75) and female nurses



(4.72) than for male nurses (4.71) and enrolled nurses (4.64). Simpson's (2009) study found a closely related engagement level mean score for registered nurses (4.60). The marginally higher level of employee engagement for female nurses than male nurses is similar to that of a South African study, which found that females were more engaged than males (Schaufeli, Bakker & Salanova, 2006).

From Table 28 (Appendix G2), psychological conditions comprise three types. Each psychological condition was measured as composite variables on a seven-point scale varying from 1 signifying weak agreement or low experience of the psychological condition to 7, which indicates very high experience of the psychological conditions. The results indicate that psychological meaningfulness had the highest mean score (5.60), followed by psychological availability (5.47) and psychological safety (5.23) with standard deviations of 0.95, 0.93 and 1.09, respectively, indicating that the nurses experience pretty high levels of each of these psychological conditions.

Related studies on meaningfulness and safety reported lower mean scores of 3.83 for meaningfulness for nurses in Iran (Royan et al., 2017) and 4.94 for psychological safety for intensive care nurses in Germany (Seibert, Pfaff, Scholten & Kuntz, 2021). The result also shows that the mean scores for enrolled and registered nurses and male and female nurses were all above 5.0. However, registered and male nurses experienced slightly higher levels of each psychological condition than enrolled and female nurses. In Banihani, Lewis and Syed's (2013) view, this is because males have better opportunities than females to experience these psychological conditions.

From an employee performance perspective, the results from Table 28 (Appendix G2) show that the mean score for adaptive performance sub-constructs of employee performance was 4.77 with a standard deviation of 0.63, which on the seven-point scale of weak agreement to strong agreement, points out that the nurses were moderately involved in adaptive performance. A similar study by Badran and Akeel (2020) also reported a moderate adaptive performance of some nurses at Ain Sham Hospital in Egypt. Generally, registered nurses' (4.79) adaptive performance activities were marginally above those of enrolled nurses (4.74). Male nurses' adaptive performance (4.88) was also higher than the adaptive performance of female nurses (4.72).

Contextual performance measured on a scale of 1, signifying never to 5, signifying always, revealed high mean contextual performance (4.12) activities among public sector nurses of Ghana. The standard deviation was 0.61. This finding is similar to Kılınç and Ulusoy's study (2014) in Turkey, which reported a high mean score for contextual performance components of altruism, courtesy and conscientiousness, averaging 4.07. The table also shows that registered nurses (4.14), like male nurses (4.18), were only marginally more involved in contextual performance compared to enrolled nurses (4.06) and female nurses (4.09), respectively. The higher mean score for the female nurses compared with male nurses in contextual performance is consistent with Allen and Rush's (2001) report that females engage more in extra-role activities than males.

The result in Table 28 (Appendix G2) demonstrates low mean levels of counterproductive behaviour (1.55) and standard deviation of 0.77, signifying that the nurses were generally committed and were interested in the "good" of their work. This result is consistent with that of Roopa, Nanjundeswaraswamy

and Swamy's (2016) finding that most nurses in some Bengaluru hospitals in India had an overall counterproductive behaviour mean score of below 2.0. In comparison, the table revealed that registered nurses' mean score (1.62) on counterproductive performance was slightly above that of enrolled nurses (1.38). Similar results were recorded for male nurses (1.53) and female nurses (1.57). A closely related study by Lubbadah (2021) in Jordan found comparatively higher but low mean results for counterproductive behaviour, with that of males (1.978) being slightly higher than that of females (1.976).

The causality orientations have three sub-constructs. Each construct was measured on a seven-point Likert scale from 1, least likely, to 7, very likely. The mean score result in Table 28 (Appendix G2) shows that the public sector nurses had higher mean predispositions toward autonomous orientation (mean = 4.09, standard deviation = 1.07) than with control orientation (mean = 3.56, standard deviation = 1.22) and impersonal orientation (mean = 3.23, standard deviation = 1.18). This comparison is similar to Soenen et al.'s (2005) autonomous orientation of 4.19, control orientations (2.78) and impersonal orientation (2.63). The mean scores show that female nurses were largely more autonomous-oriented (4.60) and impersonal-oriented (3.30) than male nurses (4.56 and 3.16), respectively. On the other hand, male nurses (3.60) possess slightly higher control-oriented tendencies than female nurses (3.54). Relatedly, Soenen et al. also found that female respondents scored higher on autonomous orientation (4.22) than male respondents (4.02).

### **Nurses' Perception of Employee Rewards**

The first objective of this study was to determine nurses' perceptions of employee rewards, which were conceptualised as social rewards. The

informants included two senior nurses, each from the Peki, Tafo, Dodowa and Tamale Hospitals, while one informant, each was from the Akuse and Adidome Government Hospitals. The result through key inductive thematic analysis of key informant interviews revealed three themes about perceptions of social rewards. These were low/high satisfaction with social reward, the inevitability of social reward for nursing and social reward as a source of motivation.

A theme that emerged from the informants from the Tamale Central and the Akuse Government Hospitals revealed a low satisfaction with social rewards. The satisfaction was low because of mistrust in the workplace and the lack of a social reward system or policy that permits supervisors to provide social rewards. An informant from the Akuse Government Hospital (18<sup>th</sup> May, 2021) indicated the nonexistence of a policy that supports social reward. This implies that such a policy might enhance social rewards and, therefore, the level of satisfaction with it. This is consistent with Gatimu and Kagiri's (2017) finding that policy influences satisfaction.

The key informants from the Dodowa District, Peki, Adidome and Tafo Hospitals showed high satisfaction with social rewards due to mutual respect. The link of social rewards with mutual respect suggests that when mutual respect is lacking between supervisors and subordinates and among colleagues, satisfaction with social rewards might be low. Related studies showed that respect brings many satisfaction benefits to organisations (Rogers, 2018) and that employee respect is an antecedent to satisfaction (Bilginoğlu, Yozgat & Artan, 2019), including satisfaction with social rewards. The result of high satisfaction also buttressed the descriptive statistics which showed a mean score

of 5.06 and a standard deviation of 1.07, indicating pretty high satisfaction with social reward.

The high satisfaction with the rewards based on the transcripts of the informants in Dodowa District, Peki, Adidome and Tafo Hospitals as compared with the low satisfaction with those from the Akuse Government hospital and the Tamale Central Hospital might be due to differences in the organisational context and people's feelings, perceptions and experience with rewards. For example, Seitovirta et al. (2017) found that the places where nurses worked affected their perceptions of reward. This explanation supports Tomoaia-Cotisel et al.'s (2013) and Morris and Tsakissiris' (2017) emphasis on the importance of contexts in analysing behaviour.

The thematic analysis revealed that the 10 key informants from the six hospitals involved in the qualitative study viewed social rewards as inevitable and a critical motivational factor. The provision of social rewards, such as showing courtesy, caring for employee well-being, and recognising a good job, was necessary for the day-to-day activities at work and drove the nurses to perform. This suggests that the provision of these rewards offered inner satisfaction and boosted the nurses' morale to do more. A theme that emerged from the informants from the six hospitals further explained that social reward facilitates work. A typical case was when an informant from the Dodowa District Hospital (19<sup>th</sup> May, 2021) stated, “my work is positively affected because of the social rewards I receive. The reason is that when I receive commendations from supervisors, the work output must be the best”.

The quotation above means that nurses' favourable perceptions of social rewards enhance the nurses' performances. This finding is consistent with Talukder and Galang's (2021) finding that social rewards in the form of supervisor support were directly related to performance. The finding also supports the social exchange theory's proposition that when employees value a reward favourably, it enhances performance (Nzyoka & Orwa, 2016). Besides, the finding coincides with the expected outcome in the conceptual framework (Figure 1) on the employee reward and performance relationship, which suggested a positive relationship between employee rewards and performance.

### **Nurses' Level of Performance**

The second objective of this study was to determine the level of nurses' performances. In order to achieve this objective, 10 key informant interviews involving senior nurses were conducted in six hospitals. The interviewees comprised senior nurses from the Tafo, Peki, Dodowa District, Tamale Central, Akuse and Adidome Hospitals. The qualitative data gathered from the interviews were analysed using inductive thematic analysis. In this section, nurses' performance is conceptualised as adaptive performance, contextual performance and counterproductive behaviour. The results from the data are subsequently presented.

A consistent theme that emerged from the key informants' interviews with all the 10 senior nurses revealed that contextual performance among the public sector nurses in Ghana was high. For instance, one key informant from the Tafo hospital asserted that the level of contextual performance could be scored seven out of ten (16<sup>th</sup> May, 2021). The key informant interview results supported the quantitative descriptive analysis of contextual performance,

which indicated a mean of 4.12 on a scale of one to five for contextual performance. The high level of contextual performance of Ghanaian public sector nurses corroborated Altuntas and Baykal's (2014) finding of high contextual performance among nurses in Istanbul.

Even though the key informant interview revealed high contextual performance among the public sector nurses, it emerged that discouraging attitudes from colleagues hindered contextual performance or extra-role performance. These discouraging attitudes distract the nurses' extra-role performance. An informant from the Tafo Hospital (16<sup>th</sup> May, 2021) noted that discouraging job attitudes reduce extra-role efforts. This means that the job attitudes of colleague nurses, whether they are unfavourable or favourable, can reduce or enhance extra-role performance, respectively. This is consistent with Alwi, Wiyono, Bafadal and Imron's (2021) report that attitudes significantly affected the contextual performance of employees in Indonesia.

The key informants' adaptive performance among the public sector nurses in Ghana was high. This emerged from the 10 informant interviews. This means that the nurses possess the capabilities to respond to alterations in their work environments positively. The quantitative result's mean score of 4.77 for the adaptive performance sub-constructs of employee performance showed moderate adaptive performance on a seven-point scale of weak agreement to strong agreement. This indicated divergence between the nurses' participation in adaptive performance from the perspective of key informant interviews and the data collected through questionnaires and analysed statistically. However, the high adaptive performance of the public sector nurses confirmed Zhang and Nantsupawat's (2021) finding of high adaptive performance of nurses in China.

The thematic analysis of key informant interviews from 8 senior nurses showed low counterproductive levels apart from two informants from Adidome and Tamale Hospitals who indicated non-involvement. A key informant from Peki Government Hospital (15<sup>th</sup> May, 2021) who admitted engaging in the behaviour stated that out of a score of 10, a score of two was the level of counterproductive behaviour. This low counterproductive behaviour matches the descriptive quantitative results, which indicated a mean of 1.55 on a one to five measurement scale. One signified never and five signified constantly engaging in counterproductive behaviour. This low level of counterproductive behaviours of the nurses supports Roopa et al.'s (2016) finding, which also found low levels of counterproductive behaviours of nurses in India even though they reported that in the extant literature, the behaviours were widespread among other employees.

### **Employee Rewards and Nurses' Performance**

Notably, issues about employee rewards, particularly social rewards, are relevant to nurses because of their value. (Seitovirta et al., 2017). This value has the prospect of resulting in performance, and it is vital in any public health response (Fernandez et al., 2020). In light of this, the issues covered are social reward's effects on adaptive performance, contextual performance and counterproductive performance. The evaluation of the issues involved the examinations of the measurement and structural models. The examination of the measurement model and predictive relevance grounded on the criteria established at the methodology section indicates that all conditions for examining the structural model and predictive relevance have been met (see Table 27 in Appendix G1).



The structural model's validation to assess whether the data supported the hypothesised model (Urbach & Ahlemann, 2010) produced the path coefficient, effect size, t-statistics and p-value results presented in Table 3. The results show that social reward substantially and positively affected adaptive performance (Beta=0.417; p=0.001). The strength of the effect was moderate ( $f^2=0.211$ ). As presented in Table 3, the results show that social reward was a significant positive predictor of contextual performance (Beta=0.520; p=0.001) with a strong effect size ( $f^2=0.370$ ).

**Table 3: Path Coefficient and Effect Size of Effect of Social Reward on Employee Performance Behaviours of Public Sector Nurses in Ghana**

	Beta	Effect Size ( $f^2$ )	t-statistics	p-values
Social reward -> Adaptive performance	0.417	0.211	10.768	0.000
Social reward -> Contextual performance	0.520	0.370	15.058	0.000
Social reward -> Counterproductive performance	-0.096	0.009	1.982	0.048

Source: Field survey (2021)

The social reward-adaptive relationship interpreted within the conceptual framework (Figure 1) suggests that public sector nurses' adaptive performance, such as managing stress and quick decision making during changing situations, increases when social rewards such as supervisor and colleague support increase. This finding is similar to the study outcomes by Alhmoud and Rjoub (2019) that social reward was one of the best choices for

maintaining and ensuring employees' participation in organisations, including adapting to changing circumstances. The finding does not support the proposed null hypothesis 1a of no significant relationship between social reward and adaptive performance.

The result of the social reward-contextual performance relationship provided support for some empirical studies. For instance, the result supports Chen, Wang, Chang and Hu's (2009), Sultana et al. (2016) and Sounthary et al.'s (2020) finding that social rewards such as supervisor supports promote nurses' contextual performance. The result disagrees with the null hypothesis 1b of no significant relationship in line with the conceptual framework's (Figure 1) proposition that social reward affects the employee performance type of contextual performance. This is in line with the social exchange theory's (Blau, 1964) argument that employees return a kind gesture, such as the provision of social reward, including contextual performance.

The key informant interviews also revealed issues that were vital in further explaining the preceding results. The social reward-adaptive performance relationship was buttressed by interviewees who indicated that adaptive performance was high but minimally influenced by social reward, suggesting that other factors accounted for the adaptive performance. The thematic analysis of the key informant interviews revealed that personal gains, the obligatory nature of adaptive performance, organisational rules and client considerations are the main themes that explained adaptive performance.

One theme that emerged was that future personal gains explained the reasons for adaptive performance. The interviewees noted that it was necessary to have the future in mind in responding to workplace contingencies. A senior

nurse from the Peki Government Hospital (15<sup>th</sup> May 2021), for example, stated that "I need to go forward. Nurses need the assistance of supervisors for some documentation. Refusing to adapt to changing work situation might result in denial of such documentations". The result corroborates Marques-Quinteiro et al.'s (2015) finding that personal reasons influence adaptive performance, confirming the conceptual framework's (Figure 1) argument that social reward and adaptive performance are related. The result also supports the social exchange theory proposition by Blau (1964) that actions in exchange relationships result from anticipatory beneficial rewards and benefits.

It emerged from all the senior nurses in the six hospitals interviewed that the nature of their jobs and the type of organisations they work in make engaging in adaptive performance obligatory. This means that organisational characteristics such as job demands (Ghitulescu, 2012) and structure (Kanten, Kanten & Gurlek, 2015) explain adaptive performance. The suggestion here is that the demands of their jobs and organisational settings within which they operated were important reasons for adaptive performance for these informants, confirming Park and Park's (2019) finding that job-related factors influence adaptive performance. This is similar to the proposition in the conceptual framework (Figure 1) that employee rewards, which can be viewed as job-related factor, is related to adaptive performance.

Additionally, from the key informant interviews, it became apparent that organisational rules facilitated adaptive performance among public sector nurses in Ghana. The interviews showed that when work situations change, the capabilities of the nurses to adapt to the changes were enhanced by clearly spelt out protocols that stipulate how to adapt to the new and emerging situation.

These protocols serve as training for the nurses and thus augment their capacity to adapt. This finding supports Abubakar, Faizuniah and Siti's (2020) finding that employee training influenced adaptive performance.

Another theme that emerged from the thematic analysis of the interviews of senior nurses from the six hospitals was that client considerations fueled the nurses' adaptive performance. This theme confirms Lutwama, Roos and Dolamo's finding (2012) that the client-oriented health staff of the Ugandan health service engaged in adaptive behaviours. The interview result means that client considerations affected how the nurses coped with stress, uncomfortable working conditions, and other factors associated with changing working conditions in Ghanaian public sector nursing. These client considerations enable them to develop sympathy, which Eldor (2017) identifies as a coping strategy for service rendering employees. This demonstrates that the patients are at the heart of the adaptive performance of the interviewees.

Through inductive thematic analysis, four themes emerged as reasons for contextual performance: commitment to work, resource constraints, nursing as a social service, and reciprocity and future gains. The interviewees of the Dodowa District, Tafo, Adidome and Akuse Government Hospitals revealed that engaging in extra-role activities such as staying beyond closing and displaying altruistic behaviours were determined by the Ghanaian public sector nurses' commitments to their jobs. This signifies that dedication to work is a determiner of contextual performance in public sector nursing in Ghana. The finding supports the argument in the conceptual framework (Figure 1) based on the employee engagement theory (Kahn, 1990) that employee dedication leads to contextual performance. The finding also buttresses Adnans, Danta, Ginting

and Rizal's (2020) finding that nurses' commitments enhance their extra-role performance in Indonesia.

Aside from commitment, resource constraints as a factor in determining contextual performance became apparent in the key informant interviews of all the senior nurses interviewed. The interviews revealed that resource challenges such as the lack of equipment promoted extra-role activities. Resource constraints promoted contextual performance activities such as improvisation, staying longer at work to complete a task and opting to stay at work and helping others instead of going home. The finding diverges with Abdel-Rahman and Harbi's (2015) argument that because resource constraint is associated with the stress of nurses, it rather hinders contextual performance. There is a possibility that differences in the work context of Abdel-Rahman and Harbi's study and this study accounted for this inconsistency. This explanation aligns with the assertion by Tomoaia-Cotisel et al.'s (2013) and Morris and Tsakissiris' (2017) that context affects behaviour.

The key informants from the Tafo and Dodowa District Hospitals noted that extra-role performances were pursued because of the need to respond to essential human needs. This finding suggests that the Ghanaian public sector nurse's concern and compassion for human life are critical for their extra-role performance. Eldor (2017) made a similar discovery by pointing out that compassion plays a role in extra-role performance or contextual performance for public service rendering institutions in Israel because compassion promotes employee engagement and high quality in service delivery.

It also emerged from the senior nurse informant interviews from the hospitals that reciprocity and the expectation of future gains were reasons for contextual performance among public sector nurses in Ghana. As it relates to reciprocity, the key informant revealed that contextual performance was prevalent because people expect a return for their kind gesture in a similar fashion. Concerning expectation of a future gain, an informant noted that:

Sometimes the administrators take note of some of these things. If they know that you are someone who attends functions or picks up roles that are not assigned without hesitation and you need a favour from them, they can help out (Key Informant, 22<sup>nd</sup> May 2021, Peki Government Hospital).

Thus, the behaviour of others determines future contextual performance activities. The findings also signify that public sector nurses in Ghana use contextual performance to achieve their self-serving aims. The findings agree with Lester, Meglino and Korsgaard's (2008) finding that people exhibit contextual performance or organisational citizenship behaviour based on the assumption of reciprocity to acquire some expected outcomes in the future. The findings also confirm the theoretical assumption of the social exchange theory, which is depicted in the conceptual framework (Figure 1), that recipients of a kind gesture return the gesture in kind to the one who provided it (Blau, 1964).

The social reward-counterproductive relationship result (Table 3, p. 154) shows that the effect of social reward on counterproductive performance was significant but negative (Beta=-0.096; p=0.048) with a weak effect size ( $f^2=0.009$ ). Thus, an increase in social rewards reduces counterproductive performance of public sector nurses in Ghana. The finding aligns with Peng et

al.'s (2011) finding that social rewards such as supervisor feedback were negatively correlated with counterproductive performance. This demonstrates that social reward can reduce counterproductive performance when employees value it favourably, as postulated by the social exchange theory. The significant effect also confirms the prediction in the conceptual framework (Figure 1) based on social exchanges as balancing acts in which employees pay back in equal measure what they receive (Blau, 1964). Thus, the null hypothesis 1c that the relationship was not significant was rejected.

The discussion of the results on the social reward and counterproductive behaviour relationship points to other contextual factors as possible explanations for the counterproductive performance of public sector nurses in Ghana. Key informant interviews of 10 senior nurses from the six hospitals involved in the qualitative study pointed out low levels of counterproductive performance among the public sector nurses. Four themes emerged from the inductive thematic analysis to explain counterproductive performance: personal value, moral standard, adherence to rules, and reputation damage.

Firstly, the low levels of counterproductive behaviours were attributed to personal values concerning its unethical nature, unhappiness when one is the victim of it and the need to set good examples. A key informant from the Akuse Government Hospital (18<sup>th</sup> May, 2021), for instance, asserted that engaging in such activities amounts to the unfair treatment of those in charge. In a related vein, Pohling, Bzdok, Eigenstetter, Stumpf and Strobel (2015) explained that personal values accounted for significant proportions of counterproductive performance or behaviour variations.

Secondly, high moral standard was a key contributor to the levels of counterproductive performance. This is because senior nurses indicated that engaging in such activities as absenteeism without permission affected their consciences negatively and made them morally uncomfortable. Along the same line, Fida et al. (2015) pointed out that moral standards affect counterproductive behaviours such that when suspended, they result in counterproductive behaviours. Thus, public sector nurses in Ghana who have high moral standards are less likely to deliberately slow down work, go to work late, and pay attention to their issues at work compared with those with low moral standards. This is consistent with Mingzheng, Xiaoling, Xubo and Youshan's (2014) finding that low moral standards resulted in pronounced counterproductive behaviours among Chinese public servants.

Thirdly, it emerged from the key informant interviews that adherence to organisational rules was a reason for low counterproductive behaviour among public sector nurses in Ghana. Some key informants revealed that policies against counterproductive behaviour and the sanction that goes with counterproductive activities were the reasons for their non-involvement. An informant pointed out that sanctions for counterproductive activities control how colleagues perform as far as counterproductiveness is concerned. This result affirms Kish-Gephart, Harrison and Treviño's (2010) assertion that organisational policies and procedures were linked to counterproductive behaviours.

Finally, since some counterproductive behaviours occur on the blind side of management, they are difficult to control using organisational rules alone. Therefore, some key informants made a strong case for damage to their



reputation when caught in counterproductive behaviours as the reason for not engaging in them. A key informant from the Tamale Central Hospital (23<sup>rd</sup> May, 2021) indicated that getting involved in fighting or insulting someone at work and arguing in front of a patient may have adverse effects. The fear of disgrace from supervisors prevents people from these acts.

It is worth noting that a key informant from the Dodowa District Hospital (19<sup>th</sup> May, 2021) admitted that nurses occasionally engage in such activities as insulting a colleague, shouting and taking something without permission. However, the informant contended that their intentions were not to harm or damage fellow employees or the organisation as it might visually suggest. The key informant clarified that such acts were rather aimed at doing good. The informant expounded that sometimes items that are required for effective performance are hoarded to the extent that some even go bad. Thus, because some of those items were required for work, they were picked without permission.

From the result above, it can be deduced that picking items without permission is a deviant behaviour and is an indicator of counterproductive behaviour. However, the intention is good and not harmful. Thus, the informant's belief about the behaviour influenced the counterproductive behaviour. This aligns with Ajzen and Fishbein's (1980) suggestion that individual beliefs affect behaviour. The finding also corroborates Costantini, Ceschi and Sartori's (2019) study of Italian employees. They concluded that intentions affect counterproductive behaviour and that in assessing engagements in counterproductive behaviour, one must measure intentions toward the behaviour.

## Multi-group Analysis of Employee Reward and Performance

### Relationship

Multi-group analysis was performed across male and female nurses and registered and enrolled nurses. Such analysis was of paramount importance in determining differences between male nurses and female nurses and registered and enrolled nurses in their responses to social reward in terms of adaptive performance, counterproductive and adaptive performance. The PLS-MGA and Welch- Satterthwait Tests for male and female nurses and the PLS-MGA for registered and enrolled nurses are subsequently discussed. Table 4 shows the results for PLS-MGA for male nurses and female nurses.

**Table 4: PLS-MGA for Male and Female Nurses**

Paths	Path Coefficient Difference (Male - Female)	P-value Original 1-tailed (Males vs Females)	P-value New (Males vs Females)	Significance
Social reward-> adaptive performance	-0.020	0.606	0.788	Not significant
Social reward -> contextual performance	0.003	0.485	0.970	Not significant
Social reward -> counterproductive performance	-0.431	0.995	0.010	Significant

Source: Field survey (2021)

The p-value in the PLS-MGA shows whether the path coefficient was significantly larger for males than females. The result shows that only the path between social reward and counterproductive performance was significant (p=0.01). The effect of social reward on adaptive performance (p= 0.788) and that for social reward and contextual performance (p= 0.970) were more or less

the same for male nurses and female nurses. At the same time, there was a significant difference between male and female nurses in the relationship between social reward and counterproductive performance ( $p=0.010$ ).

The significant result for social reward and counterproductive performance above agrees with the depiction in the conceptual framework (Figure 1), which proposed that the sex of the nurses responding to the provision of social reward affects the relationship between the reward and performance. Thus, the null hypothesis 1 diii of no significant difference in social reward and counterproductive relationship for male nurses and female nurses was rejected. The null hypotheses, 1 di and 1 dii of no significant difference for adaptive and contextual performances, were retained. Similar results were obtained by the Welch- Satterthwait Test in Table 5.

**Table 5: Welch- Satterthwait Test for Male and Female Nurses**

Paths	Path Coefficient Difference (Male - Female)	t-value (Males vs Females)	P-value (Males vs Females)	Significance
Social reward-> adaptive performance	-0.020	0.258	0.797	Not significant
Social reward -> contextual performance	0.003	0.052	0.598	Not significant
Social reward -> counterproductive performance	-0.431	2.255	0.025	Significant

Source: Field survey

Table 6 is the PLS-MGA for registered and enrolled nurses. The p-value in the PLS-MGA shows whether the path coefficient was significantly different between registered and enrolled nurses. The assessment of the result shows there was a significant difference between registered nurses and enrolled nurses in the relationship between social reward and contextual performance (p = 0.004).

**Table 6: PLS-MGA for Registered and Enrolled Nurses**

Paths	Path Coefficient Difference (Male - Female)	P-value Original 1-tailed (Males vs Females)	P-value New (Males vs Females)	Significance
Social reward-> adaptive performance	-0.146	0.927	0.147	Not significant
Social reward -> contextual performance	-0.206	0.998	0.004	Significant
Social reward -> counterproductive performance	0.171	0.140	0.280	Not significant

Source: Field survey (2021)

There is, therefore, a substantial difference between registered nurses' and enrolled nurses' responses to social reward in terms of contextual performance or extra-role activities. This is in line with the prediction in conceptual framework (Figure 1) that the social reward and contextual performance relationship is affected by the type of nurse.

The preceding finding invalidated the null hypothesis 1eii that no significant difference existed for enrolled and registered nurses for the social reward-contextual performance relationship. The result also shows that registered nurses and enrolled nurses do not significantly differ in the relationships between social reward and adaptive performance ( $p = 0.147$ ) and between social reward and counterproductive performance ( $p = 0.28$ ). These results were not parallel the conceptual framework's (Figure 1) suggestion that the type of nurse receiving social rewards affects the relationship between social reward and performance. Thus, the results confirmed the proposed no significant differences in null hypotheses 1ei and 1eiii concerning registered nurses and enrolled nurses for the above findings, respectively.

### Summary

This chapter aimed to determine the effect of employee rewards on nurses' performance. The results showed that the effect of social reward on adaptive performance and contextual performance was significant and positive and significant but negative for counterproductive behaviour or performance. Statistically significant differences existed between male and female nurses in the path between social reward and counterproductive performance. The result for registered and enrolled nurses revealed a substantial difference in the relationship between social reward and contextual performance. The chapter also showed that such factors as the commitment to work, nursing as a social service and reciprocity were reasons for the contextual performance of public sector nurses in Ghana. Personal reasons and the nature of the nursing profession explained the adaptive performance.

**CHAPTER SIX**  
**MEDIATING ROLE OF PSYCHOLOGICAL CONDITIONS IN THE**  
**RELATIONSHIPS BETWEEN EMPLOYEE REWARDS AND**  
**NURSES' PERFORMANCE**

**Introduction**

This chapter focuses on the mediating roles of psychological conditions of meaningfulness, availability and safety in the relationships between social reward and contextual performance, adaptive performance and counterproductive performance or behaviour. These relationships are concentrated on the third objective of this thesis. The theoretical basis for this chapter is the social exchange theory and the employee engagement theory. The social exchange theory holds that the provision of employee rewards relies on the expectation that it will result in performance (Njanja et al., 2013). On the other hand, employee engagement theory propositions convey that the psychological conditions of people affect how they respond to organisational factors such as social rewards in terms of their performance (Kahn, 1990). These propositions serve as the foundation for assessing the mediating roles of psychological conditions in this chapter.

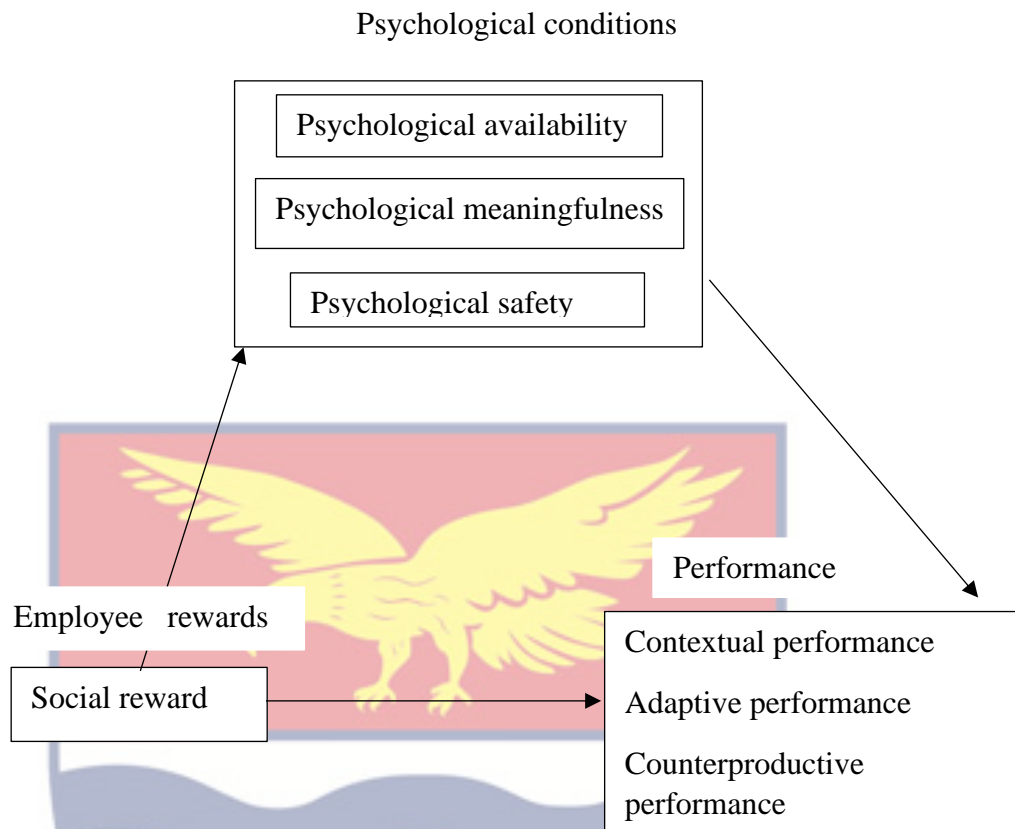


Figure 3: Sub-model of mediating roles of psychological conditions, employee engagement and causality orientations in the relationship between employee rewards and performance

Source: Author's construct (2021)

The structural equation model was used to analyse the relationships. The chapter consists of three sections. Each section examined the mediation roles of the psychological conditions in the relationship between social reward and each performance type in the conceptual framework (Figure 1). The analysis of each section involved the assessment of the measurement model and the structural model. The measurement models for this chapter, relying on the criteria established in the methodology, indicated that all requirements were met to evaluate the structural model (see Appendix G 1). The evaluation of the structural models was built on data collected from 761 out of 854 questionnaires administered to public sector nurses in Ghana. The evaluations relied on the

coefficients of determination and the estimation of the path coefficients. The predictive relevance (see Table 27 in Appendix G1) proposed by Henseler et al. (2009) was also met ( $Q^2 > 0$ ).

### **Mediating Role of Psychological Conditions in the Relationship between Social Reward and Contextual Performance**

Employee rewards aim to channel employees' efforts toward attaining organisational goals because they affect employee motivation and behaviour at work (Gupta & Shaw, 2014). The premise of this relationship is explained by the proposition of the social exchange theory that rewarding and performance are balancing acts (Syrek & Antoni, 2017). Employee engagement theory argues that employees' perceptions about their work environment or context influence their psychological states and internal motivation (Kahn, 1990). As shown in the conceptual framework (Figure 1), the provision of social reward influences the psychological conditions, affecting contextual performance or organisational citizenship behaviour. This section focuses on the role of psychological conditions, availability, meaningfulness and safety in the relationship. PLS-SEM was the analytical technique in this section.

The structural model results in Table 7 present the coefficient of determination ( $R^2$ ), path coefficient, effect size and p-values. As can be observed, the results revealed that social reward, availability, meaningfulness and safety accounted for a substantial (60.2%) variance in contextual performance ( $R^2 = 0.602$ ). Specifically, in terms of the significant effects of the paths towards contextual performance (see Table 7), meaningfulness ( $f^2 = 0.111$ ) and availability ( $f^2 = 0.172$ ) were small and moderate, respectively. On the other hand, the contributions of safety ( $f^2 = 0.000$ ) and social reward ( $f^2 = 0.008$ ) were



not significant because they fell below the minimum value of 0.02 (Cohen, 1988).

**Table 7: Coefficient of Determination, Path Coefficient and Effect Size of the Role of Psychological Conditions in the Relationship between Social Reward and Contextual Performance**

	Effect			P-value	R <sup>2</sup>
	Beta	Size (f <sup>2</sup> )	t-statistics		
Availability -> Contextual performance	0.447	0.172	9.519	0.000	0.602
Meaningfulness -> Contextual performance	0.350	0.111	8.086	0.000	
Safety -> Contextual performance	-0.010	0.000	0.230	0.409	
Social reward -> Availability	0.470	0.284	14.212	0.000	
Social reward -> Contextual performance	0.067	0.008	2.485	0.007	
Social reward -> Meaningfulness	0.475	0.292	13.433	0.000	
Social reward -> Safety	0.560	0.457	18.739	0.000	

Source: Field survey (2021)

There are social, emotional and psychological requirements involved in nurses' jobs (Birtch et al., 2016). Therefore, providing them with social reward, improving the meaning that they derive from the jobs, improving freedom from fear of harm to their reputation and confidence in their abilities contribute to substantial changes in contextual performance. The finding supports the illustration in the conceptual framework (Figure 1) that the combined effect of

the provision of social reward and the experience of meaningfulness, availability and safety affect contextual performance.

Path coefficients in Table 7 also contribute to a better comprehension of the associations between the exogenous and endogenous variables. From the results of the path analysis, social reward (Beta=0.067;  $p=0.007$ ), psychological availability (Beta=0.447;  $p=0.0001$ ) and psychological meaningfulness (Beta=0.350;  $p=0.0001$ ) significantly and positively affected contextual performance. This signifies that the nurses' contextual performance or extra-role activities increase when their experiences of social rewards, psychological meaningfulness, and psychological availability increase, with psychological availability having the strongest effect.

The finding that psychological meaningfulness predicts contextual performance confirms Sargolzaei and Keshtegar's (2015) finding that psychological meaningfulness significantly predicts contextual performance or organisational citizenship behaviour. The findings that psychological availability and psychological meaningfulness significantly predicted contextual performance confirm the employee engagement theory and the proposed direction in the conceptual framework (Figure 1) that they are related. The internal motivation embedded in these psychological conditions (Kahn, 1990) creates cognitive, emotional and behavioural energies (Alagaraja & Shuck, 2015; Shuck & Wollard, 2010), which result in positive organisational outcomes, including contextual performance. Therefore, null hypotheses 2e and 2h of no significant relationships between these psychological conditions and contextual performance were rejected.

On the other hand, psychological safety was an insignificant negative predictor of contextual performance (Beta=-0.010; p=0.409) with no effect size ( $f^2=0.000$ ). This finding contradicts Younas, Wang, Javed and Konte's (2020) finding that psychological safety contributes positively and significantly to predicting contextual performance or organisational citizenship behaviour. This finding might result from the nurses' feelings of compulsion in performing beyond what is expected in their job descriptions. Alkan and Turgut (2015) claim that in such circumstances, when psychological safety leads to freedom to express oneself at work freely, it might result in a negative relationship with extra-role or contextual performance. The finding of the relationship between psychological safety and contextual performance confirms the null hypothesis 2k that the relationship was not significant. The null hypothesis was not rejected.

The results in Table 7 reveal that an increase in social rewards resulted in significant increases in psychological availability (Beta=0.470; p=0.0001), psychological meaningfulness (Beta=0.475; p=0.0001) and psychological safety (Beta=0.560; p=0.0001), contradicting the null hypotheses 2a, 2b and 2c that social reward does not significantly predict each of these psychological conditions. Comparatively, the strength of the social reward's effect is strong for psychological safety ( $f^2=0.457$ ), moderate for psychological meaningfulness ( $f^2=0.292$ ) and psychological availability ( $f^2=0.284$ ).

The results that social rewards predicted psychological availability, psychological safety and psychological meaningfulness have signs in the expected directions in line with the employee engagement theory (Kahn, 1990). According to the theory, elements in organisations, including social reward,

affect employees' psychological well-being, such as meaningfulness, availability and safety. Furthermore, the results are consistent with Jose and Mampilly's (2015) finding that the supervisor support component of social rewards positively influenced psychological conditions. The specific indirect effect of the role of psychological conditions in the relationship between social reward and contextual performance is presented in Table 8.

**Table 8: Specific Indirect Effect of the Role of Psychological Conditions in the Relationship between Social Reward and Contextual Performance**

	Beta	t-statistics	p-values
Social reward -> Safety -> Contextual performance	-0.005	0.228	0.410
Social reward -> Meaningfulness -> Contextual performance	0.166	6.391	0.000
Social reward -> Availability -> Contextual performance	0.210	7.903	0.000

Source: Field survey (2021)

The result shows that psychological meaningfulness (Beta=0.166; p=0.0001) and psychological availability (Beta=0.210; p=0.0001) significantly and positively mediated the predictive relationship between social reward and contextual performance. In contrast, psychological safety (Beta=-0.005; p=0.410) failed to significantly mediate the predictive relationship between social reward and contextual performance.

The findings relating to psychological meaningfulness and availability parallel the conceptual framework (Figure 1) and the interaction between the social exchange theory (Blau, 1964) and the employee engagement theory (Kahn, 1990). That is, employees' evaluation of cost and benefits in response to

rewards (Cook et al., 2006) was complemented by psychological conditions to suggest that social reward and psychological availability and meaningfulness contribute significantly to explaining social reward and contextual performance relationships. The mediation analyses involving psychological meaningfulness and psychological availability were inconsistent with the null hypotheses 2n and 2q, which proposed no significant mediation relationships. However, the null hypothesis 2t of psychological safety not significantly mediating the social reward-contextual performance relationship was supported.

### **Mediating Role of Psychological Conditions in the Relationship between Social Reward and Adaptive Performance**

In the health sector of Ghana, the work of nurses is critical in the work of hospitals (Adu-Gyemfi & Brenya, 2016). This situation implies that public sector nurses' ability to adapt to changing work situations is critical to effective health delivery. This section examines the mediation roles of psychological meaningfulness, psychological safety, and psychological availability in the relationship between social reward and adaptive performance. The social exchange theory (Blau, 1964) and the employee engagement theory (Kahn, 1990) underpinned this subsection. Table 9 presents the coefficient of determination ( $R^2$ ), path coefficients, effect size and p-values of the social reward, psychological conditions and adaptive performance relationships.

The results reveal that jointly, social reward, psychological availability, psychological safety and psychological meaningfulness predicted a 41.7% variance in adaptive performance when the effect of other factors not captured in the model are statistically controlled for ( $R^2=0.417$ ). The strength of the effects (see Table 9) for social reward ( $f^2=0.002$ ) and meaningfulness ( $f^2=0.001$ )

were lower than the minimum level threshold of 0.02. Therefore, their contributions were insignificant (see Table 9). On the other hand, safety ( $f^2=0.070$ ) and availability ( $f^2=0.047$ ) had small and significant effects on the  $R^2$  value for this model.

**Table 9: Coefficient of Determination, Path Coefficient and Effect Size for Social Reward, Psychological Conditions and Adaptive**

<b>Performance</b>	Beta	Effect Size ( $f^2$ )	t-statistics	p-value	$R^2$
Availability -> Adaptive performance	0.282	0.047	5.234	0.000	0.417
Meaningfulness -> Adaptive performance	0.042	0.001	0.772	0.220	
Safety -> Adaptive performance	0.344	0.070	6.809	0.000	
Social reward -> Adaptive performance	0.044	0.002	1.264	0.103	
Social reward -> Availability	0.470	0.284	13.778	0.000	
Social reward -> Meaningfulness	0.481	0.300	13.571	0.000	
Social reward -> Safety	0.558	0.453	18.610	0.000	

Source: Field survey (2021)

The results show that the path coefficients between psychological availability (Beta=0.282;  $p=0.0001$ ) and psychological safety (Beta=0.344;  $p=0.0001$ ) and adaptive performance were significant and positive. The finding that increases in psychological availability increases adaptive performance confirms Rich et al.'s (2010). They found that when employees are psychologically available, they become prepared to exert their physical,

cognitive, and emotional selves in performance (Rich et al., 2010), including adapting to exigencies at work. The findings do not support the null hypotheses 2g and 2j that there were no significant relationships between availability and adaptive performance and between psychological safety and adaptive performance.

The psychological safety-adaptive performance relationship concurs with Groenen's (2021) finding that higher levels of psychological safety predicted higher adaptive performance levels in the Netherland. Furthermore, psychological availability predicting adaptive performance corresponds with Li and Tan's (2012) finding. Li and Tan assert that these links are possible because these psychological conditions induce and sustain internal employee motivation. The relationships between psychological availability and psychological safety and adaptive performance are in line with the predicted relationships in the conceptual framework (Figure 1). The findings also align with the employee engagement theory that these psychological conditions are positive and critical internal intricacies that drive employees (Kahn, 1990) to performance (Taylor, 2019), including adaptive performance.

In contrast to the psychological safety's and availability's positive and significant relationships with adaptive performance, psychological meaningfulness was an insignificant positive predictor of adaptive performance (Beta=0.042; p=0.220) with a weak effect size ( $f^2=0.001$ ). It can be inferred from these results that in terms of predictive power, the Ghanaian public sector nurses' feeling of freedom from fear at work and their confidence and preparedness in deciding to adapt had more predictive power than the meaning that they derived from their jobs. Psychological meaningfulness' relationship

with adaptive performance was inconsistent with the projected relationship in that the predictive contribution was statistically not significant. The result supported the hypothesised null proposition in 2d that the relationship between meaningfulness and adaptive performance was not significant.

Path estimations of the mediation effects of the psychological conditions, namely psychological meaningfulness, psychological availability, and psychological safety, were examined in the social reward and adaptive performance relationships. The relationships (Figure 1) were examined through path coefficients in Table 10. The t-value produced by bootstrapping formed the bases for the significance of the path coefficients. The results show that the mediation effects of psychological availability (Beta=0.133; p=0.0001) and psychological safety (Beta=0.192; p=0.0001) were positive and significant.

**Table 10: Specific Indirect Effect of Psychological Conditions in the Relationship between Social Reward and Adaptive Performance**

	Beta	t-statistics	p-value
Social reward -> Availability -> Adaptive performance	0.133	5.316	0.000
Social reward -> Safety -> Adaptive performance	0.192	6.271	0.000
Social reward -> Meaningfulness -> Adaptive performance	0.020	0.767	0.222

Source: Field survey (2021)

The findings that psychological availability and psychological safety significantly mediated the relationship between social reward and adaptive performance corroborate the assumptions of the employee engagement theory that these psychological conditions serve as intrinsic motivational mechanisms



that lead to positive organisational outcomes (Kahn, 1992). Accordingly, the null hypotheses 2p and 2s, which predicted a not significant social reward-availability-adaptive performance, and social-reward-safety-adaptive performance relationships, were rejected.

The mediation results confirmed the theoretical argument of the social exchange theory (Blau, 1964) and the employee engagement theory (Kahn, 1990) in this study. The argument is that employees do not respond to rewards solely due to cost and benefit analysis (Redmond, 2015). Therefore, other factors, including their psychological conditions, (Kahn, 1990) might also influence their responses. Furthermore, although psychological availability and psychological safety have been established in other studies as important mediators (e.g., Li & Tan, 2012), it was hard to find reports on their examination as mechanisms through which social reward predicts employee adaptive performance. Therefore, these findings introduce a new perspective on exploring employee rewards and performance studies.

The results further revealed that psychological meaningfulness did not significantly mediate the predictive relationship between social reward and adaptive performance, although its' contribution is positive (Beta=0.020; p=0.222). The finding of the mediating role of psychological meaningfulness is contrary to other studies (e.g., Han, Oh & Kang, 2020) that viewed meaningfulness as a significant positive mediator. This finding contradicts the employee engagement theory assumptions, which views psychological meaningfulness as a positive construct, thus supporting the null hypothesis 2m's proposition that meaningfulness does not significantly mediate the social reward-adaptive performance relationship.

Overall, the above findings shed light on the process through which adaptive performance of the Ghanaian public sector nurse can be enhanced through social reward and psychological conditions. They suggest that social reward increases psychological conditions, facilitating the adaptive performance of public sector nurses in Ghana. The results show that apart from psychological meaningfulness, public sector nurses' adaptive performance in Ghana can be enhanced when reward policymakers implement policy mechanisms that help nurses experience psychological availability and safety.

### **Mediating Role of Psychological Conditions in the Relationship between Social Reward and Counterproductive Performance**

Psychological conditions are essential because they are a source of employee internal motivation that enables the attainment of organisational goals (Alagaraja & Shuck, 2015). The counterproductive performance or work behaviours involve voluntary and intentional acts (Chang & Smithikrai, 2010) in response to perceptions about some organisational factors (Kelloway et al., 2010). Therefore, this section examines the contribution of psychological conditions in the relationship between an organisational factor, social reward, and counterproductive performance or behaviour. Appendix G1 indicates that the conditions required to assess the structural model have all been met. Table 11 presents the coefficient of determination ( $R^2$ ), path coefficient, effect size and p-values of the effect of psychological conditions on counterproductive behaviour.

**Table 11: Coefficient of Determination, Path Coefficient and Effect Size of the Mediation of Psychological Conditions in the Relationship between Social Reward and Counterproductive Performance**

	Beta	Effect Size (f <sup>2</sup> )	t-statistics	P-values	R <sup>2</sup>
Availability -> Counterproductive performance	0.041	0.001	0.509	0.306	
Meaningfulness -> Counterproductive performance	-0.467	0.088	6.923	0.000	
Safety -> Counterproductive performance	0.141	0.008	2.392	0.008	0.109
Social reward -> Availability	0.472	0.286	14.113	0.000	
Social reward -> Counterproductive performance	0.080	0.005	2.112	0.017	
Social reward -> Meaningfulness	0.482	0.303	14.063	0.000	
Social reward -> Safety	0.570	0.480	19.938	0.000	

Source: Field survey (2021)

The study demonstrated that social reward, psychological availability, psychological safety and psychological meaningfulness jointly explained a statistically 10.9 percent weak positive variance in counterproductive performance when the effect of other factors not captured in the model are statistically controlled for (R<sup>2</sup>=0.109). The contribution of meaningfulness was

small ( $f^2=0.088$ ) and significant. Since safety ( $f^2=0.008$ ), social reward ( $f^2=0.005$ ) and availability ( $f^2=0.001$ ) were below the minimum threshold of 0.02, their contributions were insignificant. The results show that the paths for psychological safety and counterproductive (Beta=0.141;  $p=0.008$ ) and psychological meaningfulness-counterproductive behaviour (Beta=-0.467;  $p=0.0001$ ) were significant except for psychological availability ( $p=0.306$ ), which was insignificant. However, the effect of psychological meaningfulness on counterproductive behaviour was negative.

The finding that psychological safety significantly and positively predicted counterproductive behaviour contradicts the employee engagement theory. The theory assumes that the experience of psychological safety is expected to produce positive employee outcomes (Kahn, 1990). Lee and Allen, 2002) argued that when psychological safety improves employees' self-expression and cognitive process, it tends to result in venting behaviours, including providing the impetus for counterproductive behaviours. The result is contrary to the proposed null hypothesis 21 that psychological safety and counterproductive behaviour were not significantly related, leading to the rejection of the null hypothesis.

The finding that psychological meaningfulness' effect on counterproductive behaviour was significant and negative signals that counterproductive behaviour of nurses in Ghana falls when their experience of psychological meaningfulness rises. This inverse relationship aligns with psychological meaningfulness as a positive concept with positive outcomes (Agarwal & Farndale, 2017; Rich et al., 2010), such as reducing behaviours that harm individuals or the organisation. Probably, this is because when the nurses

experience meaningfulness, they want to be proud of their work (Jacobs, 2013) and feel personally accomplished in performance (Shuck & Reio Jr., 2014). The significant relationship contradicted the null hypothesis 2f, which predicted a no significant effect of the relationship between meaningfulness and counterproductive behaviour. Therefore, this null hypothesis was rejected.

Additionally, the finding that psychological availability was an insignificant positive predictor of counterproductive performance (Beta=0.041;  $p=0.306$ ) with a negligible effect size ( $f^2=0.001$ ) might be due to low levels of psychological availability among public sector nurses in Ghana. This result is similar to Miharjaa, Saciptob, Nguyenc, Nguyend and Usantie's (2020) argument that the level of confidence in one's ability, psychological availability, determines the extent of the reduction in counterproductive behaviour. The no significant relationship predicted in hypothesis 2i was, thus, supported.

As a result, the insignificant effect of psychological availability on counterproductive performance points to a negligible level of psychological availability among respondents. The positive relationship between psychological availability and counterproductive behaviour is contrary to the positive employee outcomes of reducing the counterproductive behaviour predicted by the employee engagement theory assumption about psychological availability. This might be due to contextual differences in applying the employee engagement theory. This explanation supports Tomoiaia-Cotisel et al.'s (2013) and Morris and Tsakissiris' (2017) argument that context impacts on behaviour.

The mediation analysis results of the effects of psychological conditions on the relationship between social reward and counterproductive performance are presented in Table 12. The results show that the effect of social reward on counterproductive performance was significantly and positively mediated by psychological safety (Beta=0.080; p=0.010), confirming the framework in Figure 1.

**Table 12: Specific Indirect Effects of the Mediation of Psychological Conditions in the Relationship between Social Reward and Counterproductive Performance**

	Beta	t-statistics	p-value
Social reward -> Meaningfulness -> Counterproductive performance	-0.225	5.800	0.000
Social reward -> Safety -> Counterproductive performance	0.080	2.339	0.010
Social reward -> Availability -> Counterproductive performance	0.019	0.504	0.307

Source: Field survey (2021)

The finding aligns with the theoretical integration of the social exchange theory (Blau, 1964) and the employee engagement theory (Kahn, 1990). Therefore, the null hypothesis 2u that psychological safety did not significantly mediate the social reward-counterproductive behaviour relationship was rejected.

The theoretical integration argues that for a deeper understanding of the employee reward and performance relationship, the cost and benefit analysis as the basis for determining performance should be complemented by the psychological conditions of employees. The finding shows that psychological

safety aids in a better understanding of how social reward is related to counterproductive performance. Empirical studies that support the mediation role of psychological safety in the relationship between social reward and counterproductive behaviour were limited.

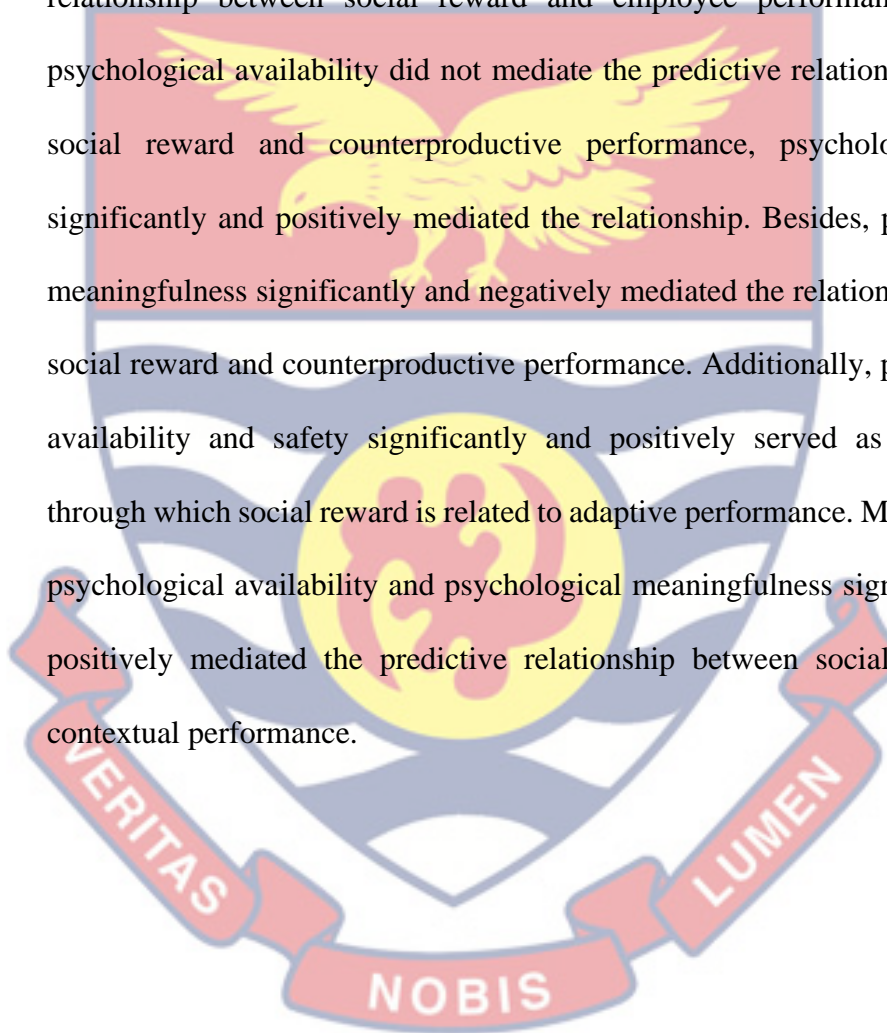
The results show that the effect of social reward on counterproductive behaviour or performance was significantly and negatively mediated through psychological meaningfulness (Beta=-0.225;  $p=0.0001$ ). This finding converges with the integrated theoretical underpinnings that social exchange theory (Blau, 1964) is complemented by the employee engagement theory (Kahn, 1990) to explain the reward-performance relationships process. However, the finding diverges with the mediation relationship in null hypothesis 2o that psychological meaningfulness does not significantly mediate the relationship between social reward and counterproductive behaviour, leading to a rejection of this null hypothesis.

In contrast to the above finding, psychological availability failed to mediate the predictive relationship between social reward and counterproductive performance (Beta=0.019;  $p=0.307$ ). The mediation with psychological availability diverges from the conceptual framework (Figure 1) and the integrated theoretical underpinnings of the existence of a mediation relationship. Thus, the null hypothesis 2p that availability was not a significant mediator in the social reward-counterproductive relationship was supported. A possible explanation is that the integrated theoretical underpinning of the relationship did not wholly reflect reality. For instance, social exchange theory and employee engagement theory do not capture country or work specific realities. However, vom Brocke, Zelt and Schmiedel (2016) recognise that

contextual issues are relevant for social science studies, including the employee reward-employee performance relationships.

### Summary

This chapter analysed the mediation roles of psychological meaningfulness, psychological availability, and psychological safety in the relationship between social reward and employee performance. Whereas psychological availability did not mediate the predictive relationship between social reward and counterproductive performance, psychological safety significantly and positively mediated the relationship. Besides, psychological meaningfulness significantly and negatively mediated the relationship between social reward and counterproductive performance. Additionally, psychological availability and safety significantly and positively served as mechanisms through which social reward is related to adaptive performance. Moreover, both psychological availability and psychological meaningfulness significantly and positively mediated the predictive relationship between social reward and contextual performance.





CHAPTER SEVEN

MEDIATING ROLES OF PSYCHOLOGICAL CONDITIONS AND  
EMPLOYEE ENGAGEMENT IN THE RELATIONSHIPS BETWEEN  
EMPLOYEE REWARDS AND NURSES' PERFORMANCE

Introduction

This chapter is devoted to the fifth objective of this thesis, which focuses on the serial mediating roles of psychological conditions and employee engagement in social reward and performance relationships (Figure 4). The theoretical basis for the chapter is the social exchange theory and the employee engagement theory. As explained in chapter two, the social exchange tenet holds that employee rewards depend on the expectation that they will result in performance (Njanja et al., 2013). On the other hand, employee engagement theory propositions argue that psychological conditions and employee engagement influence the process (Kahn, 1990).

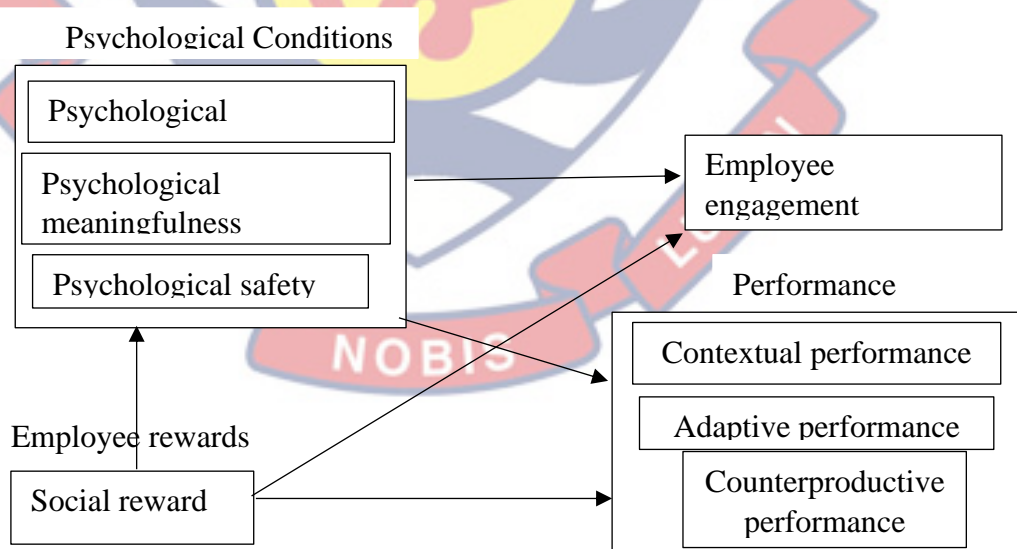


Figure 4: Sub-model of the serial mediating roles of psychological conditions employee engagement and causality orientations in the relationship between social reward and performance

Source: Author’s construct (2021)

The smart PLS-SEM was used to analysed the relationships. The chapter has three sections resulting from the conceptual framework. In this chapter, the models' predictive relevance ( $Q^2$ ) built on the criterion for predictive relevance (see Table 27 in Appendix G1) established in chapter four has been met ( $Q^2 > 0$ ).

### **Mediation Roles of Psychological Conditions and Employee Engagement in the Relationship between Social Reward and Adaptive Performance.**

Employees' satisfaction with social rewards creates a potential to generate a sense of obligation, enhance psychological attachment to the organisations (Eisenberger et al., 2001), and engender well-being among employees (Salah, 2016). These perspectives are particularly relevant in ensuring that nurses adapt to unpredictable work situations and conditions. Therefore, this section relied on data from 761 public sector nurses to examine the mediation roles of psychological conditions and employee engagement in explaining the relationship between social reward and adaptive performance. The analysis adopted the two-stage approach recommended in PLS-SEM. The first stage involving assessing the measurement model based on the criteria established in chapter four shows that all the conditions have been met (see Appendix G1).

The results for the coefficient of determination, path coefficient and effect size of the mediation role of psychological conditions and employee engagement in the relationship between social reward and adaptive performance are presented in Table 13. The result shows that social reward, psychological availability, psychological meaningfulness, psychological safety and employee engagement jointly explained substantially 40.1 percent of the variance in adaptive performance ( $R^2 = 0.401$ ). Only psychological safety and

psychological availability contributed significantly with effect sizes of 0.078 and 0.061, respectively (see Table 13).

The results show significant and positive direct effects of psychological availability (Beta=0.239; p=0.0001) and psychological meaningfulness (Beta=0.495; p=0.0001) on employee engagement. However, employee engagement insignificantly but positively predicted adaptive performance (Beta=0.052; p=0.339), thus supporting the proposed null hypothesis 3e that employee engagement did not significantly predict adaptive performance.

**Table 13: Coefficient of Determination, Path Co-efficient and Effect Size of Mediation Role of Psychological Conditions and Employee Engagement in the Relationship between Social Reward and Adaptive Performance**

	Beta	Effect size (f <sup>2</sup> )	t-statistics	p-values	R <sup>2</sup>
Availability -> Adaptive Performance	0.269	0.061	4.250	0.000	
Availability -> Employee Engagement	0.239	0.051	4.429	0.000	
Safety -> Employee Engagement	0.008	0.005	0.206	0.837	
Safety -> Adaptive Performance	0.281	0.078	5.192	0.000	0.401
Employee Engagement -> Adaptive Performance	0.052	0.002	0.956	0.339	
Meaningfulness -> Adaptive Performance	0.053	0.005	0.885	0.376	
Meaningfulness -> Employee Engagement	0.495	0.311	10.292	0.000	
Social reward -> Meaningfulness	0.571	0.481	17.529	0.000	
Social Reward -> Availability	0.541	0.445	16.480	0.000	
Social reward -> Safety	0.556	0.452	18.998	0.000	
Social reward -> Employee engagement	0.202	0.185	8.091	0.000	
Social Reward -> Adaptive Performance	0.046	0.002	1.373	0.170	

Source: Field survey (2021)

Inspection of the results shows that the strength of the effects was weaker with psychological availability ( $f^2=0.051$ ) than with meaningfulness ( $f^2=0.0311$ ), indicating that the value nurses attached to their jobs had a more significant effect on employee engagement than on confidence in their ability to perform.

The effects of psychological availability and meaningfulness on employee engagement parallel the proposed linkages in the conceptual framework (Figure 1) and the employee engagement theory (Kahn, 1990), which states that psychological availability and meaningfulness are positively associated with employee engagement. The effect of psychological meaningfulness on employee engagement agrees with Chikoko et al.'s (2014) finding that psychological meaningfulness had a significant and positive effect on employee engagement. These positive and significant effects also corroborated Rothmann and Welsh's (2013) result that they were positively linked. These results imply that the null hypothesis 3b of no significant relationship between psychological meaningfulness and employee engagement was rejected.

The significant relationship between psychological availability and employee engagement is contrary to Chikoko et al.'s (2014) finding that psychological availability had no significant relationship with employee engagement. This contradiction supports Ababneh and Macky's (2015) claim that there is an absence of conceptual clarity regarding antecedents and empirical results of employee engagement. The result that psychological availability significantly predicted employee engagement was contrary to the null hypothesis 3c that their relationship was not significant. This null hypothesis was rejected.

Compared with psychological meaningfulness and availability, psychological safety insignificantly and positively predicted employee engagement (Beta=0.008;  $p=0.837$ ). This finding is contrary to Tiwari and Lenka's (2016) finding that psychological safety significantly facilitated employee engagement because it provided employees with the liberty to share their information, learn and take risks. This finding supports the proposed null hypothesis 3d that there was no significant relationship between them. The finding opposes employee engagement theory (Kahn, 1990) that they are significantly related. A probable explanation is the variations in employee engagement results due to contextual variations in employee responses to psychological safety and employee engagement instruments. For instance, Vallières et al. (2017) found disparities in results due to those variations.

Assessment of the path coefficients and effect size, as depicted in Table 13, indicates that a substantial and positive relationship existed between social reward and employee engagement (Beta=0.202;  $p=0.0001$ ) with a reasonable effect size ( $f^2=0.185$ ), resulting in a rejection of the null hypothesis 3a that the relationship was not significant. The result is related to Owor's (2016) finding that high rewards or recognitions were related to employee engagement. The employee engagement theory Kahn (1990) elucidates that antecedents such as social reward create self-efficacy, confidence in one's abilities, status, and self-consciousness, leading to an individual's readiness to engage in performance. This converges with Eisenberger et al.'s (2001) exposition that happiness with social rewards enhances employees' psychological attachment to the organisation.

The specific mediation analysis results for this section are presented in Table 14. From the results, all the psychological conditions, safety (Beta=0.079; p=0.0001), availability (Beta=0.099; p=0.0001) and meaningfulness (Beta=0.257; p=0.0001), were significant and positive mechanisms through which social reward was related to employee engagement. The findings are similar to those of Olivier and Rothmann (2007) and Ariani (2015), which showed that social reward components of colleague support and supervisor supports significantly affected employee engagement through psychological meaningfulness and availability.

**Table 14: Specific Indirect Effect of Mediation Role of Psychological Conditions and Employee Engagement in the Relationship between Social Reward and Adaptive Performance**

	Beta	t-statistics	p-value
social reward -> Safety -> Employee engagement	0.079	3.239	0.001
Social reward -> Meaningfulness -> Employee engagement -> Adaptive performance	0.130	6.754	0.000
Availability -> Employee engagement -> Adaptive performance	0.107	3.585	0.000
Social reward -> Availability -> Employee engagement -> Adaptive performance	0.050	3.436	0.000
Social reward -> Safety -> Employee engagement -> Adaptive performance	0.040	3.052	0.001
Safety -> Employee engagement -> Adaptive performance	0.072	3.150	0.001
Social reward -> Availability -> Employee engagement	0.099	3.740	0.000
Meaningfulness -> Employee engagement -> Adaptive performance	0.271	8.413	0.000
Social reward -> Meaningfulness -> Employee engagement	0.257	8.008	0.000
Social reward -> Employee engagement -> Adaptive performance	0.243	8.105	0.000

Source: Field survey (2021)

The preceding findings align with the prediction in the conceptual framework (Figure 1) that psychological conditions mediated the predicted relations. The findings also match the employee engagement theory (Kahn, 1990) assumption that the psychological conditions of meaningfulness, availability and safety are the mechanisms through which their antecedents, such as social rewards, affect the cognitive, emotive and physical aspects of employees in the simultaneous deployment of the self in performance. The results did not support the null hypotheses, 3f, 3g and 3h, predictions that each of the psychological conditions does not significantly mediate the effect of social reward on employee engagement.

The results show a positive and significant mediation role of employee engagement (Beta=0.243; p=0.0001) in social reward's effect on adaptive performance, thus invalidating the not significant expected result of the null hypothesis 3k. Thus, public sector nurses' ability to adapt to the exigencies of their work are enhanced when they become engaged. A possible inference from the finding is that respect, courtesy and kindness (Ramirez-Marin & Shafa, 2018), as well as the feelings of well-being that are associated with social reward improved the ability of the nurses to engage in adaptive performance by the deployment of their emotional, mental and physical selves during changes in their work conditions.

The finding that the effect of social reward on adaptive performance was mediated by employee engagement is consistent with Park, Lim, Kim and Kang's (2020) finding. They found that some components of social rewards were related to adaptive performance through employee engagement. This finding also supports the social exchange theory (Blau, 1964) and the employee

engagement theory (Kahn, 1990). Whereas the social exchange theory accounted for the reasons why social reward affected adaptive performance, the employee engagement theory complemented the explanation by showing that the Ghanaian public sector nurses' dedication, vigour and absorption (Schaufeli et al., 2002) contributed to clarifying their adaptive performance.

The results in Table 14 indicate that employee engagement was a significant and positive mediator in the relationship between psychological availability (Beta=0.107; p=0.0001), psychological safety (Beta=0.072; p=0.0001) and psychological meaningfulness (Beta=0.271; p=0.0001) and adaptive performance. These results led to the rejection of the null hypotheses 3r, 3u and 3o, which predicted that employee engagement did not mediate the relationships between each of the psychological conditions and adaptive performance. In serial mediation, the indirect pathways of the effect of social reward on adaptive performance through each of the psychological conditions, meaningfulness (Beta=0.130; p=0.0001), availability (Beta=0.050; p=0.0001) and psychological safety (Beta=0.040; p=0.001), and employee engagement, were significant and positive.

Therefore, null hypotheses 3x, 3zii and 3ziv, each of which, respectively, speculated a not significant mediations of psychological meaningfulness, availability and safety in the effect of social reward on adaptive performance were rejected. Psychological conditions and employee engagement as mediators converge with Bailey et al.'s (2015), Bilal's (2017) and Franks' (2017) assertions that psychological conditions and employee engagement are essential in explaining the mechanisms through which the employee reward-performance exchange relationships occur. This is because



the internal motivation, energy and passion associated with psychological conditions and employee engagement enable employees to go beyond prescribed roles to engage in voluntary performance, such as adaptive performance. The findings are thus congruent with the social exchange theory (Blau, 1964) and the employee engagement theory (Kahn, 1990).

### **Serial Mediation Role of Psychological Conditions and Employee Engagement in the Relationship between Social Reward and Contextual Performance**

Contextual performance or organisational citizenship behaviour aids in better coordination of organisational activities and enhances productivity and efficient utilisation of limited resources (Dekas et al., 2013; Kataria et al., 2013). Within the social exchange theoretical context, it has been established that employee rewards, including social rewards, are critical in enhancing contextual performance. Other factors such as employee engagement and psychological conditions determine the effectiveness of employee rewards (Armstrong, 2012) in contributing to performance. As a result, this study examined the indirect effects of the psychological conditions and employee engagement of public sector nurses in Ghana in how social reward links to contextual performance. The measurement model (G1) met all the conditions prescribed in PLS-SEM.

The results of the coefficient of determination ( $R^2$ ), path coefficient, t-statistics, p-values and effect size of the structural model are in Table 15. The examination of the results revealed that social reward, psychological availability, meaningfulness, safety and employee engagement together contributed 71.2 percent of the variance in contextual performance ( $R^2=0.712$ ).

**Table 15: Coefficient of Determination, Path Coefficient and Effect Size of Role of Psychological Conditions and Employee Engagement in the Relationship between Social Reward and Contextual Performance**

	Beta	Effect Size ( $f^2$ )	t-statistics	p-value	$R^2$
Availability -> employee engagement	0.192	0.040	2.542	0.000	0.712
Employee engagement -> contextual performance	0.126	0.012	1.429	0.153	
Availability -> contextual	0.461	0.162	7.138	0.000	
Meaningfulness -> employee engagement	0.620	0.442	9.257	0.000	
Meaningfulness -> contextual	0.329	0.063	3.388	0.001	
Safety -> Employee engagement	-0.042	0.002	0.866	0.386	
Safety -> contextual	-0.090	0.008	1.726	0.084	
Social Reward -> contextual	0.072	0.010	2.256	0.024	
Social reward -> availability	0.572	0.485	16.651	0.000	
Social reward -> meaningfulness	0.600	0.563	17.313	0.000	
Social reward -> employee engagement	0.200	0.116	7.061	0.000	
Social reward -> Safety	0.586	0.523	18.140	0.000	

Source: Field survey (2021)

The strengths of contributions (see Table 15) show significant and moderate effects for psychological availability ( $f^2=0.162$ ) and small and significant effects for meaningfulness ( $f^2=0.063$ ). Social reward's, employee engagement's

and psychological safety's contributions were insignificant ( $f^2 < 0.02$ ), with effect sizes of 0.010, 0.012 and 0.008, respectively.

The results show that employee engagement insignificantly but positively predicted contextual performance (Beta=0.126;  $p=0.153$ ) with very weak effect size ( $f^2=0.012$ ), indicating that the nurses' connectedness to their jobs emotionally, physically and mentally do not necessarily lead to performance beyond their job descriptions in terms of engaging in extra-role activities. This result contradicts Mathumbu and Dodd's (2013) finding of significant and positive relationship between them. The finding is contrary to the depiction in the conceptual framework (Figure 1) and supports the null hypothesis 3i, that employee engagement does not significantly predict contextual performance. However, the finding parallels the employee engagement theory that the simultaneous deployment of employees' cognitive, physical and emotional selves on the job results in positive outcomes (Saks, 2006), including contextual performance.

Table 16 contains the result for the specific indirect effect of psychological conditions and employee engagement in the relationship between social reward and contextual performance. As indicated in the table, there was a significant path from social reward to contextual performance through employee engagement (Beta=-0.363;  $p=0.0001$ ). This result is related to those of Sultana et al. (2016) and Rai et al. (2018). They found that components of supervisor support and employee reward were related to contextual performance through employee engagement. Thus, the null hypothesis 3l that employee engagement did not significantly mediate the predictive relationship between social reward and contextual performance was not supported by the finding.

The finding of this study shows that employee engagement had strong positive mediating effects on the relationships between psychological availability (Beta=0.140; p=0.0001), psychological safety (Beta=0.091; p=0.0001), psychological meaningfulness (Beta=0.356; p=0.0001), and contextual performance. As a result, the nurses' confidence in their ability, freedom from the fear of harm to the self, and not being taken for granted during performance influence the deployment of the physical, emotional and cognitive selves, which affected extra-role activities.

**Table 16: Specific Indirect Effect of the role of psychological conditions and employee engagement in the relationship between Social Reward and Contextual Performance**

	Beta	t-statistics	p-value
Social reward -> Safety -> Employee engagement	0.077	3.147	0.001
Social reward -> Availability -> Employee engagement -> Contextual performance	0.066	3.373	0.000
Availability -> Employee engagement -> Contextual performance	0.140	3.614	0.000
Social reward -> Meaningfulness -> Employee engagement -> Contextual performance	0.170	6.666	0.000
Social reward -> Availability -> Employee engagement	0.099	3.746	0.000
Safety -> Employee engagement -> Contextual performance	0.091	3.353	0.000
Social reward -> Meaningfulness -> Employee engagement	0.258	7.958	0.000
Meaningfulness -> Employee engagement -> Contextual performance	0.356	10.327	0.000
Social reward -> Employee engagement -> Contextual performance	0.363	10.808	0.000
Social reward -> Safety -> Employee engagement -> Contextual performance	0.051	3.165	0.001

Source: Field survey (2021)

The findings that employee engagement was a significant mediator between each psychological condition and contextual performance corroborate a similar finding by Khoreva and Wechtler (2018) that psychological employee well-being mediated to affect performance. This supports the employee engagement theory (Kahn, 1990) suggestion that these psychological conditions are embedded with internal motivation, affecting employee engagement and leading to positive outcomes. The findings did not support the proposed null hypotheses, 3q, 3s and 3v, which suggested that employee engagement did not significantly mediate the relationship between each of the psychological conditions and contextual performance. Therefore, the finding aligns with the conceptualisation of the relationships in the conceptual framework (Figure 1).

The indirect path from social reward to contextual performance through psychological meaningfulness and employee engagement (Beta=0.170; p=0.0001), psychological availability and employee engagement (Beta=0.066; p=0.0001), as well as psychological safety and employee engagement (Beta=0.051; p=0.001), were significant and positive. The findings regarding social reward, psychological conditions, employee engagement, and contextual performance were not compatible with the study's hypothesised directions of the null hypotheses 3y, 3zv and 3zvi. These hypotheses projected that psychological meaningfulness and employee engagement, psychological safety and employee engagement and psychological availability and employee engagement did not serially mediate the predictive relationship between social reward and contextual performance. These null hypotheses were thus rejected.

The findings are also congruent with the social exchange theory explanation that the provision of employee rewards is a balancing act that directs employees' minds to the fulfilment of an exchange agreement with employers (Syrek & Antoni, 2017) to perform. The relationship between social reward and contextual performance is in line with this view. The findings of the serial mediation relationships between social reward, psychological conditions, employee engagement and contextual performance confirm the theoretical framework derived from the employee engagement theory (Kahn, 1990).

### **Mediation Role of Psychological Conditions and Employee Engagement in the Relationship between Social Reward and Counterproductive Performance**

Psychological conditions are essential in understanding the employee reward and performance relationships because employee rewards create psychological empowerment (Chiang & Birtc, 2010). This empowerment enhances work stamina (Awan & Zamir, 2016), which is a precursor to employee performance. Therefore, as part of examining the employee reward and performance relationships per the conceptual framework, the roles psychological conditions and employee engagement play in the relationship between social reward and counterproductive performance are analysed.

The results from the evaluation of the structural model in Table 17 present the coefficient of determination ( $R^2$ ), the path coefficients, and effect size of the role of psychological conditions and employee engagement in social reward's effect on counterproductive performance. The results established that the combined effect of social reward, psychological meaningfulness, psychological availability, psychological safety and employee engagement

explained a 10.5 percent weak variance in counterproductive performance. In terms of substantive effects for the significant paths toward counterproductive behaviour,  $f^2$  for meaningfulness, safety and social reward were 0.027, 0.117 and 0.014, respectively. This indicated a small effect. The contribution of psychological availability ( $f^2=0.001$ ) and employee engagement ( $f^2=0.005$ ) were insignificant ( $f^2<0.02$ ).

**Table 17: Coefficient of Determination, Path Coefficient and Effect Size of Mediation Role of Psychological Conditions and Employee Engagement in the Relationship between Social Reward and Counterproductive Performance**

	Beta	Effect Size ( $f^2$ )	t-statistics	p-value	$R^2$
Availability -> Counterproductive	-0.068	0.001	0.519	0.604	
Availability -> Employee Engagement	0.231	0.055	3.032	0.003	
Employee Engagement -> Counterproductive	-0.141	0.005	1.252	0.211	
Meaningfulness -> Counterproductive	-0.379	0.027	3.119	0.002	
Meaningfulness -> Employee Engagement	0.606	0.411	9.154	0.000	0.105
Safety -> Counterproductive	0.272	0.117	3.680	0.000	
Safety -> Employee Engagement	-0.070	0.004	1.337	0.182	
Social Reward -> Availability	0.575	0.495	18.752	0.000	
Social Reward -> Counterproductive	0.150	0.014	3.256	0.001	
Social Reward -> Employee Engagement	0.196	0.108	6.758	0.000	
Social Reward -> Meaningfulness	0.605	0.578	19.187	0.000	
Social Reward -> Safety	0.587	0.527	19.438	0.000	

Source: Field survey (2021)

As can be observed in Table 17, employee engagement was an insignificant negative predictor of counterproductive performance (Beta=-0.141; p=0.211) with an effect size of ( $f^2=0.005$ ). This finding confirms the finding of Bilal (2017) that employee engagement was negatively related to counterproductive performance or work behaviour. This finding supports the null hypothesis 3j that they were not significantly related. However, the negative relation aligns with the employee engagement theory, which argues that when employees deploy their physical, mental and emotive selves while working, it has positive outcomes (Kahn, 1990), including reducing counterproductive behaviours.

The results of the mediation model in this section are presented in Table 18. The results show that employee engagement was a negative and significant mediator in the predictive relationship between psychological meaningfulness (Beta=-0.126; p=0.0001), psychological availability (Beta=-0.048; p=0.0001), and psychological safety (Beta=-0.032; p=0.002) and counterproductive behaviour.

**Table 18: Specific Indirect Effect of Mediation Role of Psychological Conditions and Employee Engagement in the Relationship between Social Reward and Counterproductive Performance**

	Beta	t-statistics	p-value
Social reward -> Safety -> Employee engagement	0.077	3.236	0.001
Social reward -> Meaningfulness -> Employee engagement -> Counterproductive performance	-0.060	4.306	0.000
Social reward -> Availability -> Employee engagement -> Counterproductive performance	-0.023	3.314	0.000
Meaningfulness -> Employee engagement -> Counterproductive performance	-0.126	4.634	0.000



Table 18: Cont.

Social reward -> Safety -> Employee engagement -> Counterproductive performance	- 0.018	2.809	0.003
Social reward -> Availability -> Employee engagement	0.098	3.630	0.000
Social reward -> Employee engagement -> Counterproductive behaviour performance	- 0.161	5.744	0.000
Availability -> Employee engagement -> Counterproductive performance	- 0.048	3.439	0.000
Social reward -> Meaningfulness -> Employee engagement	0.260	8.179	0.000
Safety -> Employee engagement -> Counterproductive performance	- 0.032	2.850	0.002

Source: Field survey (2021)

The reason is that the psychological conditions comprise internal motivation, which positively affects employee engagement regarding the employees' vigilance, mental and physical focus (Kahn, 1990), and positive attitudes relating to organisational efficiency outcomes (Ariani, 2013).

The findings that the mediating effects of psychological conditions and employee engagement on counterproductive performance were significant and negative means that the more nurses in the public sector of Ghana experience these psychological conditions and employee engagement, the more the reduction in counterproductive performance. These are consistent with the belief that people who experience psychological meaningfulness take pride in their work (Jacobs, 2013) and want to feel personally accomplished in performance (Shuck & Reio Jr., 2014) and the finding that employee engagement was negatively related to counterproductive behaviour (Bilal, 2017). The findings did not support the no significant mediation effects of employee engagement in the relationships between each of the psychological conditions and counterproductive behaviour projected in the null hypotheses 3qc, 3r and 3w.

Employee engagement also significantly but negatively mediated the effect of social reward on counterproductive performance (Beta=-0.161;  $p=0.0001$ ), showing that high levels of social reward and employee engagement contribute meaningfully to minimise employee behaviours that are detrimental to the organisations and colleagues. This finding is related to Hu, Hung and Ching's (2017) finding that social rewards such as supervisor supports affected counterproductive performance negatively through employee engagement. The finding aligns with the employee engagement theory, which postulates that when people become engaged, the results are positive outcomes (Saks & Gruman, 2014), such as reducing counterproductive performance or behaviours (Bilal, 2017). Therefore, the null hypothesis 3m of no significant mediation effect between social reward and counterproductive behaviour was rejected.

The effect of social reward on counterproductive behaviour through psychological meaningfulness (Beta=-0.060;  $p=0.0001$ ), availability (Beta=-0.023;  $p=0.0001$ ), psychological safety (Beta=-0.018;  $p=0.003$ ), and employee engagement were significant and negative. Thus, social reward indirectly reduces counterproductive performance or behaviour as psychological conditions and employee engagement of public sector nurses in Ghana increase. These serial mediation findings parallel the integration of the social exchange theory and employee engagement theories as depicted by the conceptual framework (Figure 1). The results did not support the null hypotheses 3zi, 3ziii and 3zvii, which predicted no significant effects of social reward on counterproductive behaviour serially through psychological meaningfulness and employee engagement, availability and engagement, and psychological safety and employee engagement.

In social exchange theory (Blau, 1964), employees cannot constantly evaluate rewards to determine their performance (Redmond, 2015) as the theory assumes. The findings align with the employee engagement theory proposition that psychological conditions and employee engagement are essential mechanisms (Bailey et al., 2015) through which employees assess their jobs and perform their tasks (Taylor, 2019). Thus, the finding explains the direct relationship between social reward and counterproductive behaviour and accounts for how social reward reduces counterproductive behaviour through psychological conditions and employee engagement.

Empirically, many studies applying the employee engagement theory relied on either psychological conditions or employee engagement as parallel mediators (e.g., Bilal, 2017; Chikoko et al., 2014; Franks, 2017; Gutti, 2016). Similarly, employee reward and performance studies that relied on the social exchange theory, such as those by Owor (2016), Sung et al. (2018), Asghar and Asif (2018), Rai et al. (2018) and Yin (2018), did so using it as the sole underpinning theory. Consequently, there are limited findings on psychological conditions and employee engagement as serial mediators in the empirical literature.

### **Feedback Loop of Employee Engagement on Psychological Conditions**

The employee engagement theory (Kahn, 1990) elucidates that experiences of psychological availability, safety and meaningfulness result in employee engagement. As proposed in the conceptual framework (Figure 1), employee engagement may affect the psychological conditions in a feedback loop. The objective is to estimate employee engagement (EE) feedback on psychological conditions (PC). The two-stage least squares (2SLS) was used

as the analytical technique. A primary concern with the 2SLS estimation approach is the potential endogeneity associated with employee engagement resulting from reverse causality.

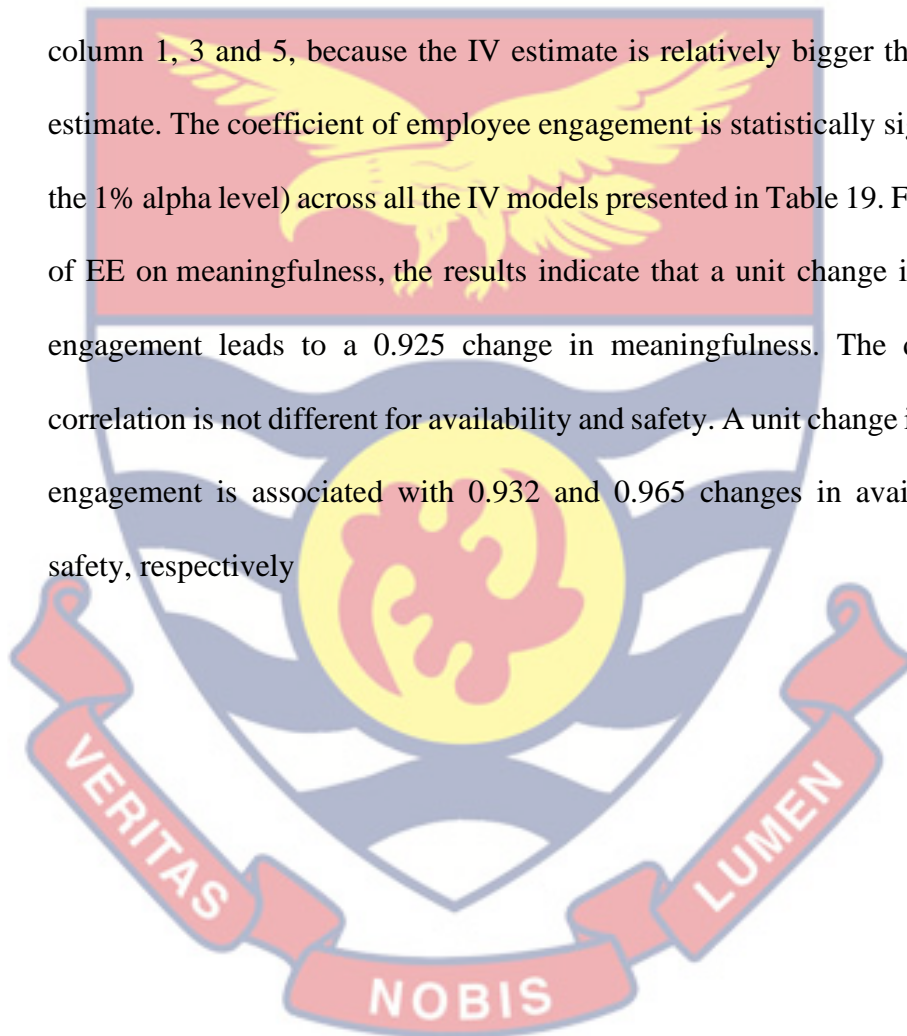
One way to solve the issue of endogeneity is by using the instrumental variable (IV) technique. In the instrumental variable technique, however, the major challenge is finding an appropriate instrument variable. According to Felson (1981), when it is established that variable “W” mediates the effect of variable “P” on variable “Q”, the variable “P” can serve as the instrumental variable to estimate the variable “Q” to variable “W” effect. Following the work of Felson, the endogeneity problem associated with employee engagement (EE) was addressed by using the *social reward (SR)* as an instrument in a two-stage least square (2SLS) or instrumental variable (IV) estimation procedure.

In the model, the dependent variable is the psychological conditions (PC), which has three components (meaningfulness, availability and safety). The *meaningfulness (M)* variable is made of 14 indicators, whilst the *availability (A)* and *safety(S)* variables are made of 14 and 16 indicators. Indices were constructed for the variables (meaningfulness, availability and safety) as well as the instrument (Social reward) and the potential endogenous variable employee engagement (EE). Using social reward as the instrument, separate models were run for meaningfulness, availability and safety.

The result with the Wald test of exogeneity in all the models is significant at the one percent alpha level (see Table 19), so the null hypothesis of no endogeneity of employee engagement (EE) is rejected (Cameron & Trivedi, 2010). Expectedly, the first stage regression estimates also show that social reward (SR) has a positive effect on employee engagement. This shows

that the instrument variable satisfies the relevance condition. The Cragg-Donald Wald F statistics of the first stage regression are above the threshold of 10 (see Table 19), which resulted in the rejection of the null hypothesis of weak instruments (Staiger & Stock, 1997).

The IV regression in columns 2, 4 and 6 of Table 19 suggests that endogeneity employee engagement results are downward bias in the OLS estimates in column 1, 3 and 5, because the IV estimate is relatively bigger than the OLS estimate. The coefficient of employee engagement is statistically significant (at the 1% alpha level) across all the IV models presented in Table 19. For the effect of EE on meaningfulness, the results indicate that a unit change in employee engagement leads to a 0.925 change in meaningfulness. The direction of correlation is not different for availability and safety. A unit change in employee engagement is associated with 0.932 and 0.965 changes in availability and safety, respectively



**Table 19: Regression for the Feedback between Employment Engagement and Psychological Conditions**

	(1)	(2)	(3)	(4)	(5)	(6)
	Meaningfulness		Availability		Safety	
Variables	OLS	IV	OLS	IV	OLS	IV
Employment Engagement	0.802*** (0.036)	0.925*** (0.035)	0.785*** (0.035)	0.932*** (0.043)	0.732*** (0.039)	0.965*** (0.059)
Constant	0.000 (0.060)	0.000 (0.061)	0.000 (0.072)	0.000 (0.073)	0.000 (0.083)	0.000 (0.087)
Observations	761	761	761	761	761	761
R-squared	0.657	0.642	0.559	0.540	0.450	0.404
<i>First stage</i>		0.562 (0.042)		0.562 (0.042)		0.562 (0.042)
F-statistic of first regression		177.2***		177.2***		177.2***
Anderson-Rubin Wald test		138.9***		145.6***		176.0***

Robust standard errors in parentheses \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. OLS: ordinary least squares IV: instrumental variables estimation

## Summary

This chapter examined the serial mediation of psychological conditions and employee engagement in the relationship between social reward and employee performance. The analysis revealed that whereas psychological safety significantly and positively mediated the relationship between social reward and employee engagement, the mediation effects of psychological availability and psychological meaningfulness are significant and negative. Also, the mediation effect of employee engagement in the relationships between the psychological conditions and counterproductive performance is negative and significant.

Employee engagement significantly and positively mediated the relationships between the psychological conditions on the one hand and the contextual and adaptive performance on the other hand. The psychological conditions and employee engagement positively and significantly serially mediated the relationships between social reward and contextual performance and adaptive performance. On the other hand, each of the psychological conditions and employee engagement mediated significantly and negatively the effect of social reward on counterproductive performance. The chapter also revealed that the feedback loop of employee engagement on psychological conditions resulted in a unit change in employee engagement leading to 0.935, 0.932 and 0.965 changes in psychological meaningfulness availability and safety, respectively.

This chapter demonstrates that psychological conditions, employee engagement, and social rewards are essential predictors of Ghana's public sector nurses' performance or behaviours. The reason is that when the nurses perceive that their colleagues and supervisors are concerned about their well-being, they

will become psychologically involved and channel their energies towards performance. Overall, the findings of this chapter imply that managers of public sector nurses in Ghana should not focus only on providing rewards to enhance performance but must also encourage employees' experience of psychological meaningfulness, availability and safety. This will ensure that nurses are continuously engaged. These will provide a holistic experience and psychologically satisfying work environment that will enhance adaptive and contextual performance and reduce counterproductive performance or behaviour of nurses in the public sector.





## CHAPTER EIGHT

### SERIAL MEDIATING ROLES OF PSYCHOLOGICAL CONDITIONS, EMPLOYEE ENGAGEMENT AND CAUSALITY ORIENTATIONS IN THE RELATIONSHIPS BETWEEN EMPLOYEE REWARDS AND NURSES' PERFORMANCE

#### Introduction

This chapter discusses the results of the sixth objective of this thesis. The objective is to examine the role of psychological conditions, employee engagement and causality orientations in the relationships between employee rewards and employee performance. The specific issues dealt with are the serial mediation roles of psychological meaningfulness, employee engagement and causality orientations in the relationship between social rewards and performance. Another issue is the serial mediation roles of psychological availability, employee engagement and causality orientations in the relationship between social rewards and performance. The chapter also deals with the sequential mediation roles of psychological safety, employee engagement and causality orientations in the relationship between social rewards and performance. The theoretical underpinnings are the social exchange, employee engagement and causality orientation theories.

The social exchange theory's tenet is that the provision of employee rewards depends on the expectation that it will result in performance (Njanja et al., 2013). On the other hand, employee engagement propositions argue that the relationships between organisational factors such as employee rewards and employee performance are mediated by psychological conditions, affecting employee engagement before leading to the outcome (Kahn, 1990). However,

social exchange and employee engagement theories cannot fully explain the relationship because they do not account for the role of individual dispositions or causality orientations in the relationship. These propositions serve as the foundation for assessing the serial mediating roles of psychological conditions, employee engagement and causality orientation of public nurses in the social rewards-performance linkages.

The structural equation model based on useable data from 761 nurses was used to analyse the relationships. The two-stage approach recommended in PLS-SEM (Urbach & Ahlemann, 2010) was used to analyse the data. The first stage, which involved the evaluation of the internal consistency reliability, convergent validity, discriminate validity, indicator reliability and common method variance were examined. The results show that the criteria set for their evaluation and acceptance have all been met (see Appendix G1). Additionally, the models' predictive relevance using the criterion for predictive relevance (see Table 27 in Appendix G1) established in chapter four has been met ( $Q^2 > 0$ ).

### **Serial Mediation Role of Psychological Conditions, Employee Engagement and Causality Orientations in the Relationships between Social Rewards and Contextual Performance**

Employee rewards have the objective to motivate and direct behaviour toward performance (Gupta & Shaw, 2014). As theoretically posited in this study and depicted by the conceptual framework (Figure 1), employees' psychological states, employee engagement, and the causality orientation of employees affect their performance. As a result, this study sought to examine how these factors impact on the relationships between the social reward category of employee rewards and contextual performance or organisational

citizenship behaviour. The analysis involved the assessment of the structural model.

The path results in Table 20 represent the coefficient of determination, path coefficients, effect size and p-values of psychological conditions, employee engagement and causality orientations in the relationships between social rewards and contextual performance. The results show that social rewards, meaningfulness, safety and availability, employee engagement and autonomous, control and impersonal orientations contributed 65 percent ( $R^2=0.650$ ) to the change in contextual performance. The paths towards contextual performance (see Table 20) show that autonomous ( $f^2$  0.021), meaningfulness ( $f^2= 0.053$ ), employee engagement ( $f^2= 0.017$ ) and availability ( $f^2= 0.108$ ) contributed significantly to the  $R^2$ . On the other hand, the  $f^2$  for social reward (0.012), safety (0.000), impersonal (0.005) and control (0.014) fell below the threshold 0.02 (Cohen, 1988) for small effect size, thus their contributions to contextual performance were insignificant.

Per the results of the path coefficient in Table 20, high autonomous orientation significantly increases contextual performance (Beta=0.105;  $p=0.0001$ ) with a small effect size ( $f^2=0.021$ ). One reason might be that autonomous causality-oriented individuals experience high intrinsic motivation (Hagger et al., 2015). This finding is similar to Li et al.'s (2016) that found autonomous orientated employees contributed positively to contextual performance because they thrive better at work.

**Table 20: Coefficient of Determination, Path-coefficient and Effect Size of Psychological Conditions, Employee Engagement and Causality Orientations in the Relationships between Social Rewards and Contextual Performance**

	Beta	Effect Size (f <sup>2</sup> )	t-statistics	p-value	R <sup>2</sup>
Autonomous -> Contextual performance	0.105	0.021	3.343	0.001	0.650
Availability -> Employee engagement	0.204	0.043	3.879	0.000	
Control -> Contextual performance	-0.094	0.014	2.904	0.004	
Employee engagement -> Autonomous	-0.010	0.000	0.127	0.899	
Employee engagement -> Control	-0.286	0.026	4.235	0.000	
Employee engagement -> Impersonal	-0.196	0.012	2.774	0.006	
Impersonal -> Contextual performance	-0.051	0.005	1.982	0.048	
Meaningfulness -> Autonomous	0.088	0.002	1.120	0.263	
Meaningfulness -> Control	0.152	0.006	2.002	0.045	
Meaningfulness -> Contextual performance	0.280	0.053	4.773	0.000	
Engagement ->Contextual performance	0.144	0.017	2.568	0.010	
Meaningfulness -> Impersonal	-0.124	0.004	1.737	0.082	
Safety -> Autonomous	0.200	0.013	2.962	0.003	
Safety -> Control	0.205	0.014	3.100	0.002	
Safety -> Impersonal	0.153	0.007	2.117	0.034	
Safety -> Contextual performance	-0.002	0.000	0.046	0.964	
Availability -> Autonomous	-0.002	0.000	0.030	0.976	
Availability -> Control	-0.031	0.000	0.466	0.641	
Availability -> Impersonal	0.014	0.000	0.219	0.827	
Availability -> Contextual performance	0.362	0.108	8.018	0.000	
Meaningfulness -> Employee engagement	0.504	0.265	10.526	0.000	

Table 20: Cont.

Safety -> Employee engagement	0.205	0.001	3.100	0.002
Social reward -> Availability	0.528	0.386	15.443	0.000
Social reward -> Contextual performance	0.085	0.012	2.975	0.003
Social reward -> Meaningfulness	0.564	0.465	16.590	0.000
Social reward -> Safety	0.574	0.491	18.695	0.000
Social Reward -> Autonomous	0.073	0.003	1.623	0.105
Social Reward -> Control	0.172	0.019	3.807	0.000
Social Reward -> Impersonal	0.217	0.029	4.817	0.000
Social Reward -> Engagement	0.202	0.088	3.807	0.000

Source: Field survey (2021)

The reason is that the autonomous-oriented experience high intrinsic motivation levels, which is a precursor to performance (Hagger et al., 2015). The null hypothesis 4ei (Appendix A4), which suggested a no significant effect, was, thus, not supported.

There were significant and negative effects of Control (Beta=-0.094; p=0.004) and impersonal orientations (Beta=-0.051; p=0.048) on contextual performance. These findings mean that high levels of nurses' control orientation or impersonal orientation result in lesser voluntary activities. The lack of self-efficacy, which is a characteristic of impersonal orientation (Olesen et al., 2010), might explain the negative association with the nurses' contextual performance or performance beyond what was required. The finding supports the causality orientation theory that control-oriented individuals are influenced by rewards (Ryan, 1982).

Thus, expectedly, the result revealed control orientedness' disinterest in contextual performance, which are voluntary activities and usually not rewarded. The findings above agree with the direction implied in the conceptual

framework (Figure 1). They do not support the null hypotheses in 4eii and 4eiii that there were no significant effects of control orientation and impersonal orientation on contextual performance. These generally confirmed causality orientation theory assumption that individual differences in how they orient to different components in their environments, such as employee rewards, determine their behaviours (Ryan, 2009), such as contextual performance.

The effects of employee engagement on impersonal and control orientations were significant and negative (Beta=-0.268; p=0.0001) and (Beta=-0.196; p=0.006), respectively. Thus, high employee engagement levels result in lower control and impersonal orientations predispositions, including feelings of worthlessness (Wong, 2000) and incompetence (Deci & Ryan, 1985a). The findings agree with the tenet of employee engagement theory (Kahn, 1990) that high levels of employee engagement result in positive outcomes, including reducing feelings of incompetence and worthlessness. These findings led to the rejection of the null hypotheses in 4dii and 4diii (Appendix A4) that the significant predictive relationships did not exist between employee engagement and control and impersonal orientations, respectively.

The Beta values in Table 20 (p. 211) show that employee engagement made an insignificant and negative contribution to autonomous orientation, with high levels of employee engagement associated with negligible reduction in levels of autonomous orientations (Beta=-0.010; p=0.899), such as working based on a high level of willingness, preference and choice (Deci et al., 2017). The finding contrasts the direction predicted in the conceptual framework (Figure1). The null hypothesis 4di (Appendix A4) of no significant predictive

relationship between employee engagement and autonomous orientation was accordingly supported.

Furthermore, the findings indicate that the psychological safety-autonomous orientation (Beta=0.200;  $p=0.003$ ), psychological safety-control orientation (Beta=0.205;  $p=0.002$ ), and psychological safety-impersonal orientation (Beta=0.153;  $p=0.034$ ) relationships were significant and positive. These results indicate that increasing levels of psychological safety raise the nurses' levels of autonomous, control and impersonal orientations. The result that psychological safety predicts autonomous orientation significantly and positively concurs with the employee engagement assumption that freedom from harm while working internally motivates (Kahn, 1990), leading to feelings of disappointment with poor performance. The findings align with the proposed conceptual framework (Figure1) and do not support the null hypotheses, 4ci, 4cii and 4ciii (Appendix A4) of no significant effects.

Contrary to psychological safety's significant and positive relationships with the causality orientations, the results (see Table 20) show positive and insignificant relationships between psychological meaningfulness and autonomous orientation, and psychological meaningfulness and control orientation. An insignificant and negative relationship was found between psychological meaningfulness and impersonal orientation. These results support the proposals in the null hypotheses that they were not significantly related. Thus, null hypotheses 4ai, 4aii and 4aiii (Appendix A4) were not rejected.

Table 20 revealed an insignificant and positive effect of psychological availability on impersonal orientation (Beta=0.014;  $p=0.827$ ), leading to the acceptance of the null hypothesis, 4biii, of no significant relationship between

psychological availability and impersonal orientation (Appendix A4). The relationship between psychological availability and control orientation (Beta=-0.031; p=0.641), and autonomous orientation (Beta=-0.002; p=0.976) were negative and insignificant. These findings support the null hypotheses, 4bi and 4bii, that there were no significant predictive relationships between them (Appendix A4).

The path coefficients also indicate that apart from social reward's positive and insignificant effect on autonomous orientation, the paths between social reward and control orientation (Beta=0.172; p=0.0001) and between social reward and impersonal orientation (Beta=0.217; p=0.0001) were significant and positive, with high social rewards resulting in higher feelings of incompetence and acting to please others. These positive and significant findings are inconsistent with Salah's (2016) explanation that social reward affects employees' well-being. Alhmoud and Rjoub (2019) found that this improves employees' feelings of competence and self-efficacy in performance.

The findings endorse causality orientation expectations that responses to work environment characteristics, including rewards (Ryan, 1982), are interpreted differently and thus create distinct causality orientations (Deci & Ryan, 2000). Therefore, the null hypotheses 4hii and 4hiii projections of no significant effects between social reward and control orientation and between social reward and impersonal orientation were rejected. The null hypothesis 4hi of no significant effect between social reward and autonomous orientation was retained (Appendix A4).



Table 29 (Appendix I1) presents the serial mediation analysis of the role of psychological conditions, employee engagement and causality orientations in the relationship between social reward and contextual performance. The results show that through employee engagement, social reward was significantly and negatively related to control orientation (Beta=-0.058;  $p=0.0001$ ) and impersonal orientation (Beta=-0.040;  $p=0.011$ ), confirming the conceptual framework (Figure 1) in line with the employee engagement theory (Kahn, 1990). Consequently, the null hypotheses 4oii and 4oiii (Appendix A4) that no significant mediation effects of employee engagement existed between social reward and control orientation and between social reward and impersonal orientation were rejected.

According to Schaufeli et al. (2002), employees' response to some antecedents has substantial impacts on employees' vigour, dedication and absorption in performance. This yields beneficial effects, including dampening control and impersonal orientations propensities to always relying on others and feeling incapable, respectively. The mediation relationship with autonomous orientation was insignificant (see Table 29 in Appendix I1), validating null hypothesis 4oi (Appendix A4) of no significant mediation effect. This contradicts the proposed linkage in the conceptual framework (Figure 1).

The assessment of the specific indirect effects of the psychological conditions in the effect of social reward on the causality orientations reveals that psychological safety significantly and positively mediated the effect of social reward on autonomous (Beta=0.115;  $p=0.004$ ), impersonal (Beta=0.088;  $p=0.038$ ), and control (Beta=0.118;  $p=0.002$ ) orientations. Comparatively, the effect on control orientation was the highest and closely followed by

autonomous orientation. The mediation effect on impersonal orientation was the lowest. In contrast, the mediation effects of psychological availability and psychological meaningfulness in the relationships between social reward and autonomous, impersonal and control orientations were insignificant (see Table 29 in Appendix I1).

The findings above are indications that Deci and Ryan's (2000) assertion that the distinctiveness in individual responses to organisational cues, which is the primary assumption of the causality orientation theory, was not violated. Based on the mediation results and in line with the conceptual framework (Figure 1), the null hypothesis 4pi (Appendix A4) that psychological safety did not significantly mediate the predictive relationship between social reward and the causality orientations was not accepted. On the other hand, the insignificant mediation effects involving meaningfulness and availability supported the null hypotheses 4pii and 4piii, which suggested no significant mediations effects.

The findings suggest that the positive outcomes implied in the engagement theory (Saks & Gruman, 2014) do not always occur due to individual dispositional characteristics. For instance, the assumed positive outcome proposed was not met by psychological safety's significant and positive mediating effect on the nurses' feelings of incapability concerning impersonal orientation. That is, employee engagement increased these feelings rather than mediating to reducing these feelings. The examination of the specific mediation results is in line with the proposed conceptual framework (Figure 1).

The results in Table 29 (see Appendix I1) revealed that the mediation roles of employee engagement in the effect of each of the psychological conditions on the causality orientations found that the meaningfulness-

engagement-control orientation (Beta=-0.144; p=0.0001), meaningfulness-  
engagement-impersonal orientation (Beta=-0.099; p=0.007), availability-  
engagement-control orientation (Beta=-0.058; p=0.005), and availability-  
engagement-impersonal orientation (Beta=-0.040; p=0.032) mediation  
relationships were significant and negative. As can be observed from the table,  
the rest of the five simple mediation effects of employee engagement in the  
relationship between the psychological conditions and the causality orientations  
were all insignificant.

The findings that employee engagement mediated the meaningfulness-  
control, meaningfulness-impersonal, availability-impersonal, and availability-  
control effects affirm the conceptual framework (Figure 1) and the employee  
engagement theory (Kahn, 1990). That is, when people are prepared to exert  
their whole selves (Rich et al., 2010), they become proud of their work (Jacobs,  
2013) and feel personally accomplished through what they do (Shuck & Reio  
Jr., 2014); they become engaged in performance. These lead to positive  
outcomes, including reducing the negative tendencies associated with  
impersonal and control causality orientations.

From the above discussions, the null Hypotheses for 4qi and 4qii of no  
significant mediation effects (Appendix A4) were rejected for control  
orientation and impersonal orientation. On the other hand, the null hypotheses  
4qi and 4qii, which involved the autonomous causality orientation component  
of the causality orientations was accepted. The null hypothesis 4qiii (Appendix  
A4) that psychological availability does not significantly mediate the predictive  
relationship between social reward and autonomous, control and impersonal  
causality orientations was also accepted.

The estimated paths in Table 29 (Appendix I1) indicate the effects of each of the psychological conditions of availability, safety and meaningfulness on contextual performance through each of the causality orientations of autonomous, impersonal and control orientations, were insignificant or failed mediations (see Table 29). The results revealed that the mediation of autonomous orientation in the effect of psychological safety on contextual performance was positive and significant (Beta=0.021; p=0.032), while that of control orientation was significant but negative (Beta=-0.019; p=0.047). The null hypothesis in 4r (Appendix A4) of no significant effects involving psychological safety, autonomous orientation and contextual performance, and psychological safety, control orientation and contextual performance were rejected. The null hypothesis 4r (Appendix A4) of no significant mediation effect involving impersonal orientation was accepted.

The above significant and positive finding is linked to Zhang et al.'s (2010) view that psychologically safe individuals experience a feeling of confidence that the workplace relationships pose no threats and would not embarrass or punish them when expressing themselves in performance. This, together with autonomous-oriented individuals' interest in demonstrating behaviours that help maintain relationships and accept responsibility (Ryan & Deci, 2006), possibly explain the nurses' contextual or extra-role performance. This finding was thus consistent with the conceptual framework (Figure 1), employee engagement theory, and causality orientation theory.

From the values in Table 29 (Appendix I1), the indirect path between social reward and contextual performance through the causality orientations showed a significant and negative result for control orientation (Beta=-0.016;

$p=0.025$ ), invalidating null hypothesis 4w (Appendix A4) that there was no significant relationship between social reward and contextual performance through control orientation. This finding points out that the introduction of control orientation into the effect of social reward on contextual performance reduced the significant and positive effects earlier established. This could be attributed to the causality orientation theories' characterisation of control-oriented individuals as inclined to blame others (Ye et al., 2013) rather than helping in contextual performance.

Contrarily, the social reward-contextual performance relationship mediation with autonomous orientations (Beta=-0.008;  $p=0.177$ ) was insignificant and positive and insignificant and negative for impersonal orientation (Beta=-0.011;  $p=0.055$ ). These results were not parallel to the proposition of the conceptual framework (Figure 1). These findings did not support the social exchange theory and the causality orientation theories as the basis for the relationships proposed in the conceptual framework and hypothesis. Therefore, the null hypotheses 4w (Appendix A4) of no significant mediation pertaining to autonomous and impersonal orientations in the social reward and contextual performance relationships were supported.

In addition, there was a significant and positive mediation effect of control orientation in the effect of employee engagement on contextual performance (Beta=0.027;  $p=0.020$ ). This suggests that employee engagement positively impacted control-oriented nurses or reduced negative control-oriented likelihoods, such as feeling worthless (Wong, 2000) and tension (Ryan, 1982), which positively affected contextual performance. This result is congruent with the causality orientation theory that relatively permanent

characteristics of individuals reflect their beliefs about behaviour (Deci & Ryan, 1985b).

The finding also supports the employee engagement theory that employee engagement impacts positively on behaviour (Kahn, 1990). This confirms the study's argument that causality orientation, including control orientation (De Gieter & Hofmans, 2015) and employee engagement (Franks, 2017), are critical factors in explaining the employee rewards and performance relationships. Thus, the conceptual framework (Figure 1) is supported, while the null hypothesis 4x of no significant mediation effect (Appendix A4) involving control orientation was not supported. The null hypothesis of no significant mediation relationships relating to impersonal and autonomous orientations were retained.

The results in Table 29 (Appendix II) show that the social reward- safety -autonomous -contextual performance serial mediation effect was significant and positive (Beta=0.012; p=0.034). The mediation path of social reward - psychological safety -control orientation -contextual performance was significant and negative (Beta=-0.011; p=0.049). These findings uphold the argument that psychological conditions (Chikoko et al., 2014) in line with the employee engagement and individual dispositions (Hagger et al., 2015) based on the causality orientation theories are vital in explaining exchange relationships based on the social exchange theory (Blau, 1964). The null hypothesis of no significant mediation effect relating to autonomous and control orientations in 4si (Appendix A4) was rejected. The null hypotheses in 4si relating to impersonal orientations, 4sii, and 4siii of no significant mediation relationships were not rejected.

Table 29 (Appendix I1) further revealed significant and positive serial mediations for social reward, engagement, control orientation and contextual performance (Beta=0.005; p=0.024), and for the serial mediation path for psychological meaningfulness, employee engagement, control orientations and contextual performance (Beta=0.014; p=0.027). These outcomes substantiate Kahn's (1990) position that valuing one's job, psychological meaningfulness, motivates and positively affects one's physical, emotional and cognitive states, employee engagement.

Combining the above outcomes with Soenens et al.'s (2005) description of the control-oriented as involving a desire to please others might have contributed to the substantial and positive results. Therefore, the null hypotheses 4u and 4v (Appendix A4), which suggested a no significant relationship with control orientation, were rejected. On the other hand, the results confirmed the null hypotheses of 4u and 4v, which depicted insignificant relationships involving impersonal and autonomous orientations. Thus, their null hypotheses were not rejected. This was contrary to the direction proposed in the conceptual framework (Figure 1).

The indirect pathway of the effect of social reward on contextual performance via psychological meaningfulness, employee engagement and control orientation was significant and positive (Beta=0.008; p=0.031), aligning with the proposition in the conceptual framework (Figure 1) that these variables mediate the relationship. The findings also concur with the three theories integrated into this study. The social exchange theory (Blau, 1964) explained the relationship between social rewards and contextual performance. The concepts derived from the employee engagement (Kahn, 1990) and causality

orientation (Ryan & Deci, 1985b) theories are crucial factors in explaining how social reward is related to contextual performance. Thus, there was evidence of significant effect, leading to the rejection of the null hypothesis, 4ti (Appendix A4) with control orientation. On the other hand, the null hypothesis 4ti of no significant effects involving impersonal and autonomous orientations were supported.

The serial mediation result, as theorised, shows that psychological availability, employee engagement and control orientation did not significantly mediate the relationship between social reward and contextual performance (Beta=0.003; p=0.055). This finding does not parallel the conceptual framework proposition (Figure 1), which suggested a mediation effect. Comparing the insignificant mediation effect here and the positive mediation in the previous paragraph further corroborate the causality orientation argument that individuals possess distinct orientations and respond differently to different organisational stimuli (Ryan & Deci, 1985b). The null hypothesis involving control orientation in 4tii, which suggested a no significant relationship, was supported. The null hypotheses 4tii and 4tiii, which predicted no significant effects were also accepted (see Appendix A4).

### **Serial Mediation Role of Psychological Conditions, Employee Engagement and Causality Orientations in the Relationships between Social Reward and Adaptive Performance**

Adaptive performance reflects employees' ability to adjust quickly and make decisions in response to new, uncertain and ambiguous situations and events (Pulakos et al., 2000). Cullen et al. (2014) identify organisational factors that affect adaptive performance to include supporting managers or supervisors,



which are dimensions of social reward. However, being a volitional performance, other factors might concurrently influence the decision to engage in an adaptive performance. Therefore, as illustrated in the conceptual framework (Figure 1), it is crucial to identify how social reward interacts with psychological conditions, employee engagement and causality orientations to predict adaptive performance.

The coefficient of determination ( $R^2$ ), path coefficient, effect size, t-statistics and p-value results of the structural model are in Table 30 (Appendix I2). The results indicate that changes in social reward, control, autonomous and impersonal orientations, employee engagement and safety, availability and meaningfulness jointly explained 44.6 percent substantial variance in adaptive performance ( $R^2=0.446$ ). For the substantive effect for the substantial paths towards adaptive performance,  $f^2$  for autonomous, availability and safety were 0.025 0.033 and 0.043, respectively (see Table 30 in Appendix I2). These results suggested that their individual effects were small and significant. The contributions of control ( $f^2=0.012$ ), impersonal ( $f^2=0.010$ ), employee engagement ( $f^2=0.010$ ), social reward ( $f^2=0.002$ ) and meaningfulness ( $f^2=0.001$ ) were below 0.02. Thus, their individual contributions were insignificant.

The results show that adaptive performance was significantly and positively predicted by autonomous orientation (Beta=0.144;  $p=0.0001$ ) and control orientation (Beta=0.109;  $p=0.014$ ). This indicates that higher levels of autonomous and control orientations led to increased adaptive performance, with autonomous orientation having a stronger effect. The effect of autonomous orientation on adaptive performance validates the finding of Halvari and

Olafsen (2020) that autonomous orientation was linked with employees' adaptive performance. The finding, as captured by the conceptual framework (Figure 1), aligns with the acceptability of responsibility (Ryan & Deci, 2006) and high levels of willingness (Deci et al., 2017) of the autonomous-oriented in line with the causality orientation theory. As a result, the null hypothesis 4yi that autonomous orientation had no significant effect on adaptive performance was not supported.

The findings on the predictive role of control orientations on adaptive performance could not be empirically supported. That notwithstanding, the finding is consistent with the direction proposed in the conceptual framework (Figure 1) and the causality orientation theory argument by Ryan (1982). Ryan argues that the work environment's characteristics, including rewards, are informational or controlling and produce distinct causality orientations, which affect behaviour, including adapting to changing work situations in an adaptive performance. The finding, thus, invalidated the null hypothesis 4yii that control orientation did not significantly predict adaptive performance.

There was a significant and negative effect of impersonal orientation on adaptive performance ( $\text{Beta}=-0.090$ ;  $p=0.025$ ), with a higher impersonal orientation resulting in a lower adaptive performance. This finding did not support the null hypothesis 4yiii that impersonal orientation did not significantly predict adaptive performance. Finding empirical support for this result was limited because, according to Halvari and Olafsen (2020), it is uncommon to find reports on impersonal orientations. The finding supports the theoretical and conceptual characterisation of impersonal orientation. Impersonal causality orientated people display signs of incompetence, rely on past experiences,

precedence and doubt their ability when faced with situations that require that they exhibit certain behaviours (Deci & Ryan, 1985a). In light of this, the impersonal oriented nurses could not adapt positively to changing circumstances relating to their work.

The mediation analysis concerning the roles of psychological conditions, employee engagement and causality orientations in the relationship between social reward and adaptive performance are presented in Table 31 (Appendix I3). Per the results, the mediating effects of each causality orientation on each of the psychological conditions and adaptive performance show that the only significant mediating was the positive and significant effect of autonomous orientation in the pathway between psychological safety and adaptive performance (Beta=0.029 p=0.024). Thus, the null hypothesis 4zi about the no significant mediation effect of autonomous orientation in the psychological safety-adaptive performance relationship was not accepted. The remaining no significant predictions in null hypothesis 4zi (see Appendix A4) about the psychological conditions-causality orientations-adaptive performance mediation effects were retained.

The positive and significant mediation effects of autonomous orientation agree with a related finding that autonomous motivation perfectly mediated work effort (Kuvaas et al., 2016). This finding supports the claim by Kahn (1990) and Schaufeli et al. (2002) that employees' experiences of psychological conditions, such as psychological safety, lead to feeling high levels of energy, mental resilience, active involvement, enthusiasm and challenge, concentration and engrossment in one's work. Thus there is a linkage between psychological safety as explained by employee engagement theory (Kahn, 1990) and

autonomous orientation as captured by the conceptual framework (Figure 1). This corroborates the acceptability of responsibility (Ryan & Deci, 2006) and high levels of willingness (Deci et al., 2017) of the autonomous-oriented as captured by the causality orientation theory.

The results regarding autonomous orientation could also be explained by its associations with variables that promote psychological well-being, such as the psychological conditions (van Beek, Taris & Schaufeli, 2011). Hagger and Chatzisarantis (2011) point out that autonomous causality-oriented people tend to assess rewards and other environmental exigencies as an opportunity to show competence. Furthermore, Gillet, Fouquereau, Marc-Andre and Huyghebaert (2016) explained that autonomous-oriented individuals experience a sense of desire and self-commendation for their actions, resulting in positive outcomes.

Additionally, impersonal orientation significantly and negatively mediated the effect of social reward on adaptive performance (Beta=-0.019; p=0.043). This points out that the combined effects of social reward and impersonal orientation tend to lower Ghanaian public sector nurses' abilities to be involved in adaptive performance during changing work demands. The negative finding relating to impersonal orientation might be associated with Deci and Ryan's (1985a) characterisations of impersonal orientation as individuals who feel incompetent and incapable of regulating their behaviour, including adapting to alterations in work situations.

As a result, the null hypothesis 4zii, which proposed a no significant mediation effect for the impersonal orientation component of the causality orientations in the relationship between social reward and adaptive performance

was rejected. The finding is in agreement with the social exchange theory (Blau, 1964) and the causality orientation theory (Ryan, 2009) and the proposed direction of mediation in the conceptual framework (Figure 1). Coyle-Shapiro and Shore (2007) emphasised that social exchange involves interdependence in which actors, including nurses, recognise that providing a benefit generates the obligation to reciprocate. This obligation to respond to the provision of social reward resulted in a significant and negative effect on adaptive performance because, in Hagger et al.'s (2015) view, responding to organisational practices tends to be affected by individual differences in causality orientations.

The serial mediation effect of the psychological conditions, employee engagement and causality orientations on the relationship between social reward and adaptive performance was insignificant. This finding does not correspond with the outcomes expected in the study's conceptual framework (Figure 1) that psychological conditions, employee engagement, and control/impersonal orientations mediate the relationship between social reward and adaptive performance. Consequently, the null hypothesis 4zii, which proposed a no significant serial mediation effects was not rejected.

#### **Serial Mediation role of Psychological Conditions, Employee Engagement and Causality Orientations in the Relationships between Social Rewards and Counterproductive Performance or Behaviour**

Employee performance includes counterproductive performance, which are employee behaviours that hinder organisational goals (Motowidlo et al., 1997). Counterproductive work behaviours are employees' deliberate behaviours that infringe organisational rules and threaten the organisation, members, and supervisors' good (Fox & Spector, 1999). In order to unravel

some of the myriads of factors that drive this behaviour, the analysis focuses on how nurses' psychological conditions, employee engagement and causality orientation in a sequential mediation fashion expatiate the relationship between social reward and counterproductive performance or behaviour.

The evaluation of the structural model results representing the coefficient of determination, effect size, path coefficient and p-values are in Table 32 (Appendix I4). The result shows that changes in control, autonomous and impersonal causality orientations, meaningfulness, safety, availability, social reward and employee engagement jointly accounted for a substantial 19.2 percent variance in counterproductive performance ( $R^2=0.192$ ). The strengths of the individual effects indicated that except for the small significant contributions of impersonal orientation ( $f^2=0.068$ ) and meaningfulness ( $f^2=0.020$ ), all the other paths towards counterproductive behaviour were insignificant (see Table 32 in Appendix I4).

Assessment of the results in Table 32 (Appendix I4) shows that impersonal causality orientation had a significant and positive predictive effect on counterproductive performance ( $\text{Beta}=0.287$ ;  $p=0.0001$ , such that high levels of impersonal orientation of the nurses resulted in increased counterproductive activities. Legault (2017) asserts that impersonal causality-oriented individuals experience a sense of helplessness and detachment from their work, which possibly explains their involvement in these activities. This aligns with the causality orientations theory's characterisation of impersonal causality orientation dispositions towards behaviour (Olesen et al.; 2010; Ryan, 1982; Ryan, 2009). The finding supports the impersonal orientation-counterproductive performance linkage in the conceptual framework (Figure 1),

leading to the rejection of the null hypothesis 4giii that the relationship was not significant.

Contrary to the significant effect of impersonal orientation on counterproductive behaviour, the effects of autonomous orientation (Beta=0.050; p=0.150) and control orientation (Beta=0.048; p=0.197) were positive and statistically insignificant. These resulted in not rejecting the null hypotheses 4gi and 4gii, which predicted that the relationships were not significant. The finding of positive and insignificant association between autonomous and counterproductive behaviour is related to that of Bureau, Mageau, Morin and Gagne (2018) that autonomous causality orientation characteristics of taking personal decisions about work and choice at the workplace lower deviant behaviours because of their motivation towards work. Thus, the statistically negligible positive effect.

From Table 33 (Appendix I5), the effect of psychological safety on counterproductive behaviour through impersonal orientation was significant and positive (Beta=0.048; p=0.014), signifying that nurses' freedom from the fear of harm to the self on feelings of incapability does not reduce counterproductive activities. This finding parallels the mediation relationship proposed in the conceptual framework (Figure 1). The finding also backs Malinowska and Tokarz's (2020) conclusion based on the causality orientation theory that causality orientations affect individuals' perception of their social environment, including feeling freedom from fear of harm, which has implications for potential motivational outcomes, including counterproductive activities. As a result, the null hypothesis 4ziv that impersonal orientation did

not significantly mediate the psychological safety-counterproductive behaviour relationship was not supported.

The paths between psychological safety and counterproductive behaviour via control orientation (Beta=0.010;  $p=0.239$ ) and autonomous orientation (Beta=0.011;  $p=0.186$ ) were insignificant and positive. Besides, the mediation roles of control orientation (Beta=0.006;  $p=0.341$ ) and autonomous (Beta=0.004;  $p=0.494$ ) in the path between psychological meaningfulness and counterproductive behaviour were insignificant and positive, while it was insignificant and negative for impersonal orientation (Beta=-0.034;  $p=0.100$ ). The psychological availability-causality orientations-counterproductive behaviour was insignificant and positive for impersonal orientation, insignificant and negative for control orientation and field mediation for autonomous orientation (see Table 33 in Appendix I5). Thus, the null hypothesis 4zv that these relationships were not significant was not rejected.

As can be seen from Table 33 (Appendix I5), the effects of employee engagement on counterproductive via the causality orientations show that except for the mediation role of impersonal orientation that was significant and negative (Beta=-0.053;  $p=0.016$ ), that for autonomous orientation and control orientation were insignificant and negative. The significant effect of employee engagement on impersonal orientation tends to lower counterproductive behaviours. This finding is related to Bilal's (2017) finding that employee engagement was significantly and negatively related to counterproductive behaviour.



The finding that impersonal orientation significantly and negatively mediates the pathway between employee engagement and counterproductive behaviour matches the employee engagement theory (Kahn, 1990). The proposition is that because engaged employees deploy their physical, emotional and mental selves at work, they tend to produce positive outcomes, such as minimising tendencies to feel incapable and worthless (Wong, 2000) and counterproductive behaviours (Bilal, 2017). The null hypothesis 4ziv of no significant mediation for impersonal orientation was invalidated along this line, while that for autonomous and control orientations was not rejected.

The mediation effect of impersonal orientation in the relationship between social reward and counterproductive behaviour was significant (Beta=0.060; p=0.0001). In contrast, the mediation with autonomous (Beta=0.004; p=0.314) and control (Beta=0.008; p=0.232) orientations were insignificant and positive (see Table 33 in Appendix I5). Thus, social reward affects impersonal oriented nurses to increase counterproductive activities substantially. These findings corroborated Shore et al.'s (2009) argument that individual differences explain the returning of a kind gesture, such as rewarding employees, and consequently, different levels of the outcome, including counterproductive behaviour. Thus, while the significant social reward-impersonal orientation-counterproductive behaviour relationship aligns with the social exchange and causality orientation theories, the null hypothesis 4zvi of no significant effect was not supported.

The serial mediation of the psychological conditions and the causality orientations in the relationship between social reward and counterproductive behaviour revealed that the serial mediation effect of psychological safety and

impersonal orientation was significant and positive (Beta=0.028; p=0.017). This finding converges with the theoretical argument in this study that employees' psychological conditions and their individual disposition are mechanisms through which rewards are linked to employee performance. Thus, the null hypothesis 4zvii of no significant effect for the serial mediation of psychological safety and impersonal orientation in the social reward-counterproductive behaviour was rejected. A related finding for the role of impersonal orientation by Malinowska and Tokarz (2020) indicated that resources, including social support and feedback and employee engagement, were linked with high impersonal orientations.

Employee engagement and impersonal orientation significantly and negatively serially mediated the effect of social reward on counterproductive behaviour (Beta=-0.010; p=0.025). This confirms the theoretical integration argument that despite social exchange theory being a valuable explanation for two-way exchanges, the employee engagement theory and the causality orientation theory complement to explain the relationship. This finding is consistent with the serial mediation effect predicted in the conceptual framework's (Figure 1). Thus, the finding did not support the no significant relationship regarding impersonal orientation as hypothesised in the null of 4zviii, while the null hypothesis 4zviii of no significant mediation effect regarding the serial mediations of employee engagement and control orientation (Beta=-0.003; p=0.221) and employee engagement and autonomous orientation (Beta=0.000; p=0.831) were retained.

The results in Table 33 (Appendix I5) show that there was a significant and negative serial mediation for the psychological meaningfulness-employee engagement-impersonal orientation-counterproductive behaviour relationship (Beta=-0.027; p=0.018). The serial mediation effects of employee engagement and impersonal orientation, and for employee engagement and autonomous orientation in the psychological meaningfulness-counterproductive behaviour, psychological safety-counterproductive behaviour and psychological availability-counterproductive behaviour relationships showed either failed or insignificant serial mediation effects (see Table 33 in Appendix I5). These results did not support the conceptual framework's (Figure 1) argument that there were serial mediation effects.

The finding that employee engagement and impersonal orientation significantly mediated the relationship between psychological meaningfulness and counterproductive behaviour is related to Bilal (2017), Franks (2017) and Rai et al.'s (2018) positions that psychological conditions and employee engagement are critical factors that affect the process through which employee rewards relate to employee performance. It is also related to De Gieter and Hofmans'(2015) assertion that individual differences could determine the strength of rewards' effect on performance. The null hypothesis 4zix that there was no significant serial mediation effect for employee engagement and impersonal orientation in the meaningfulness-counterproductive behaviour effect was therefore not confirmed. The null hypothesis was accordingly rejected.

The mediation role of psychological conditions, employee engagement and causality orientations in the relationship between social reward and counterproductive behaviour in Table 33 (Appendix I5) show a significant and negative mediation of psychological meaningfulness, employee engagement and impersonal orientation in the relationship between social reward and counterproductive behaviour (Beta=-0.015; p=0.021). There were failed or insignificant serial mediation effects for the other psychological conditions, employee engagement and the other causality orientations in the relationship between social reward and counterproductive behaviour (see Table 33 in Appendix I5).

The results imply that the direct relationship between social reward and counterproductive behaviour of public sector nurses in Ghana can be explained by their experiences of psychological meaningfulness, employee engagement and impersonal orientation. This invalidates the no significant null hypothesis 4zx relating to meaningfulness and impersonal orientations. This serial mediation result backs the proposed direction in the conceptual framework (Figure 1). The finding also supports the social exchange, employee engagement and causality orientation theories. These are based on the argument that due to weakness in social exchange theory's assumption of human rationality (Redmond, 2015), psychological states such as meaningfulness and causality orientations such as impersonal orientation are vital in explaining the relationship.

## Summary

In this chapter, as depicted by the conceptual framework (Figure 1), the serial mediation of psychological conditions, employee engagement and causality orientations in the predictive role of social reward on employee performance were analysed. The analysis showed that autonomous orientation was a significant positive predictor of contextual performance, while impersonal orientation was a significant and negative predictor of contextual performance. The chapter also revealed that the effects of employee engagement on impersonal orientation and control orientation were significant and negative. The chapter further found significant and positive serial mediations for social reward, employee engagement, control orientation and contextual performance, and the serial mediation path for psychological meaningfulness, employee engagement, control orientation and contextual performance.

Additionally, the chapter showed that adaptive performance was significantly and positively predicted by autonomous orientation and control orientation. Besides, there was a significant and negative effect of impersonal orientation on adaptive performance. The results also indicated that autonomous orientation mediated the pathway between psychological safety and adaptive performance significantly and positively. Impersonal causality orientation had a significant and positive predictive effect on counterproductive performance or behaviour.

## CHAPTER NINE

### SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

#### Introduction

The study aims to examine the mediating roles of psychological conditions, employee engagement, and causality orientations in the relationship between employee rewards and the performance of public sector nurses in Ghana. This chapter presents the summary of the thesis. The chapter covers a summary of the research processes. It also includes the major findings of the thesis, the conclusions drawn and recommendations based on the findings. The chapter also presents the contribution of this study to knowledge, the limitations of the study, and associated suggestions for future research.

#### Summary

The study focused on the roles of psychological conditions, employee engagement and causality orientations in the relationship between employee rewards and the performance of public sector nurses in Ghana. The study was limited to the social reward type of employee rewards and three performance types, contextual, adaptive and counterproductive performance or behaviour. Six objectives guided the study. The first objective was to determine the nurses' perceptions of social rewards. The second objective was to determine their level of performance. The third objective focused on ascertaining the effect of employee rewards on nurses' performance. The fourth, fifth and sixth objectives were to assess the simple and serial mediating roles of psychological conditions, employee engagement and causality orientations in the relationship between employee rewards and nurses' performance.

The mixed-methods research approach with a tilt towards the quantitative approach was used for the study. The sequential explanatory mixed-method design was used for the study. Seven hundred and sixty-one registered and enrolled public sector nurses were selected from 14 hospitals in 14 MMDAs in eight regions. The sampling technique was multistage sampling. Ten key informants for the qualitative study were selected through purposive sampling. Data were collected through a questionnaire for the quantitative data and key informant interviews for the qualitative aspect. The quantitative data were analysed using the PLS-SEM, and the qualitative data were analysed using thematic inductive analysis.

The analysis of the results and the discussions of the findings revealed some key findings. These findings are presented according to the objectives of the study. The key findings relating to nurses' perception of employee rewards conceptualised as social rewards are subsequently presented:

1. There was high satisfaction with social rewards even though mistrust among the nurses hinders the level of satisfaction, as revealed by key informants. Registered nurses (5.09) and male nurses (5.13) had higher mean satisfaction with social rewards than the enrolled nurses (4.98) and female nurses (5.02).
2. Key informants perceived that social reward was inevitable and a critical motivational factor in nursing practice, affecting nurses' performance. The effect of the reward on adaptive performance ( $p= 0.788$ ) and contextual performance ( $p= 0.970$ ) was more or less the same for male nurses and female nurses but significantly different among them for counterproductive behaviour ( $p=0.010$ ).

The second objective was to determine the level of performance of public sector nurses in Ghana. The key findings are that:

1. Contextual performance of key informants of public sector nurses was generally high, with a quantitative mean score of 4.12. Average contextual performance levels show that registered nurses (4.14) and male nurses (4.18) were only marginally more involved in contextual performance compared to that of enrolled nurses (4.06) and female nurses (4.09).
2. In Ghana, key informant public sector nurses were involved in counterproductive behaviours, albeit at low levels, due to personal values, moral standards and the unethical nature of the behaviour. Comparatively, registered nurses' mean score (1.62) on counterproductive performance was slightly above that of enrolled nurses (1.38), while those for male nurses (1.53) were lower than those of female nurses (1.57).
3. The key informants' adaptive performance among the public sector nurses in Ghana was high. Generally, registered nurses' average adaptive performance activities (4.79) were marginally above those of enrolled nurses (4.74). Male nurses' adaptive performance (4.88) was also higher than the adaptive performance of female nurses (4.72).

The third objective focused on ascertaining the predictive effect of employee rewards on nurses' performance. The results of the effect of employee rewards on nurses' performance showed that:

1. Social rewards had a relatively more significant and positive effect on contextual performance ( $\text{Beta}=0.520$ ;  $p=0.0001$ ) than on adaptive



performance (Beta=0.427;  $p=0.0001$ ), with no significant differences existing between male and female nurses for adaptive performance ( $p=0.788$ ) and contextual performance ( $p=0.970$ ). While social reward predicted contextual performance, commitment to work, resource constraints, nursing as a social service, and reciprocity also promoted contextual performance. Personal reasons, nature of the nursing profession, protocols, and clients' welfare also accounted for adaptive performance.

2. There was a substantial difference between registered nurses' and enrolled nurses' responses to social reward in terms of contextual performance or extra-role activities ( $p=0.004$ ).

3. Social reward was a negative predictor of counterproductive performance or behaviour (Beta=-0.096;  $p=0.048$ ), with a substantial difference between male and female nurses ( $p=0.010$ ). The nurses' values, moral standards, adherence to rules and damage to reputation also accounted for counterproductive performance.

The fourth objective was to assess the mediating role of psychological conditions in the relationship between employee rewards and nurses' performance. The key findings related to this objective are presented below:

1. Psychological meaningfulness had the highest mean score (5.60), followed by psychological availability (5.47) and psychological safety (5.23), indicating that the nurses experience quite high levels of each of these psychological conditions. The mean scores for enrolled and registered nurses and male and female nurses were all above 5.0.

However, registered and male nurses experienced slightly higher levels of each psychological condition than enrolled and female nurses.

2. There were significant and positive effects in the predicted relationships between psychological availability (Beta=0.447;  $p=0.0001$ ), psychological meaningfulness (Beta=0.350;  $p=0.0001$ ) and contextual performance, with the former being the stronger predictor.
3. It was found that social reward was a significant positive predictor of psychological availability (Beta=0.470;  $p=0.0001$ ), psychological meaningfulness (Beta=0.481;  $p=0.0001$ ) and psychological safety (Beta=0.558;  $p=0.0001$ ), with psychological safety having the most substantial effect.
4. Psychological meaningfulness (Beta=0.166;  $p=0.0001$ ) and psychological availability (Beta=0.210;  $p=0.0001$ ) significantly and positively mediated the predictive relationship between social reward and contextual performance.
5. Psychological availability and psychological safety were significant positive predictors of adaptive performance at (Beta=0.282;  $p=0.0001$ ) and (Beta=0.344;  $p=0.0001$ ), respectively.
6. There were positive and significant relationships between social reward and adaptive performance through psychological availability (Beta=0.133;  $p=0.0001$ ) and psychological safety (Beta=0.192;  $p=0.0001$ ).
7. The study revealed that psychological meaningfulness (Beta=-0.467;  $p=0.0001$ ) significantly and negatively predicted counterproductive performance and, in the same manner, mediated the relationship (Beta=-

0.225;  $p=0.0001$ ) between social reward and counterproductive performance. Additionally, psychological safety was a substantial and positive mediator between social reward and counterproductive performance (Beta=0.080;  $p=0.010$ ).

8. The study found quite high average levels of the experience of psychological safety (5.23) among the nurses. There was a negative association between psychological safety and contextual performance (Beta=-0.010;  $p=0.409$ ), contradicting the employee engagement theory proposition that the experience of psychological safety leads to a positive outcome, including increasing contextual performance. Similarly, the study revealed a positive and significant relationship between psychological safety and counterproductive performance (Beta=0.141;  $p=0.008$ ), defiling the employee engagement theory's proposition of positive effects, including reducing counterproductive performance or behaviours.

Objective five concerned the serial mediation of psychological conditions and employee engagement in the relationship between employee rewards and nurses' performance. The notable related findings were as follows:

1. There were relatively high levels of employee engagement among the nurses with a mean value of 4.72, with slightly higher levels for registered nurses (4.75) and female nurses (4.72) than for male nurses (4.71) and enrolled nurses (4.64).
2. A substantial and positive relationship existed between social reward and employee engagement (Beta=0.202;  $p=0.0001$ ).

3. Social reward's effect on adaptive performance was significant and positive through employee engagement (Beta=0.243; p=0.0001).
4. There were positive and significant effects of psychological availability (Beta=0.239; p=0.0001) and psychological meaningfulness (Beta=0.495; p=0.0001) on employee engagement. In a feedback fashion not anticipated by the employee engagement theory, it was found that a unit change in employee engagement led to a 0.925 change in psychological meaningfulness, a 0.932 change in psychological availability and a 0.965 change in psychological safety.
5. The indirect path from social reward to contextual performance through the psychological conditions and employee engagement revealed that the mediating effect with psychological meaningfulness and employee engagement had the most substantial positive serial mediating effect (Beta=0.170; p=0.0001). This was followed by psychological safety and employee engagement (Beta=0.051; p=0.001) and psychological availability and employee engagement (Beta=0.066; p=0.0001).
6. The effect of social reward on counterproductive behaviour through psychological meaningfulness (Beta=-0.060; p=0.0001), availability (Beta=-0.023; p=0.0001), psychological safety (Beta=-0.018; p=0.003), and employee engagement were significant and negative.
7. There were statistically significant and negative mediation effects through employee engagement in the predictive relationship between psychological meaningfulness (Beta=-0.126; p=0.0001), psychological availability (Beta=-0.048; p=0.0001), and psychological safety (Beta=-0.032; p=0.002) and counterproductive performance.

8. It was established that serial mediation effects of the psychological conditions and employee engagement in the relationship between social reward and adaptive performance had a significantly positive higher effect for psychological meaningfulness (Beta=0.130; p=0.0001) than for availability (Beta=0.050; p=0.0001) and psychological safety (Beta=0.040; p=0.001).

Objective six focused on the serial mediation of psychological conditions, employee engagement and causality orientations in the relationship between employee rewards and nurses' performance. The key related findings are listed below:

1. The mean scores of the causality orientations show that female nurses were largely more autonomous-oriented (4.60) and impersonal-oriented (3.30) than male nurses' (4.56) and (3.16), respectively. On the other hand, male nurses (3.60) possess slightly higher control-oriented tendencies than female nurses (3.54).
2. The study found that autonomy orientation was a significant positive predictor of contextual performance (Beta=0.105; p=0.0001), while control orientation (Beta=-0.094; p=0.004) and impersonal (Beta=-0.051; p=0.048) were significant negative predictors of contextual performance.
3. Contrary to the causality orientation theory proposition that the control causality-oriented employees' behaviours are motivated by rewards, it was found that high levels of control causality orientation increased adaptive performance (Beta=0.109; p=0.014), which is usually not rewarded.

4. The effects of employee engagement on impersonal and control orientations were significant and negative at  $\text{Beta}=-0.268$ ;  $p=0.0001$  and  $\text{Beta}=-0.196$ ;  $p=0.006$ , respectively.
5. The study revealed significant and positive serial mediations for social reward, employee engagement, control orientation and contextual performance ( $\text{Beta}=0.005$ ;  $p=0.024$ ) relationship. Additionally, the serial mediation path for psychological meaningfulness, employee engagement, control orientations and contextual performance was substantial and positive ( $\text{Beta}=0.014$ ;  $p=0.027$ ).
6. Adaptive performance was significantly and positively predicted by autonomous orientation ( $\text{Beta}=0.144$ ;  $p=0.0001$ ) and control orientation ( $\text{Beta}=0.109$ ;  $p=0.014$ ). There was a significant and negative effect of impersonal orientation on adaptive performance ( $\text{Beta}=-0.090$ ;  $p=0.025$ ).
7. Autonomous orientation mediated the pathway between psychological safety and adaptive performance significantly and positively ( $\text{Beta}=0.029$ ;  $p=0.024$ ).
8. Impersonal causality orientation had a significant and positive predictive effect on counterproductive performance ( $\text{Beta}=0.287$ ;  $p=0.0001$ ), such that high levels of impersonal-orientedness of the nurses resulted in increased counterproductive activities.
9. Significant and negative mediation of psychological meaningfulness, employee engagement and impersonal orientation existed between social reward and counterproductive behaviour ( $\text{Beta}=-0.015$ ;  $p=0.021$ ). On the other hand, the indirect pathway of the effect of social reward on

contextual performance via psychological meaningfulness, employee engagement and control orientation was significant and positive (Beta=0.008; p=0.031).

## Conclusions

The nurses generally perceived employee rewards in a positive light. Social rewards were perceived as a source of motivation. The provision of social rewards, such as providing feedback, courteousness, emotional support, caring for employee well-being, and recognising a good job, was a source of inner satisfaction, emanating from the nurses' perception of social reward as a sign of mutual respect. Comparatively, registered nurses and male nurses were likely to have higher satisfaction with social rewards than enrolled and female nurses. The results also indicated that mistrust and the absence of a social reward policy lower social reward.

The performance of the nurses depended on the type of performance. While their contextual and adaptive performance were high, the performance with respect to counterproductive behaviour was low. That is, the nurses, to a large extent, performed beyond their prescribed roles, including helping others, promoting the organisation's interests, and staying after closing to help with work, with registered and male nurses doing better than enrolled nurses and female nurses. The nurses also largely could manage stress, work in uncomfortable situations and make quick decisions when there are alterations in their work situations. The nurses exhibited low counterproductive performance. Essentially, they reported on time for work, stayed till closing and worked according to schedule. They exhibited positive personal values, and abided by ethical and moral standards.

Higher employee rewards generally led to higher or improved performance. Social rewards enhance adaptive performance and contextual performance, irrespective of whether they are male or female nurses. Nurses who receive social rewards were likely to perform beyond their assigned roles, including staying after closing to help others and adapting to changing work situations, such as coping with stress and making quick and effective decisions. Social rewards also dampen nurses' counterproductive performance such that nurses that receive social rewards are likely to reduce activities that are detrimental to the organisation, colleagues and patients, with substantial differences between male and female nurses but not between registered and enrolled nurses.

The mediation effect of psychological conditions on the relationship between employee reward and performance depends on the type of psychological condition and performance. While social reward positively affected adaptive performance and contextual performance through the feeling of safety, perceiving the job as valuable, freedom from fear of harm and confidence in ability, social reward negatively affected counterproductive behaviour through the nurses' feelings about their jobs' value. This means that when nurses receive social rewards and experience freedom from the fear of harm, value their jobs, and become confident; they are likely to perform extra roles and positively adjust to changing work situations. On the other hand, nurses who are provided social rewards and have felt that their jobs were valuable tend to engage less in harmful behaviours at work, including deliberate lateness, stealing and leaving before closing.



The psychological conditions and employee engagement positively or negatively mediate the relationship between employee reward and performance depending on the type of employee performance. That is, receiving social rewards is likely to enhance the nurses' feelings that their jobs are valuable, experience freedom from fear of harm and experience of confidence. These will boost their enthusiasm at work, thereby increasing their extra-role activities and their ability to manage stress and work in uncomfortable conditions. On the other hand, social reward reduces stealing and deliberate slowing down of work or lateness, indirectly as the feelings of having a valuable job, confidence in ones' ability, freedom from the fear of harm and enthusiasm about work increase.

The psychological condition of meaningfulness, employee engagement and causality orientations positively or negatively mediated the relationship between employee rewards and employee performance depending on the types of causality orientation and employee performance. The effect of social reward on contextual performance through perceived job value, enthusiasm and pleasing others was positive and substantial, but substantially and negatively with nurses who lack confidence in their ability for counterproductive performance. Social rewards are likely to stimulate how nurses value their jobs, which relates positively to their enthusiasm, their tendency to please others and subsequently positively affects extra-role activities. In contrast, the combined positive effects of social rewards, such as emotional support, on nurses' feelings about the value of their jobs, enthusiasm and feelings of incompetence are likely to reduce stealing and lateness.

Generally, the study indicates that the feeling about doing a valuable job, enthusiasm and dedication and individual dispositions played enhancing roles in the employee reward-performance relationships of the public sector nurses. For instance, as proposed in the conceptual framework (Figure 1), the relationship between social rewards and extra performance was substantially explained by nurses' perceptions of doing a valuable job. Confidence in their ability, lack of fear of the self at work, emotional, mental and physical involvement in job performance, and working in line with their interests and desires also promoted extra-role performance.

### **Recommendations**

Based on the key findings and the conclusions, I suggest that public sector nurses should:

1. Seek training on social rewards to boost the rewards' effective use as an essential motivational tool. The training will ensure an adequate and continuous provision of the reward to sustain its enhancing impacts on the nurses' ability to respond favourably to changing work situations, perform beyond the prescribed roles, and reduce detrimental behaviours such as stealing and deliberate lateness to work. Employee rewards experts in the public health service or their agents should administer the training. This can be achieved by annual refresher training programmes on social rewards for the nurses at the various public hospitals.
2. Through nurse managers request for the creation of conditions that promote an atmosphere for employee engagement or address hindering factors. This will ensure that the nurses' enthusiasm and dedication, which are non-monetary factors, are utilised to optimise nurses'

performance and identify enthusiasm and dedication levels, problems and measures to help sustain enthusiasm and dedication. The nurses through nurse managers at public hospitals should be responsible for creating a climate for employee engagement by providing prompt feedback and emotional support and showing concern. They should also conduct annual employee engagement surveys, using instruments developed in this study or the Utrecht Employee Engagement Scale developed by May et al. (2004).

3. Request through nurse managers to the Human Resources Division of the Ghana Health Service (HRDGHS) to institute a "Public Sector Nurse Dispositional Enhancement Policy Document" to classify nurses in the public sector based on their individual characteristics that influence their performances. This document will assist in identifying and helping, for instance, nurses who experience feelings of incompetence, which is associated with high counterproductive activities such as stealing and lateness to work. The classification should be carried out by the nurses in partnership with the HRDGHS and their agents in the MMDA health directorates. Existing survey instruments, such as the general causality orientation scale or this study's instrument can be used for the classification. The survey should be done annually to update the document regularly.

4. Request the HRDGHS to use individual characteristics identification tests for applicants seeking to join nursing in the public sector or for admission into the public nursing training institutions. This will help to identify the distinct individual dispositional characteristics such as

having feelings of incompetence and the desire to please others, which are associated with counterproductive behaviours such as stealing, deliberately slowing down work and lateness to work. The nurses through the HRDGHS should be responsible for the implementation, using individual characteristics identification scales, such as the general causality orientation scale, or the scale used for this study for the assessment. This should be done before entering into the public-funded nursing training institutions and before appointment of those trained in private institutions as public sector nurses.

5. Through the Nursing and Midwifery Council request the Human Resource Management and Development Directorate (HRMDD) of the MOH of Ghana to introduce courses on social rewards, applying the emotional, mental and physical aspects at work, developing feelings of a valuable job, competence and freedom from the fear of harm to self-image at work into the nurses' training curriculum. The rationale is to promote knowledge of these concepts at the training institutions because they promote nurses' performance during practice. The nurses through the Nursing and Midwifery Council and the Human Resource Training and Development Unit of the HRMDD should be responsible for implementing this recommendation. This recommendation can be implemented by reviewing the nursing training curriculum during the next curriculum view.

Senior nurses are also advised to:

1. Address the problem of mistrust, which lowered the level of social rewards among the nurses. Addressing this problem will ensure that

providing feedback, courteousness, and showing concern for nurses' well-being are improved, resulting in a possibility of higher performance. Senior nurses should address the problems of mistrust at departmental levels by investigating the sources of the mistrust and taking steps for its elimination or minimisation. Also, the senior nurses should always promote understanding and open interaction in the workplace.

2. Collaborate with the hospital management to organise ethics and moral standards seminars for nurses since it was associated with low levels of counterproductive behaviours, such as reporting late for work, leaving before closing and deliberately slowing down work. The seminars will enlighten participants on any new ethical and moral standards in the nursing profession relating to performance and reinforce its benefits. In collaboration with hospital management, senior nurses responsible for each hospital should organise the seminar annually.

### **Contributions to Knowledge**

Contributions to research knowledge are usually based on addressing research gaps in a particular study area. Along this line, this study filled some gaps. Firstly, studies on employee reward and performance relationships, particularly among public sector nurses, focused on extrinsic and extrinsic rewards and, severally, conceptualised employee performance as a single construct. This study focused on social reward, which has received little attention and linked it with three employee performance types. It was established that social reward significantly and positively predicted adaptive

and contextual performance but was negatively related to counterproductive performance.

Secondly, employee reward-performance studies that relied on the social exchange theory mainly focused on cost and benefit analysis. This study adds to knowledge as it integrated the social exchange theory with the employee engagement theory and the causality orientation theory to explain the social reward-employee performance relationships of the public sector nurse in Ghana. This helped to further explain the mechanisms through which employee rewards relate to performance. Thus, the study found that psychological conditions, employee engagement, and causality orientations variedly explain how social reward was linked to adaptive, contextual and counterproductive performances of public sector nurses in Ghana.

Thirdly, the conceptual framework that I developed from the above theoretical integration can be useful in further research, particularly related to the employee reward and performance exchange relationships. This framework can guide employee reward and performance studies and all employer-employee exchange processes in human resource management.

Fourthly, the study's contribution to knowledge was in addressing a methodological gap. Previous studies related to the current study, particularly in the Ghanaian context, relied on direct relations and simple mediation analysis. In serial and parallel mediations, none of the studies used psychological conditions, employee engagement and causality orientations to investigate the relationship between social rewards and adaptive, contextual and counterproductive performance or behaviours. By addressing this methodological gap, this study found that the psychological conditions,

employee engagement and the causality orientations significantly and insignificantly contributed to explaining the processes through which social reward relates to employee performance. Furthermore, the mixed-method approach of the study through a sequential explanatory study design improved the understanding of the studied relationships.

### Limitations

One limitation of this study is that multilevel analyses were limited to the type of nurse and sex in the predictive relationship between employee rewards and nurses' performance and not to the other established relationships. However, the effect of age of nurses, their marital status, work experience, their locations, facilities in the hospitals where they work and years of training were omitted in the relationships established. These omissions suggest that the findings in this study failed to account for their impact on the constructs studied, such as employee engagement, psychological conditions, causality orientations, adaptive performance, contextual performance and counterproductive performance or behaviour. Notwithstanding this deficit, researchers rarely account for all possible variables in their study and analysis, especially in this case where the theoretical integration and how the constructs were linked lacked sufficient support in extant literature.

Another shortfall is that this study considered only social rewards as against extrinsic and intrinsic rewards. The inclusion of these reward types would have broadened the comprehension of how each reward type was related to the dependent variables in this study. However, this lapse was necessary because of the limited attention focused on social reward in empirical studies, especially in the Ghanaian context. Similarly, even though employee

performance is grouped into process performance and outcome performance, this study focused on process performance, adaptive performance, contextual performance or organisational citizenship behaviour, counterproductive performance or behaviour, and neglected outcome performance or task performance.

### Suggestions for Further Research

Following the limitations of this study, I suggest that future research should:

1. Examine the social reward and employee performance relationship with a focus on multilevel analysis that includes factors such as the age of public sector nurses, years of experience, location of nurse and years of training;
2. Investigate the effects of age, sex, type of nurse, work experience, years of training and location of the nurse on the social reward, psychological conditions, causality orientation and performance relationships;
3. Assess the roles of psychological conditions, employee engagement and causality orientations in the relationship between extrinsic/intrinsic rewards and process performance;
4. Examine the mediating roles of psychological conditions, employee engagement and causality orientations in the relationships between extrinsic/intrinsic rewards and outcome performance or task performance.



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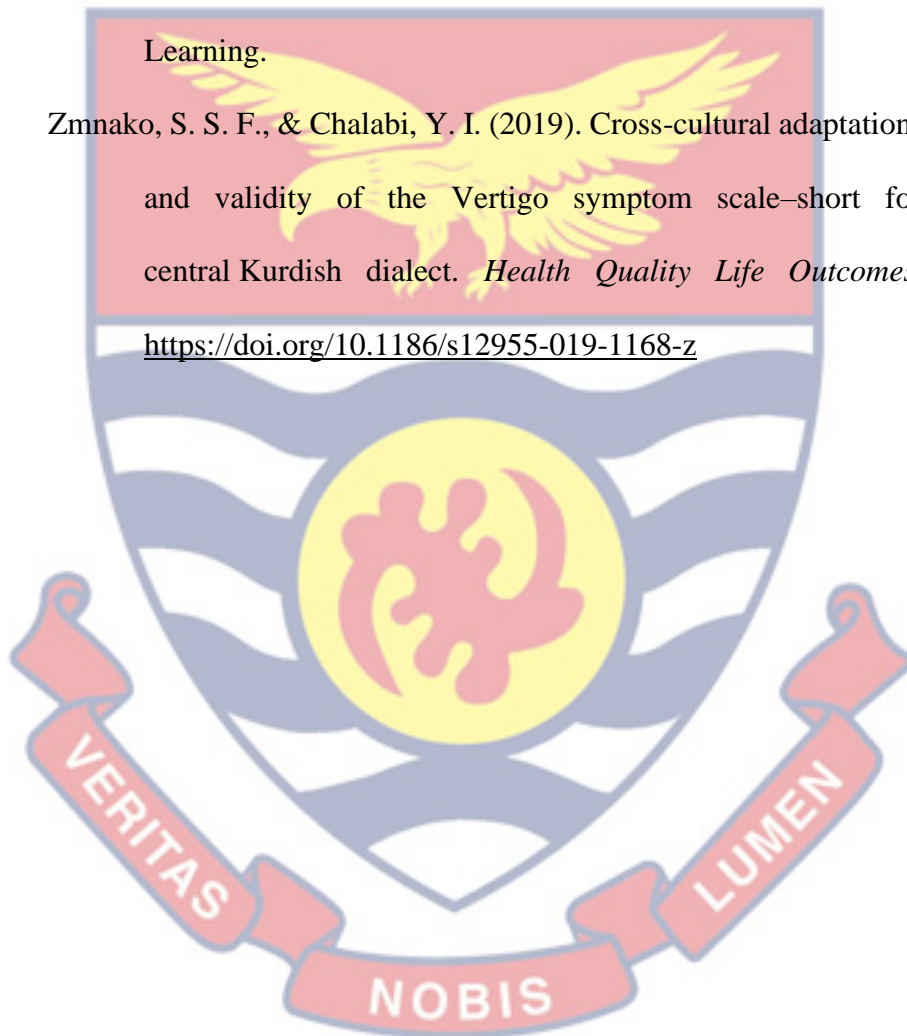
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## APPENDICES

### APPENDIX A1

#### SUB HYPOTHESES OF THE EFFECT OF EMPLOYEE REWARDS ON NURSES' PERFORMANCE

Null Hypothesis 1: There is no significant predictive relationship between employee rewards and nurses' performance.

a. H<sub>0</sub>: There is no significantly predictive relationship between social reward and adaptive nurses' adaptive performance.

Ha: There is a significantly predictive relationship between social reward and nurses' adaptive performance.

b. H<sub>0</sub>: There is no significantly predictive relationship between social rewards and nurses' contextual performance.

Ha: There is a significantly predictive relationship between social reward and nurses' contextual performance.

c. H<sub>0</sub>: There is no significantly predictive relationship between social reward and adaptive nurses' counterproductive performance.

Ha: There is a significantly predictive relationship between social reward and nurses' counterproductive performance.

d. i. H<sub>0</sub>: There is no significant difference between male nurses and female nurses in the relationship between social reward and adaptive performance.

Ha: There is a significant difference between male nurses and female nurses in the relationship between social reward and adaptive performance.

ii. H<sub>0</sub>: There is no significant difference between male nurses and female nurses in the relationship between social reward and contextual performance.

Ha: There is a significant difference between male nurses and female nurses in the relationship between social reward and contextual performance.

iii. a.  $H_0$ : There is no significant difference between male nurses and female nurses in the relationship between social reward and counterproductive performance.

$H_a$ : There is a significant difference between male nurses and female nurses in the relationship between social reward and counterproductive performance.

e. i.  $H_0$ : There is no significant difference between registered nurses and enrolled nurses in the relationship between social reward and adaptive performance.

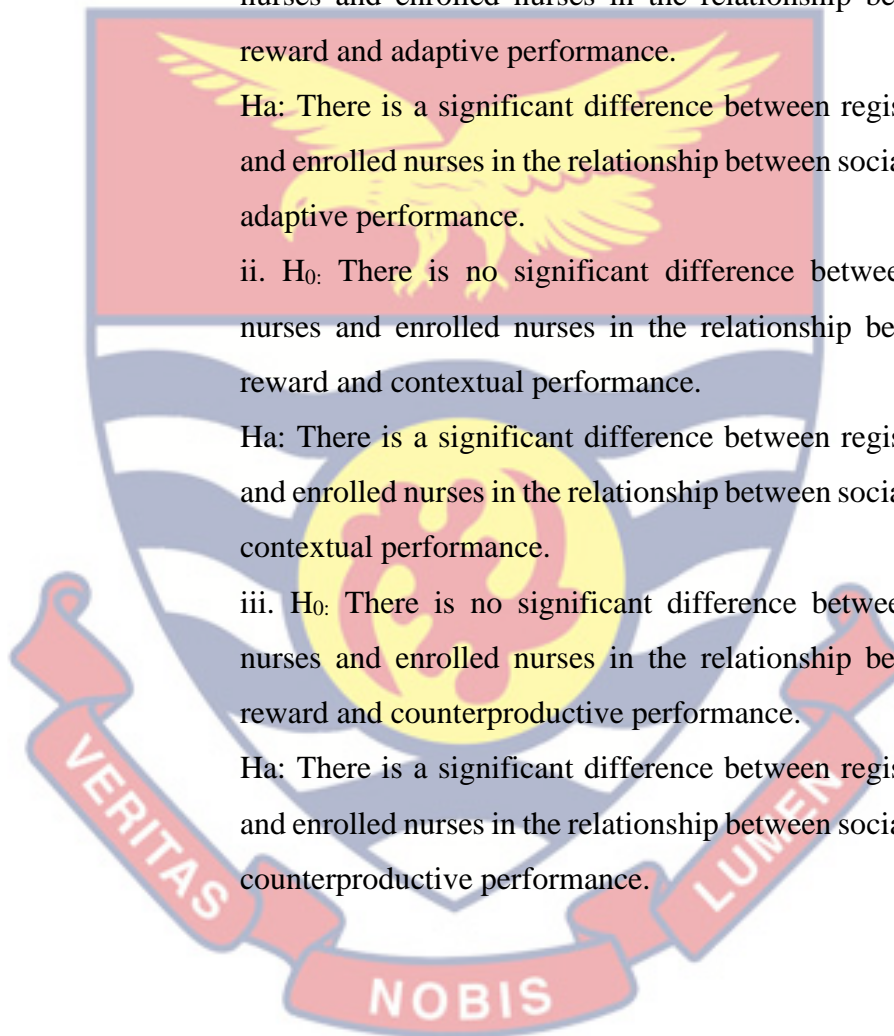
$H_a$ : There is a significant difference between registered nurses and enrolled nurses in the relationship between social reward and adaptive performance.

ii.  $H_0$ : There is no significant difference between registered nurses and enrolled nurses in the relationship between social reward and contextual performance.

$H_a$ : There is a significant difference between registered nurses and enrolled nurses in the relationship between social reward and contextual performance.

iii.  $H_0$ : There is no significant difference between registered nurses and enrolled nurses in the relationship between social reward and counterproductive performance.

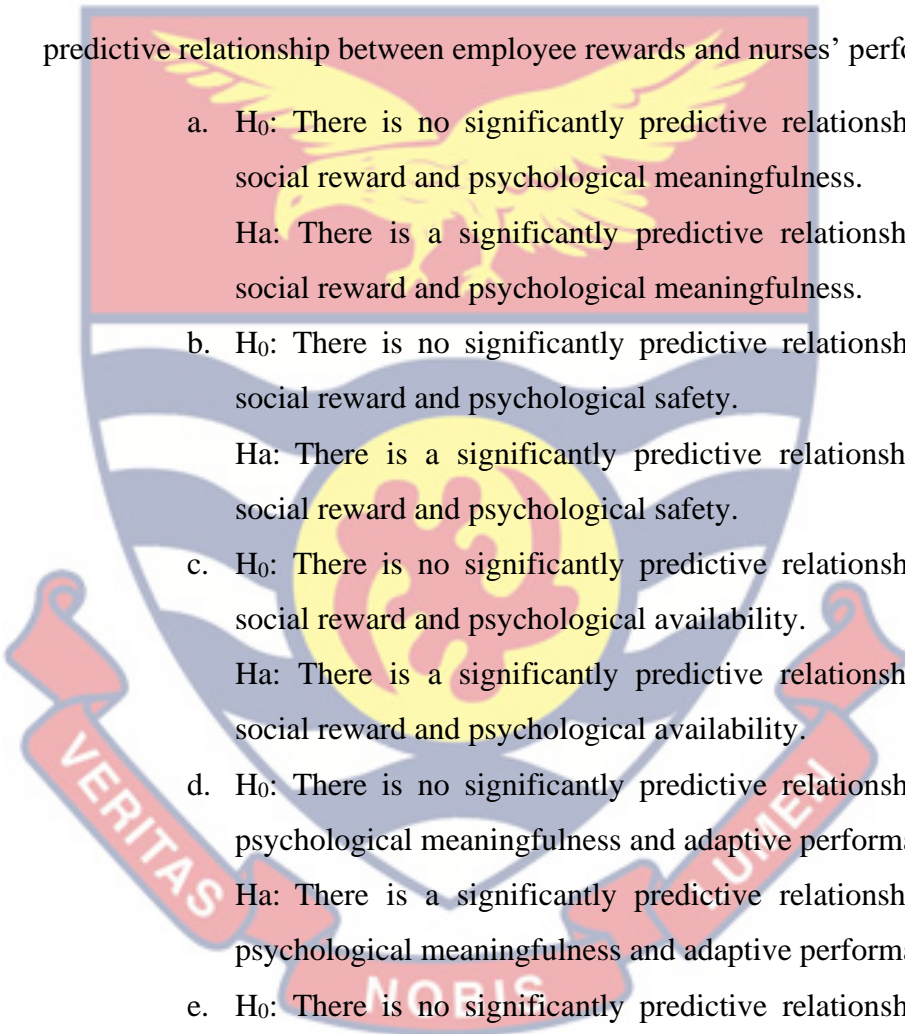
$H_a$ : There is a significant difference between registered nurses and enrolled nurses in the relationship between social reward and counterproductive performance.



## APPENDIX A2

### SUB HYPOTHESES OF THE MEDIATING ROLES OF PSYCHOLOGICAL CONDITIONS IN THE PREDICTIVE RELATIONSHIP BETWEEN EMPLOYEE REWARDS AND NURSES' PERFORMANCE

Null Hypothesis 2: Psychological conditions do not significantly mediate the predictive relationship between employee rewards and nurses' performance.

- 
- a.  $H_0$ : There is no significantly predictive relationship between social reward and psychological meaningfulness.  
 $H_a$ : There is a significantly predictive relationship between social reward and psychological meaningfulness.
  - b.  $H_0$ : There is no significantly predictive relationship between social reward and psychological safety.  
 $H_a$ : There is a significantly predictive relationship between social reward and psychological safety.
  - c.  $H_0$ : There is no significantly predictive relationship between social reward and psychological availability.  
 $H_a$ : There is a significantly predictive relationship between social reward and psychological availability.
  - d.  $H_0$ : There is no significantly predictive relationship between psychological meaningfulness and adaptive performance.  
 $H_a$ : There is a significantly predictive relationship between psychological meaningfulness and adaptive performance.
  - e.  $H_0$ : There is no significantly predictive relationship between psychological meaningfulness and contextual performance.  
 $H_a$ : There is a significantly predictive relationship between psychological meaningfulness and contextual performance.
  - f.  $H_0$ : There is no significantly predictive relationship between psychological meaningfulness and counterproductive performance.

Ha: There is a significantly predictive relationship between psychological meaningfulness and counterproductive performance.

- g. H<sub>0</sub>: There is no significantly predictive relationship between psychological availability and adaptive performance.

Ha: There is a significantly predictive relationship between psychological availability and adaptive performance.

- h. H<sub>0</sub>: There is no significantly predictive relationship between psychological availability and contextual performance.

Ha: There is a significantly predictive relationship between psychological availability and contextual performance.

- i. H<sub>0</sub>: There is no significantly predictive relationship between psychological availability and counterproductive performance.

Ha: There is a significantly predictive relationship between psychological availability and counterproductive performance.

- j. H<sub>0</sub>: There is no significantly relationship between psychological safety and adaptive performance.

Ha: There is a significantly predictive relationship between psychological safety and adaptive performance.

- k. H<sub>0</sub>: There is no significantly predictive relationship between psychological safety and contextual performance.

Ha: There is a significantly predictive relationship between psychological safety contextual performance.

- l. H<sub>0</sub>: There is no significantly predictive relationship between psychological safety and counterproductive performance.

Ha: There is a significantly predictive relationship between psychological safety and counterproductive performance.

- m. H<sub>0</sub>: Psychological meaningfulness does no significantly mediates the predictive relationship between social reward and nurses' adaptive performance.

Ha: Psychological meaningfulness significantly mediate the predictive relationship between social reward and nurses' adaptive performance.

n. H<sub>0</sub>: Psychological meaningfulness does not significantly mediate the predictive relationship between social reward and nurses' contextual performance.

Ha: Psychological meaningfulness significantly mediate the predictive relationship between social reward and nurses' contextual performance

o. H<sub>0</sub>: The predictive relationship between social reward and counterproductive performance is not significantly mediated by Psychological meaningfulness.

Ha: The predictive relationship between social reward and counterproductive performance is significantly mediated by psychological meaningfulness.

p. H<sub>0</sub>: Psychological availability does not mediate the predictive relationship between social reward and adaptive performance.

Ha: Psychological availability significantly mediate the predictive relationship between social reward and nurses' adaptive performance.

q. H<sub>0</sub>: Psychological availability does not significantly mediate the predictive relationship between social reward and nurses' contextual performance.

Ha: Psychological availability significantly mediate the predictive relationship between social reward and nurses' contextual performance.

r. H<sub>0</sub>: The predictive relationship between social reward and counterproductive performance is not significantly mediated by Psychological availability.

Ha: The predictive relationship between social reward and counterproductive performance is significantly mediated by Psychological availability.

s. H<sub>0</sub>: Psychological safety does not significantly mediate the predictive relationship between social reward and nurses' adaptive performance.

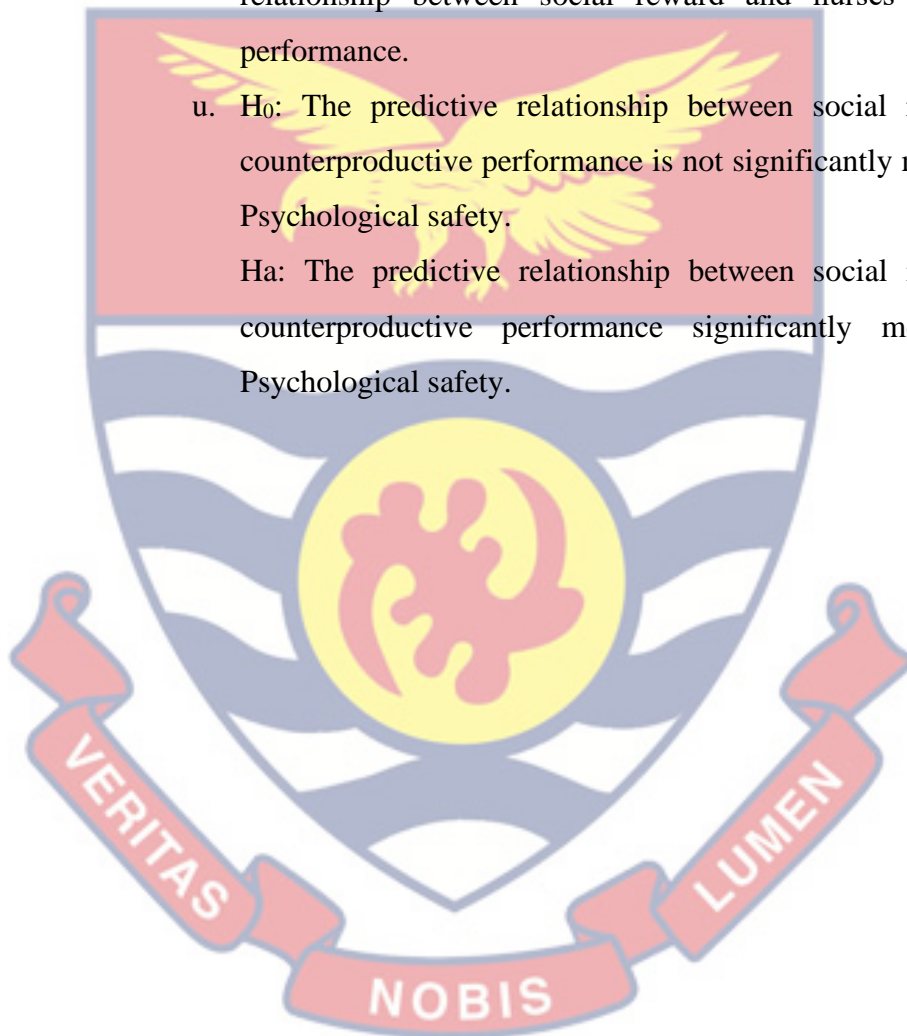
Ha: Psychological safety significantly mediate the predictive relationship between social reward and nurses' adaptive performance.

- t. H<sub>0</sub>: Psychological safety does not significantly mediates the predictive relationship between social reward and nurses' contextual performance.

Ha: Psychological safety significantly mediate the predictive relationship between social reward and nurses' contextual performance.

- u. H<sub>0</sub>: The predictive relationship between social reward and counterproductive performance is not significantly mediated by Psychological safety.

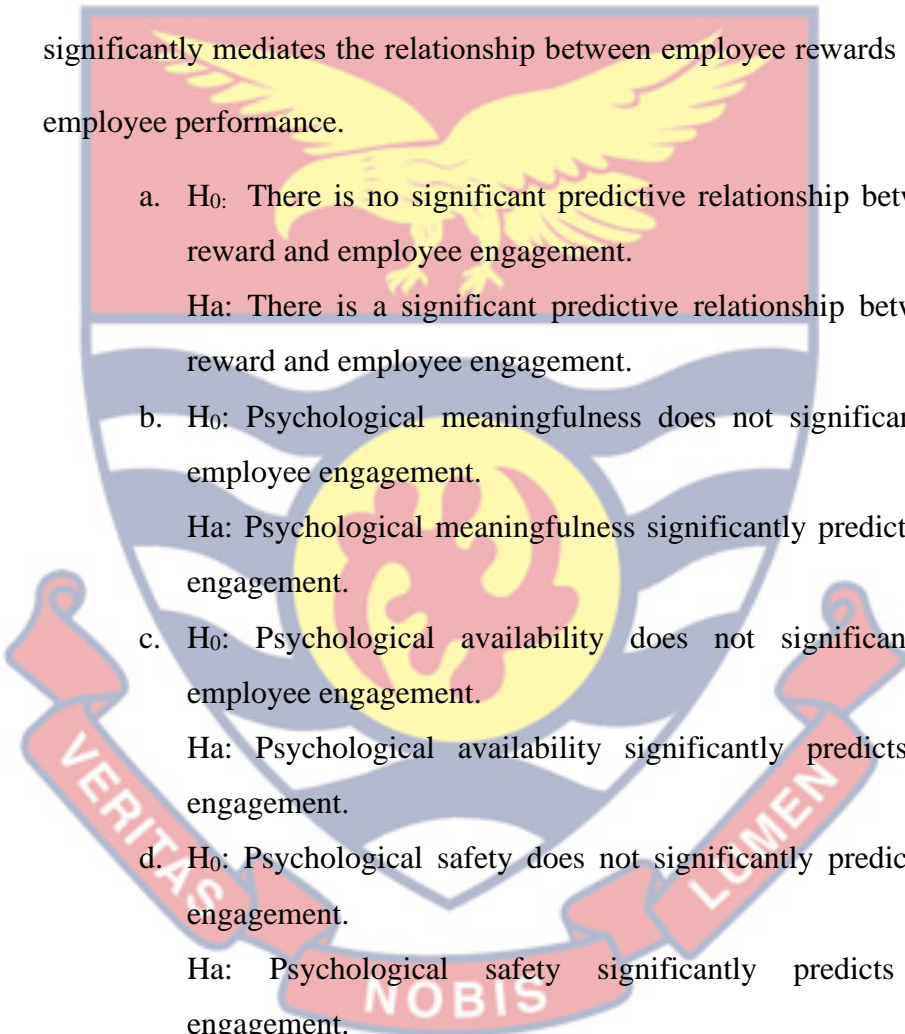
Ha: The predictive relationship between social reward and counterproductive performance significantly mediated by Psychological safety.



### APPENDIX A3

## SUB HYPOTHESES OF ROLE OF PSYCHOLOGICAL CONDITIONS AND EMPLOYEE ENGAGEMENT IN THE RELATIONSHIP BETWEEN EMPLOYEE REWARDS AND NURSES' EMPLOYEE PERFORMANCE

Null Hypothesis 3: Psychological conditions and employee engagement significantly mediates the relationship between employee rewards and nurses' employee performance.

- 
- a. H<sub>0</sub>: There is no significant predictive relationship between social reward and employee engagement.  
Ha: There is a significant predictive relationship between social reward and employee engagement.
- b. H<sub>0</sub>: Psychological meaningfulness does not significantly predict employee engagement.  
Ha: Psychological meaningfulness significantly predicts employee engagement.
- c. H<sub>0</sub>: Psychological availability does not significantly predict employee engagement.  
Ha: Psychological availability significantly predicts employee engagement.
- d. H<sub>0</sub>: Psychological safety does not significantly predict employee engagement.  
Ha: Psychological safety significantly predicts employee engagement.
- e. H<sub>0</sub>: Employee engagement does not significantly predict adaptive performance.  
Ha: employee engagement significantly predicts adaptive performance.
- f. H<sub>0</sub>: Psychological meaningfulness does not significantly mediate the relationship between social reward and employee engagement.



Ha: Psychological meaningfulness significantly mediates the relationship between social reward and employee engagement.

g. H<sub>0</sub>: Psychological availability does not significantly mediate the relationship between social reward and employee engagement.

Ha: Psychological availability mediates the relationship between social reward and employee engagement.

h. H<sub>0</sub>: Psychological safety does not significantly mediate the relationship between social reward and employee engagement.

Ha: Psychological safety mediates the relationship between social reward and employee engagement

i. H<sub>0</sub>: Employee engagement is not significant predictor of contextual performance.

Ha: Employee engagement is a significant predictor of contextual performance.

j. H<sub>0</sub>: Employee engagement does not significantly predict counterproductive performance

Ha: Employee engagement is a significant predictor of counterproductive performance.

k. H<sub>0</sub>: Employee engagement does not significantly mediate the predictive relationship between social reward and adaptive performance

Ha: Employee engagement significantly mediates the predictive relationship between social reward and adaptive performance.

l. H<sub>0</sub>: Employee engagement does not significantly mediate the predictive relationship between social reward and contextual performance.

Ha: Employee engagement significantly mediates the predictive relationship between social reward and contextual performance.

m. H<sub>0</sub>: Employee engagement does not significantly mediate the predictive relationship between social reward and counterproductive performance

n. Ha: Employee engagement significantly mediates the predictive relationship between social reward and counterproductive performance.

o.  $H_0$ : Employee engagement does not significantly mediate the predictive relationship between psychological meaningfulness and adaptive performance.

$H_a$ : Employee engagement significantly mediates the relationship between psychological meaningfulness and adaptive performance.

p.  $H_0$ : Employee engagement does not significantly mediate the predictive relationship between psychological meaningfulness and contextual performance.

q.  $H_a$ : Employee engagement significantly mediate the relationship between psychological meaningfulness and contextual performance.

qc.  $H_0$ : Employee engagement does not significantly mediate the predictive relationship between psychological meaningfulness and counterproductive performance.

$H_a$ : Employee engagement does not significantly mediate the relationship between psychological meaningfulness and counterproductive performance.

r.  $H_0$ : Employee engagement does not significantly mediate the predictive relationship between psychological availability and adaptive performance.

$H_a$ : Employee engagement significantly mediates the relationship between psychological availability and adaptive performance.

s.  $H_0$ : Employee engagement does not significantly mediate the predictive relationship between psychological availability and contextual performance.

$H_a$ : Employee engagement significantly mediates the relationship between psychological availability and contextual performance.

t.  $H_0$ : Employee engagement does not significantly mediate the predictive relationship between psychological availability and counterproductive performance.

$H_a$ : Employee engagement significantly mediates the relationship between psychological availability and counterproductive performance.

u.  $H_0$ : Employee engagement does not significantly mediate the predictive relationship between psychological safety and adaptive performance.

$H_a$ : Employee engagement significantly mediate the relationship between psychological safety and adaptive performance.

v.  $H_0$ : Employee engagement does not significantly mediate the predictive relationship between psychological safety and contextual performance.

$H_a$ : Employee engagement significantly mediates the relationship between psychological safety and contextual performance.

w.  $H_0$ : Employee engagement does not significantly mediate the predictive relationship between psychological safety and counterproductive performance.

$H_a$ : Employee engagement significantly mediates the relationship between psychological safety and counterproductive performance.

x.  $H_0$ : Psychological meaningfulness and employee engagement do not significantly mediate the relationship between social reward and adaptive performance.

$H_a$ : Psychological meaningfulness and employee engagement significantly mediate the relationship between social reward and adaptive performance.

y.  $H_0$ : Psychological meaningfulness and employee engagement do not significantly mediate the relationship between social reward and contextual performance.

$H_a$ : Psychological meaningfulness and employee engagement significantly mediate the relationship between social reward and contextual performance.

z. i.  $H_0$ : Psychological meaningfulness and employee engagement do not significantly mediate the relationship between social reward and counterproductive performance.

$H_a$ : Psychological meaningfulness and employee engagement significantly mediate the relationship between social reward and counterproductive performance.

ii. H<sub>0</sub>: Psychological availability and employee engagement do not significantly mediate the relationship between social reward and adaptive performance.

Ha: Psychological availability and employee engagement significantly mediate the relationship between social reward and adaptive performance.

iii. H<sub>0</sub>: Psychological availability and employee engagement do not significantly mediate the relationship between social reward and counterproductive performance.

Ha: Psychological availability and employee engagement significantly mediate the relationship between social reward and counterproductive performance.

iv. H<sub>0</sub>: Psychological safety and employee engagement do not significantly mediate the relationship between social reward and adaptive performance.

Ha: Psychological safety and employee engagement significantly mediate the relationship between social reward and adaptive performance.

v. H<sub>0</sub>: Psychological safety and employee engagement do not significantly mediate the relationship between social reward and contextual performance.

Ha: Psychological safety and employee engagement significantly mediate the relationship between social reward and contextual performance.

vi. H<sub>0</sub>: Psychological availability and employee engagement do not significantly mediate the relationship between social reward and contextual performance.

Ha: Psychological availability and employee engagement significantly mediate the relationship between social reward and contextual performance

vii. H<sub>0</sub>: Psychological safety and employee engagement do not significantly mediate the relationship between social reward and counterproductive performance.

Ha: Psychological safety and employee engagement significantly mediate the relationship between social reward and counterproductive performance.

viii. H<sub>0</sub>: There is no feedback loop of employee engagement on psychological conditions.

Ha: There is a feedback loop of employee engagement on psychological conditions.



## APPENDIX A4

### SUB HYPOTHESES OF ROLE OF PSYCHOLOGICAL CONDITIONS, EMPLOYEE ENGAGEMENT AND CAUSALITY ORIENTATIONS IN THE RELATIONSHIP BETWEEN SOCIAL REWARD AND NURSES' PERFORMANCE

Null Hypothesis 4: Psychological conditions, employee engagement and causality orientations do not significantly mediate the relationship between employee rewards and nurses' employee performance.

- a. i. H<sub>0</sub>: There is no significant predictive relationship between psychological meaningfulness autonomous orientation.  
Ha: H<sub>0</sub>: There is significant predictive relationship between the psychological meaningfulness and autonomous orientation.
- ii. H<sub>0</sub>: There is no significant predictive relationship between psychological meaningfulness and control orientation.  
Ha: here is a significant predictive relationship between the psychological meaningfulness and control orientation.
- iii. H<sub>0</sub>: There is no significant predictive relationship between psychological meaningfulness impersonal orientation.  
Ha: There is a significant predictive relationship between the psychological meaningfulness and impersonal orientation.
- b. i. H<sub>0</sub>: There is no significant predictive relationship between psychological availability and autonomous orientation.  
Ha: There is a significant predictive relationship between the psychological availability and autonomous orientation.
- ii. H<sub>0</sub>: There is no significant predictive relationship between psychological availability and control orientation.  
Ha: There is a significant predictive relationship between the psychological availability and control orientation.
- iii. H<sub>0</sub>: There is no significant predictive relationship between psychological availability and impersonal orientation.

Ha: There is a significant predictive relationship between the psychological availability and impersonal orientations.

- c. i. H<sub>0</sub>: There is no significant predictive relationship between psychological safety and autonomous orientation.

Ha: There is a significant predictive relationship between the psychological safety and autonomous orientation.

- ii. H<sub>0</sub>: There is no significant predictive relationship between psychological safety and control orientation.

Ha: There is a significant predictive relationship between the psychological safety and control orientations.

- iii. H<sub>0</sub>: There is no significant predictive relationship between psychological safety and impersonal orientation.

Ha: There is a significant predictive relationship between the psychological safety and impersonal orientation.

- d. i. H<sub>0</sub>: There is no significant predictive relationship between employee engagement and autonomous orientation.

Ha: There is a significant relationship between employee engagement and autonomous orientation.

- ii. H<sub>0</sub>: There is no significant predictive relationship between employee engagement and control orientation.

Ha: There is a significant predictive relationship between employee engagement and control orientation

- iii. H<sub>0</sub>: There is no significant predictive relationship between employee engagement and impersonal orientation.

Ha: There is a significant predictive relationship between employee engagement and impersonal orientation

- e. i. H<sub>0</sub>: There is no significant predictive relationship between autonomous orientation and contextual performance.

Ha: There is a significant relationship between the autonomous and contextual performance.

- ii. H<sub>0</sub>: There is no significant relationship between control orientation and contextual performance.

Ha: There is a significant relationship between control orientation and contextual performance.

- iii. H<sub>0</sub>: There is no significant relationship between impersonal orientation and contextual performance.  
Ha: There is a significant relationship between impersonal orientation and contextual performance.
- f. i. H<sub>0</sub>: There is no significant relationship between autonomous orientation and adaptive performance.  
Ha: There is a significant relationship between autonomous orientation and adaptive performance.
- ii. H<sub>0</sub>: There is no significant relationship between control orientation and adaptive performance.  
Ha: There is a significant relationship between control orientations and adaptive performance.
- iii. H<sub>0</sub>: There is no significant relationship between impersonal orientation and adaptive performance.  
Ha: There is a significant relationship between impersonal orientation and adaptive performance.
- g. i. H<sub>0</sub>: There is a significant relationship between autonomous orientation and counterproductive performance.  
Ha: There is a significant relationship between autonomous orientation and counterproductive performance.
- ii. H<sub>0</sub>: There is no significant relationship between control orientation and counterproductive performance.  
Ha: There is a significant relationship between control orientations and counterproductive performance.
- iii. H<sub>0</sub>: There is no significant relationship between impersonal orientation and counterproductive performance.  
Ha: There is a significant relationship impersonal orientation and counterproductive performance.
- h. i. H<sub>0</sub>: There is no significant relationship between social reward and autonomous orientation.  
Ha: There is a significant relationship between social reward and autonomous orientation.
- ii. H<sub>0</sub>: There is no significant relationship between social reward and control orientation.



Ha: There is a significant relationship between social reward and control orientation.

iii. H<sub>0</sub>: There is no significant relationship between social reward and impersonal orientation.

Ha: There is a significant relationship between social reward and impersonal orientation.

j. i. H<sub>0</sub>: Psychological meaningfulness does not significantly mediate the relationship between social reward and autonomous orientation.

Ha: Psychological meaningfulness significantly mediates the relationship between social reward and autonomous orientation.

ii. H<sub>0</sub>: Psychological meaningfulness does not significantly mediate the relationship between social reward and control orientation.

Ha: Psychological meaningfulness significantly mediates the relationship between social reward and control orientation.

iii. H<sub>0</sub>: Psychological meaningfulness does not significantly mediate the relationship between social reward and impersonal orientation.

Ha: Psychological meaningfulness significantly mediates the relationship between social reward and impersonal orientation

k. i. H<sub>0</sub>: Psychological availability does not significantly mediate the relationship between social reward and autonomous orientation.

Ha: Psychological availability significantly mediates the relationship between social reward and autonomous orientation.

ii. H<sub>0</sub>: Psychological availability does not significantly mediate the relationship between social reward and control orientation.

Ha: Psychological availability significantly mediates the relationship between social reward and control orientation

iii. H<sub>0</sub>: Psychological availability does not significantly mediate the relationship between social reward and impersonal orientation.

Ha: Psychological availability significantly mediates the relationship between social reward and impersonal orientation

l. i. H<sub>0</sub>: Psychological safety does not significantly mediate the relationship between social reward and autonomous orientation.

Ha: Psychological safety significantly mediates the relationship between social reward and autonomous orientation.

ii. H<sub>0</sub>: Psychological safety does not significantly mediate the relationship between social reward and control orientation.

Ha: Psychological safety significantly mediates the the relationship between social reward and control orientation.

iii. H<sub>0</sub>: Psychological safety does not significantly mediate the relationship between social reward and impersonal orientation.

Ha: Psychological safety significantly mediate the relationship between social reward and impersonal orientation.

m. i. H<sub>0</sub>: employee engagement does not significantly mediate the relationship between psychological meaningfulness and autonomous orientation.

Ha: employee engagement significantly mediates the relationship between psychological meaningfulness and autonomous orientation.

ii. H<sub>0</sub>: employee engagement does not significantly mediate the relationship between psychological meaningfulness and control orientation.

Ha: employee engagement significantly mediates the relationship between psychological meaningfulness and control orientation.

iii. H<sub>0</sub>: employee engagement does not significantly mediate the relationship between psychological meaningfulness and impersonal orientation.

Ha: employee engagement significantl mediates the relationship between psychological meaningfulness and impersonal orientation.

iv. H<sub>0</sub>: employee engagement does not significantly mediate the relationship between psychological safety and autonomous orientation.

Ha: employee engagement significantly mediates the relationship between psychological safety and autonomous orientation.

v. H<sub>0</sub>: employee engagement does not mediate the relationship between psychological safety and impersonal orientation.

Ha: employee engagement significantly mediates the relationship between psychological safety and impersonal orientation.

vi. H<sub>0</sub>: employee engagement does not significantly mediate the relationship between psychological safety and control orientation.

Ha: employee engagement significantly mediates the relationship between psychological safety and control orientation.

vii. H<sub>0</sub>: employee engagement does not significantly mediate the relationship between psychological availability and autonomous orientation.

Ha: employee engagement significantly mediates the relationship between psychological availability and autonomous orientation.

viii. H<sub>0</sub>: employee engagement does not significantly mediate the relationship between psychological availability and control orientation.

Ha: employee engagement significantly mediates the relationship between psychological availability and control orientation.

ix. H<sub>0</sub>: Employee engagement does not significantly mediate the relationship between psychological availability and impersonal orientation.

Ha: Employee engagement significantly mediates the relationship between psychological availability and impersonal orientation.

n. i. H<sub>0</sub>: Psychological meaningfulness and employee engagement do not significantly mediate the relationship between social reward and autonomous orientation.

Ha: Psychological meaningfulness and employee engagement significantly mediate the relationship between social reward and autonomous orientation.

o. i. H<sub>0</sub>: Employee engagement does not significantly mediate the predictive relationships between social reward and autonomous orientation.

ii. Ha: Employee engagement significantly mediates the predictive relationships between social reward and control orientation.

iii. H<sub>0</sub>: Employee engagement does not significantly mediate the predictive relationships between social reward and impersonal orientation.

Ha: Employee engagement significantly mediates the predictive relationships between social reward and impersonal orientation.

p. i.  $H_0$ : Psychological safety does not significantly mediate the predictive relationship between social reward and autonomous, control and impersonal causality orientations.

$H_a$ : Psychological safety significantly mediates the predictive relationships between social reward and autonomous, control and impersonal causality orientations.

ii.  $H_0$ : Psychological meaningfulness does not significantly mediate the predictive relationship between social reward and autonomous, control and impersonal causality orientations.

$H_a$ : Psychological meaningfulness significantly mediates the predictive relationships between social reward and autonomous, control and impersonal causality orientations

iii.  $H_0$ : Psychological availability does not significantly mediate the predictive relationship between social reward and autonomous, control and impersonal causality orientations.

$H_a$ : Psychological availability significantly mediates the predictive relationships between social reward and autonomous, control and impersonal causality orientations.

q. i.  $H_0$ : Employee engagement does not significantly mediate the predictive relationship between psychological meaningfulness and autonomous, control and impersonal causality orientations.

$H_a$ : i Employee engagement significantly mediates the predictive relationships between psychological meaningfulness and autonomous, control and impersonal causality orientations.

ii.  $H_0$ : Employee engagement does not significantly mediate the predictive relationship between psychological availability and autonomous, control and impersonal causality orientations.

$H_a$ : Employee engagement significantly mediates the predictive relationship between psychological availability and autonomous, control and impersonal causality orientations.

r. i.  $H_0$ : Each of the causality orientations of autonomous, impersonal and control orientations do not significantly mediate the effect each of the psychological conditions, meaningfulness, safety and availability on contextual performance.

Ha: Each of the causality orientations of autonomous, impersonal and control orientations significantly mediate the effect each of the psychological conditions, meaningfulness, safety and availability on contextual performance.

ii. H<sub>0</sub>: Employee engagement does not significantly mediate the predictive relationships between psychological availability and autonomous, control and impersonal causality orientations.

Ha: Employee engagement significantly mediates the predictive relationships between psychological availability and autonomous, control and impersonal causality orientations.

iii. H<sub>0</sub>: Employee engagement does not significantly mediate the predictive relationship between psychological safety and autonomous, control and impersonal causality orientations.

Ha: Employee engagement significantly mediates the predictive relationships between psychological safety and autonomous, control and impersonal causality orientations.

s. i. H<sub>0</sub>: There is no significant serial mediation of psychological safety and each of the causality orientation, autonomous, control and impersonal orientations, in the predictive relationship between social reward and contextual performance.

Ha: There is a significant serial mediation of psychological safety and each of the causality orientation, autonomous, control and impersonal orientations in the predictive relationship between social reward and contextual performance.

ii. H<sub>0</sub>: There is no significant serial mediation of psychological meaningfulness and each of the causality orientation, autonomous, control and impersonal orientations in the predictive relationship between social reward and contextual performance.

Ha: There is a significant serial mediation of psychological meaningfulness and each of the causality orientation, autonomous, control and impersonal orientations in the predictive relationship between social reward and contextual performance.

iii. H<sub>0</sub>: There is no significant serial mediation of psychological availability and each of the causality orientation, autonomous,

control and impersonal orientations in the predictive relationship between social reward and contextual performance.

Ha: There is a significant serial mediation of psychological availability and each of the causality orientation, autonomous, control and impersonal orientations in the predictive relationship between social reward and contextual performance.

- t. i.  $H_0$ : There is no significant serial mediation of psychological meaningfulness, employee engagement and each of the causality orientation, autonomous, control and impersonal orientations in the predictive relationship between social reward and contextual performance.

Ha: There is a significant serial mediation of psychological meaningfulness, employee engagement and each of the causality orientation, autonomous, control and impersonal orientations in the predictive relationship between social reward and contextual performance.

- ii.  $H_0$ : There is no significant serial mediation of psychological availability, employee engagement and each of the causality orientation, autonomous, control and impersonal orientations in the predictive relationship between social reward and contextual performance.

Ha: There is a significant serial mediation of psychological availability, employee engagement and each of the causality orientation, autonomous, control and impersonal orientations in the predictive relationship between social reward and contextual performance.

- iii.  $H_0$ : There is no significant serial mediation of psychological safety, employee engagement and each of the causality orientation, autonomous, control and impersonal orientations in the predictive relationship between social reward and contextual performance.

Ha: There is a significant serial mediation of psychological safety, employee engagement and each of the causality orientation, autonomous, control and impersonal orientations in the predictive relationship between social reward and contextual performance.

u. i.  $H_0$ : Employee engagement and each of the causality orientations, autonomous, control and impersonal orientations are not significant serial mediators in the relationship between social reward and contextual performance.

$H_a$ : Employee engagement and each of the causality orientations, autonomous, control and impersonal orientations, are significant serial mediators in the relationship between social reward and contextual performance.

v.  $H_0$ : Employee engagement and each of the causality orientations, autonomous, control and impersonal orientations, do not significantly mediate the relationship between psychological meaningfulness and contextual performance.

$H_a$ : Employee engagement and each of the causality orientations, autonomous, control and impersonal orientations, significantly mediate the relationship between psychological meaningfulness and contextual performance.

w.  $H_0$ : The causality orientations, autonomous, control and impersonal orientations, do not significantly mediate the predictive relationship between social reward and contextual performance.

$H_a$ : The causality orientations, autonomous, control and impersonal orientations, significantly mediate the predictive relationship between social reward and contextual performance.

x. The causality orientations, autonomous, control and impersonal orientations, do not significantly mediate the predictive relationship between employee engagement and contextual performance.

$H_a$ : The causality orientations, autonomous, control and impersonal orientations, significantly mediate the predictive relationship between employee engagement and contextual performance.

y. i.  $H_0$ : There is no significant effect of autonomous orientation on adaptive performance.

$H_a$ : There is a significant effect of autonomous orientation on adaptive performance.

ii.  $H_0$ : There is no significant effect of control orientation on adaptive performance.

Ha: There is a significant effect of control orientation on adaptive performance.

iii. H<sub>0</sub>: There is no significant effect of impersonal orientation on adaptive performance.

Ha: There is a significant effect of impersonal orientation on adaptive performance.

z. i. H<sub>0</sub>: Each of the causality orientations, autonomous, control, and autonomous orientations, does not significantly mediate the predictive relationship between each of the psychological conditions, safety, meaningfulness and availability, and adaptive performance.

Ha: Each of the causality orientations, autonomous, control, and autonomous orientations, significantly mediates the predictive relationship between each of the psychological conditions, safety, meaningfulness and availability, and adaptive performance.

ii. H<sub>0</sub>: Each of the causality orientations, autonomous, control and impersonal orientations, does not significantly mediate the predictive relationship between social reward and adaptive performance.

Ha: Each of the causality orientations, autonomous, control and impersonal orientations, significantly mediates the predictive relationship between social reward and adaptive performance.

iii. H<sub>0</sub>: Psychological conditions, employee engagement and causality orientations do not significantly mediate the predictive relationship between social reward and adaptive performance.

Ha: Psychological conditions, employee engagement and causality orientations significantly mediate the predictive relationship between social reward and adaptive performance.

iv. H<sub>0</sub>: There is no significant mediation effect of each of the causality orientations of autonomous, control and impersonal orientations, in the relationship between employee engagement and counterproductive behaviour.

Ha: There is a significant mediation effect of each of the causality orientations of autonomous, control and impersonal orientations in



the relationship between employee engagement and counterproductive behaviour.

v.  $H_0$ : Each of the causality orientations, autonomous, control and impersonal orientations, does not significantly mediate the relationships between each of the psychological conditions, safety, meaningfulness and availability, and counterproductive behaviour.

$H_a$ : Each of the causality orientations, autonomous, control and impersonal orientations, significantly mediates the relationships between each of the psychological conditions, safety, meaningfulness and availability, and counterproductive behaviour.

vi.  $H_0$ : There is no significant mediation effect of each of the causality orientations of autonomous, control and impersonal orientations, in the relationship between social reward and counterproductive behaviour.

$H_a$ : There is a significant mediation effect of each of the causality orientations of autonomous, control and impersonal orientations in the relationship between social reward and counterproductive behaviour.

vii.  $H_0$  There is no significant serial mediation effect of each of the psychological conditions of safety, meaningfulness and availability and each of the causality orientations of autonomous, impersonal and control orientations in the predictive relationship between social reward and counterproductive behaviour.

$H_a$ : There is a significant serial mediation effect of each of the psychological conditions of safety, meaningfulness and availability and each of the causality orientations of autonomous, impersonal and control orientations in the predictive relationship between social reward and counterproductive behaviour.

viii.  $H_0$ : There is no significant serial mediation effect of employee engagement and each of the causality orientations, impersonal, autonomous and control orientations in the relationship between social reward and counterproductive behaviour.

$H_a$ : There is a significant serial mediation effect of employee engagement and each of the causality orientations, impersonal,

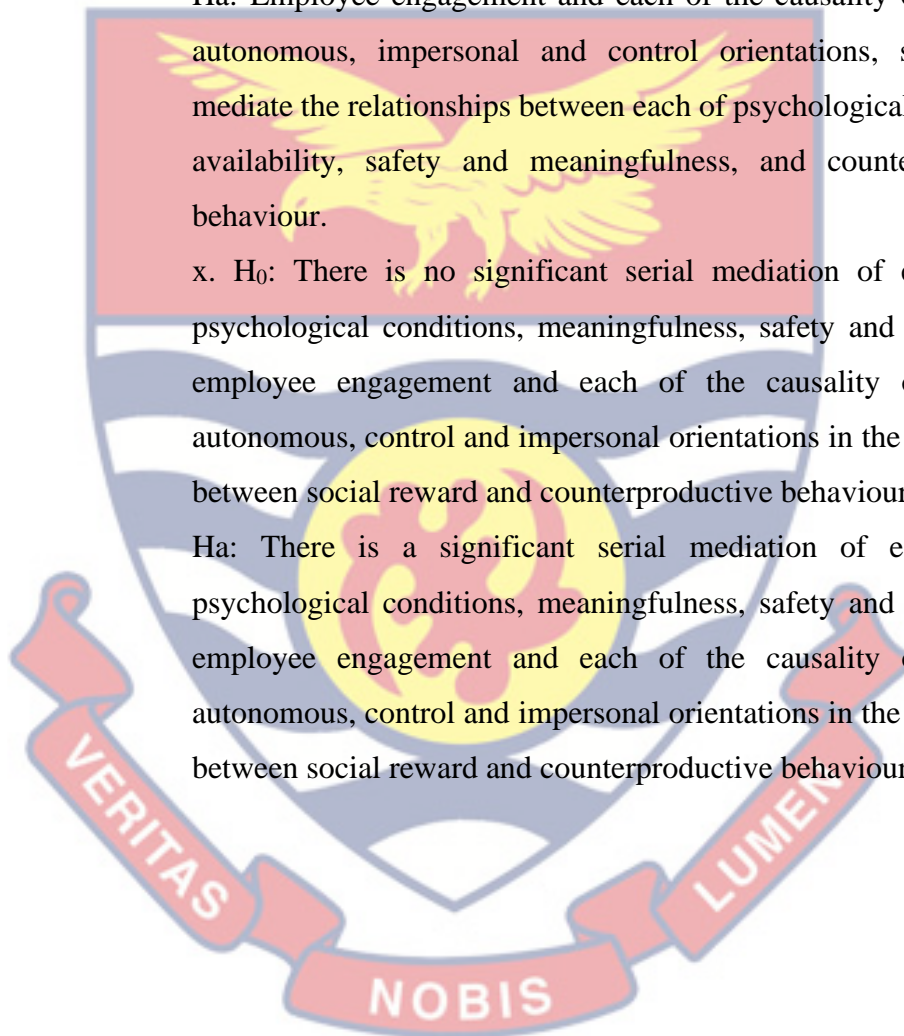
autonomous and control orientations, in the relationship between social reward and counterproductive behaviour.

ix.  $H_0$ : Employee engagement and each of the causality orientations, autonomous, impersonal and control orientations, do not significantly mediate the relationships between each of psychological conditions, availability, safety and meaningfulness, and counterproductive behaviour.

Ha: Employee engagement and each of the causality orientations, autonomous, impersonal and control orientations, significantly mediate the relationships between each of psychological conditions, availability, safety and meaningfulness, and counterproductive behaviour.

x.  $H_0$ : There is no significant serial mediation of each of the psychological conditions, meaningfulness, safety and availability, employee engagement and each of the causality orientations, autonomous, control and impersonal orientations in the relationship between social reward and counterproductive behaviour.

Ha: There is a significant serial mediation of each of the psychological conditions, meaningfulness, safety and availability, employee engagement and each of the causality orientations, autonomous, control and impersonal orientations in the relationship between social reward and counterproductive behaviour.



APPENDIX B

SUMMARY OF EMPIRICAL REVIEW ON SOCIAL EXCHANGE, EMPLOYEE ENGAGEMENT AND CAUSALITY

ORIENTATION THEORIES

Table 21: Summary of Empirical Review on Social Exchange Theory

Author (s)/Yr.	Purpose	Theoretical Basis	Research Approach and Study Design	Sampling	Measures and Data Collection	Analysis procedures	Major Findings	Critiques/Gaps
Owor (2016)	Investigate how human resource factors predict employee engagement and performance of staff of four selected Ugandan organisations	Social exchange theory and the employee-organisation relationship frameworks.	Quantitative and cross-sectional	Unspecified	Validated continuous scales from previous studies Questionnaire	Pearson correlation and hierarchical regression	Engagement mediates relationship between reward fairness and contextual performance.	Sample size was too small for generalisation across four firms in two districts. Did not state population of each firm and how sample size was apportioned to firms. Some dimensions of reward (social rewards) and performance were not covered

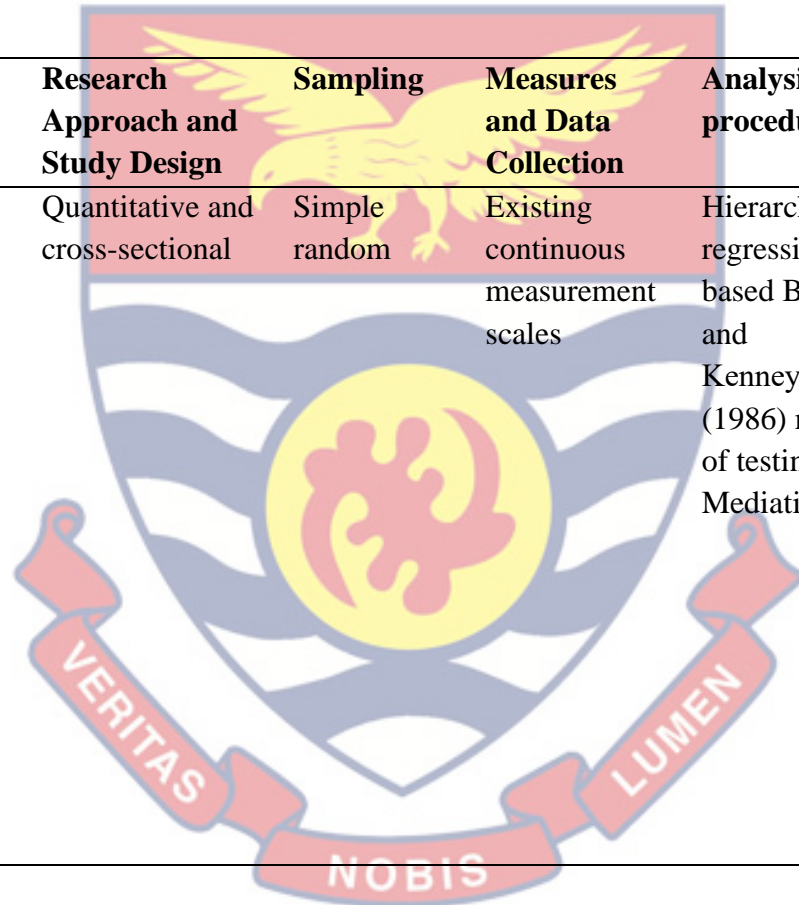
**Table 21 Continued**

Sung et al. (2018)	Examine relationship between monetary reward and performance of salespersons in the Malaysian retail sector	social exchange theory	Quantitative and cross-sectional	Purposive sampling	Existing continuous scale questionnaire	Structural equation model	- Rewards as a one dimensional construct had a significant relationship with salespersons performance -Salary component of reward is not significantly related to performance	Use of a nonprobability sampling method in quantitative study was a bit out of the norm, given the stringent structural requirements of quantitative studies. Treatment of performance as a one-component concept makes it difficult to decipher how employee reward contributes to each component of employee performance. Social reward was also ignored.
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Table 21 Continued

Author (s)/Yr.	Purpose	Theoretical Basis	Research Approach and Study Design	Sampling	Measures and Data Collection	Analysis procedures	Major Findings	Critiques/Gaps
Rai et al. (2018)	Investigate the effect of rewards on in-role performance and extra-role performance through the mechanism of employee engagement	Social exchange theory Job resource theory	Quantitative and cross-sectional	Simple random	Existing continuous measurement scales	Hierarchical regression based Baron and Kenney's (1986) model of testing Mediation	Employee engagement perfectly mediated the relationship between rewards and recognition and in-role performance and extra-role performance	Other components of performance, including adaptive performance and counterproductive work behaviour were not explored. Did not take into consideration Influence of psychological conditions and employee engagement



**Table 21 Continued**

Yin (2018)	Examine the relationships between employee engagement and task performance, organisational citizenship behaviour, burnout and counterproductive work behaviour	Social exchange theory	Quantitative and cross-sectional designs	Simple random	Standardised continuous scales Questionnaire	Structural equation model.	Higher employee engagement led to higher in-role task performance, higher extra-role performance but led to lower counterproductive work behaviours	Theoretical conceptualisation did not include an antecedent variable (e.g., employee rewards), which employees must value and reciprocate before they become engaged
Khoreva and Wechtler (2018)	Assess the relationship between human resource practices and performance using	Social exchange theory	Quantitative and cross-sectional	Not specified	Standardised continuous scale Questionnaire	Structural equation model	Relationship between motivation-enhancing human resource practices, including employee	Unexplained methodologies including not stating the population, sample size determination technique and technique for selecting

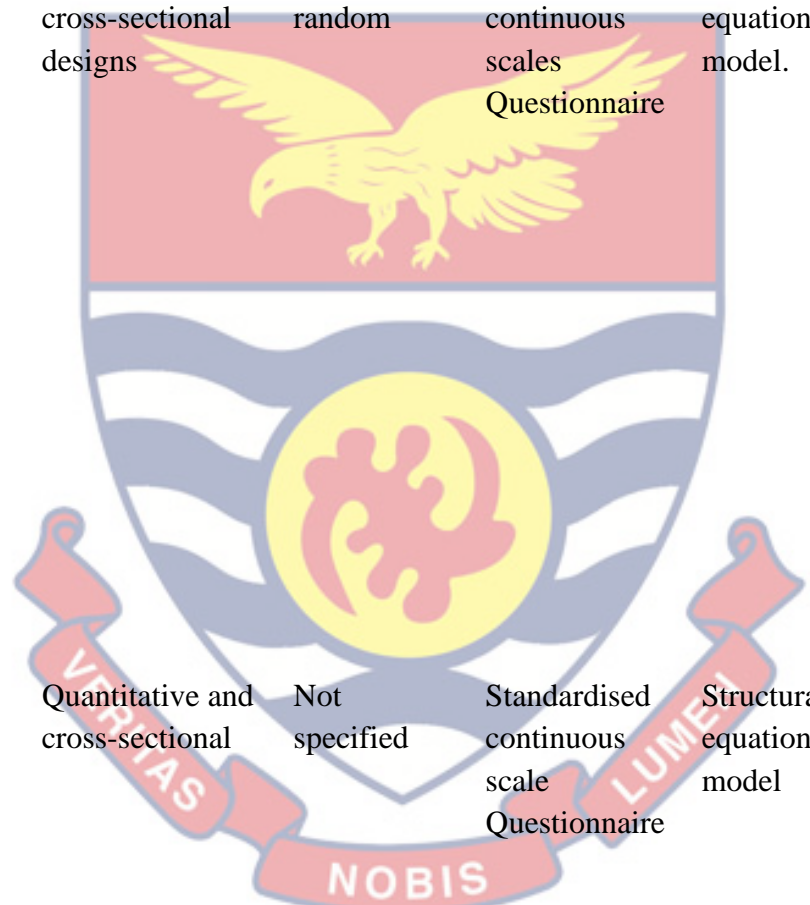


Table 21 Continued

psychological and physical well-beings as mediators

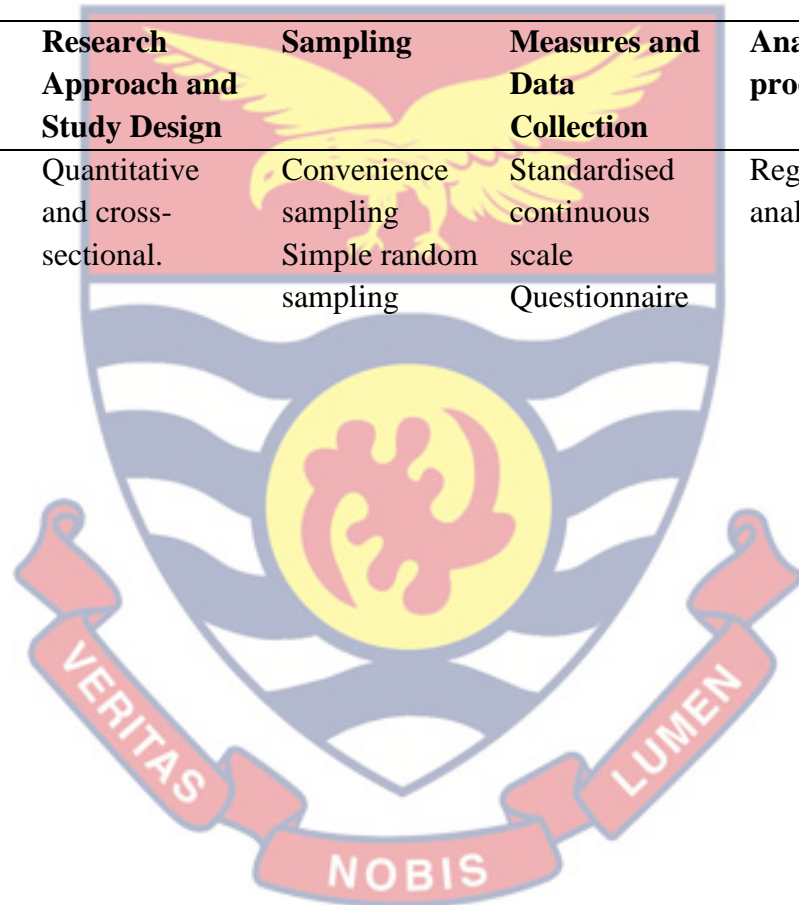


reward, and performance were partially mediated by psychological employee well-being. respondents. Did not treat employee performance as multidimensional construct.

Source: Author's compilation (2020)

**Table 22: Summary of Empirical Review on Causality Orientation Theory**

Author (s)/Yr.	Purpose	Theoretical Basis	Research Approach and Study Design	Sampling	Measures and Data Collection	Analysis procedures	Major Findings	Critiques/Gaps
Ye et al. (2014)	Investigate how general causality orientations predicted creative performance of staff of high-tech organisations in China	Causality orientation theory.	Quantitative and cross-sectional.	Convenience sampling Simple random sampling	Standardised continuous scale Questionnaire	Regression analysis	<ul style="list-style-type: none"> <li>-Control orientation was not significantly correlated with creative performance.</li> <li>-Impersonal orientation was negatively related to creative performance.</li> <li>- Well-being mediated the relationship between autonomy orientation and creative performance</li> </ul>	<ul style="list-style-type: none"> <li>Concentrated solely on creative performance to the neglect of other performance dimensions.</li> <li>Did not specify the population of the Study and basis for selecting 20 high-tech organisations, thus, compromising generalisation of findings.</li> </ul>





Hagger et al. (2015).	Analyse the effect of causality orientations and positive performance-enhancing feedback on intrinsic motivation	Self-determination/ causality orientation theory.	Quantitative and experimental.	160 students based on voluntary participation.	Puzzle solving Verified continuous scale Questionnaire	Experimental Analysis MANOVA	Both autonomy and control causality orientations, and positive feedback stimulated intrinsic motivation.	Did not state the population of the study. Representativeness of sample and generalisation could be called to question
Li et al. (2016).	Examine the role of autonomous orientation in the relationship between empowered leaders and organisational citizenship behaviour information technology staff in China	Causality orientation theory.	Quantitative and cross-sectional.	unexplained sampling procedure	General causality orientation scale and change-oriented organisational citizenship behaviour scale. Questionnaire	Hierarchical regression and bootstrapping methods.	-High autonomous orientated employees because of the tendency to thrive better at work, exhibit change organisational citizenship behaviours	Sampling procedures were not explained. Concentrated on only one behavioural construct of employee performance.

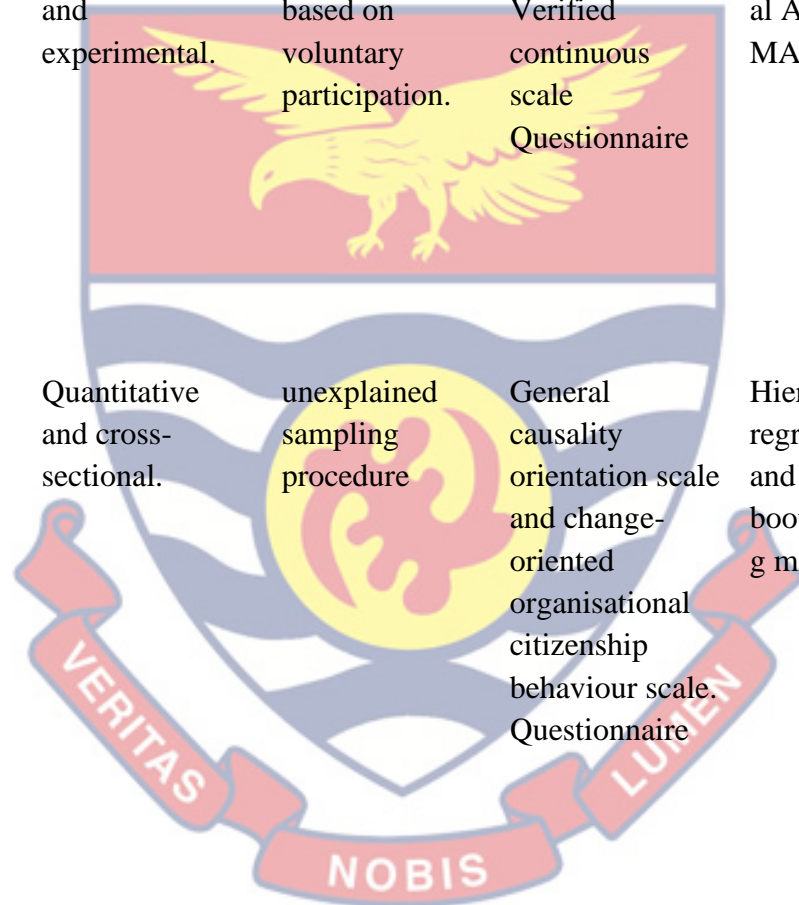


Table 22: Continued

Author (s)/Yr.	Purpose	Theoretical Basis	Research Approach and Study Design	Sampling	Measures and Data Collection	Analysis procedures	Major Findings	Critiques/Gaps
Weske and Schott (2016)	Investigate effect of autonomous and controlled motivation on the motivation of different groups of individuals in Dutch Municipalities.	Causality orientation theory	Quantitative and Exploratory	Census	Verified continuous scales Questionnaire	Cluster analysis	Different employees have different causality orientations	Lack of clarity About how differences in causality orientations could result in differences in motivational outcomes, including performance
Malinowska and Tokarz (2020)	Examine how causality orientations explain differences in the levels of employee engagement in response to the provision of job resources of outsourcing staff in Poland	Causality orientation theory Job-demand resource theory	Quantitative and cross-sectional	Convenience sampling	Existing Continuous scale measures Questionnaires	Hierarchical regression	Weaker relationship between job resources and high autonomous and impersonal orientations than with a lower autonomous orientation	Generalisation of findings across the heterogeneous population difficult is because of unexplained sample size allocation procedures

Source: Author’s compilation (2020)

**Table 23: Summary of Empirical Review on Employee Engagement Theory**

Author (s)/Yr.	Purpose	Theoretical Basis	Research Approach and Study Design	Sampling	Measures and Data Collection	Analysis procedures	Major Findings	Critiques/Gaps
Chikoko et al. (2014)	Investigate the relationship between employee engagement and the three psychological conditions and the mediating role of the three psychological conditions in the relationship between employee engagement and job characteristics of tertiary staff in South Africa	Engagement theory	Quantitative and cross-sectional	Convenience sampling	Verified continuous scale Questionnaire	Multiple regression analysis.	Psychological meaningfulness has a significant and positive relationship with employee engagement. Psychological availability had no significant relationship with employee engagement. Psychological meaningfulness was the strongest predictor of employee engagement	Drawing data from nonhomogeneous respondents in a university setting requires a larger sample size that is based on the proportional allocation of the sample size for generalisation purposes. Did not fully explore the antecedent-psychological condition-employee engagement-employee engagement outcome model implied in the engagement theory.

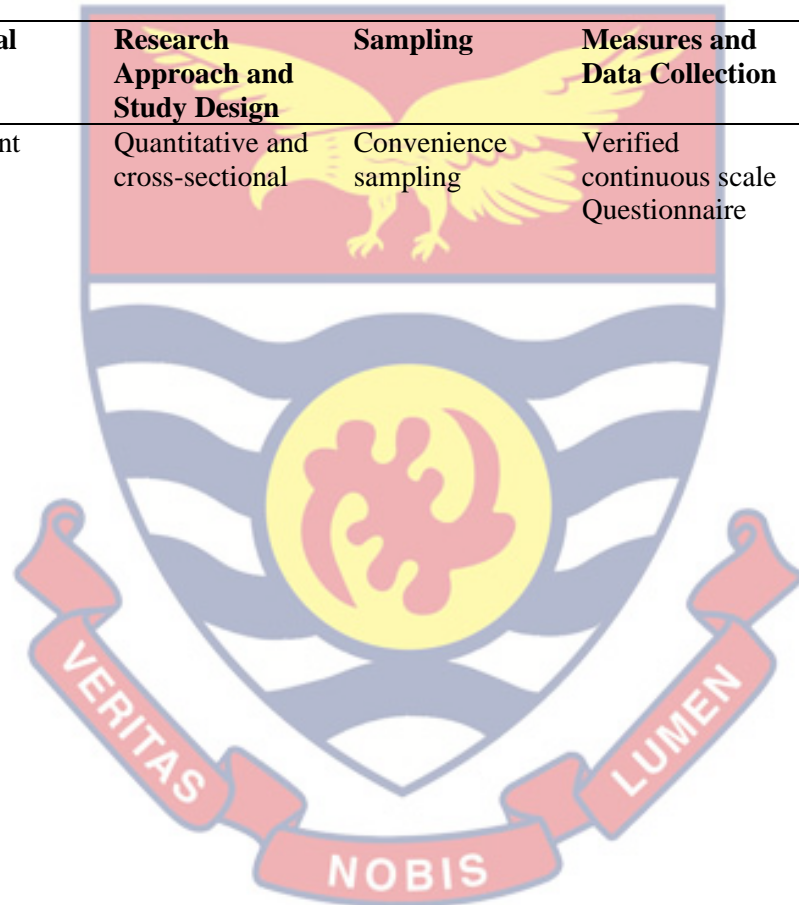


Table 23 Continued

Gatti (2016)	Examine the psychological conditions through which some dimensions of employee engagement were related to it	Employee engagement theory	Quantitative and Cross-sectional	Voluntary participation	Standardised continuous scale Questionnaire	Pearson correlation Hayes and Preacher's (2014) macro for mediation analysis	among the three psychological conditions  Psychological meaningfulness mediated the relationship between each of its antecedent variables and employee engagement. Psychological availability did not mediate the relationship between its antecedent and employee engagement	Limited sample size, unspecified population cast some doubt on the generalisability of the results. Ignored the outcome of employee engagement in the conceptualisation
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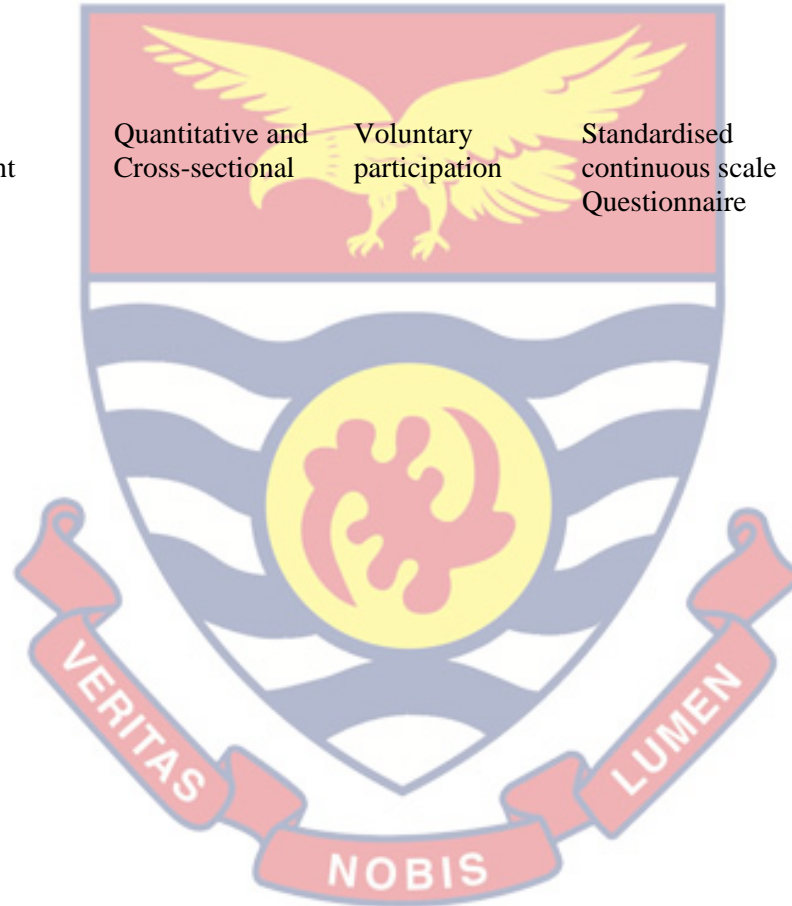
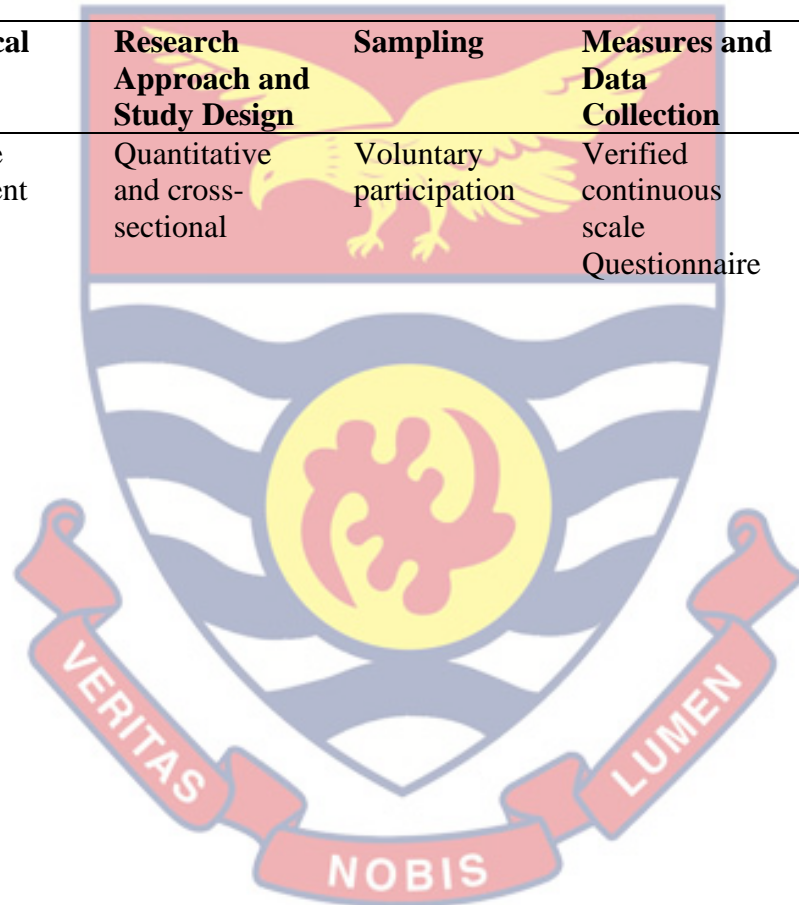


Table 23: Continued

Author (s)/Yr.	Purpose	Theoretical Basis	Research Approach and Study Design	Sampling	Measures and Data Collection	Analysis procedures	Major Findings	Critiques/Gaps
Franks (2017)	Investigate the relationship between the antecedents of psychological conditions and employee engagement and whether the psychological conditions mediate the relationship between their antecedents and employee engagement of community college staff in Mississippi in the United States of America	Employee engagement theory	Quantitative and cross-sectional	Voluntary participation	Verified continuous scale Questionnaire	Structural equation model	Apart from psychological safety, both psychological meaningfulness and availability were positively related to employee engagement. Psychological meaningfulness fully mediated the relationship between its determinants and	Excluded engagement outcomes in the study's conceptualisation. Eliminated the simultaneous mediation roles of psychological conditions and employee engagement. Not stating the population of the study area and the procedure for sample size determination did not meet the strict requirement for scientific rigour.



Asiwe et al. (2017)	Investigate employee engagement of a research organisation in South Africa	Relational theory of work engagement	Quantitative and Cross sectional	convenience sampling	Verified continuous scales Questionnaire	Structural equation model	employee engagement, whereas psychological availability did not. Psychological meaningfulness and psychological availability were related to employee engagement.	Did not state study population and procedure for determining the sample size. Convenience sampling in a quantitative study is unusual' Excluded outcomes of employee engagement in the study.
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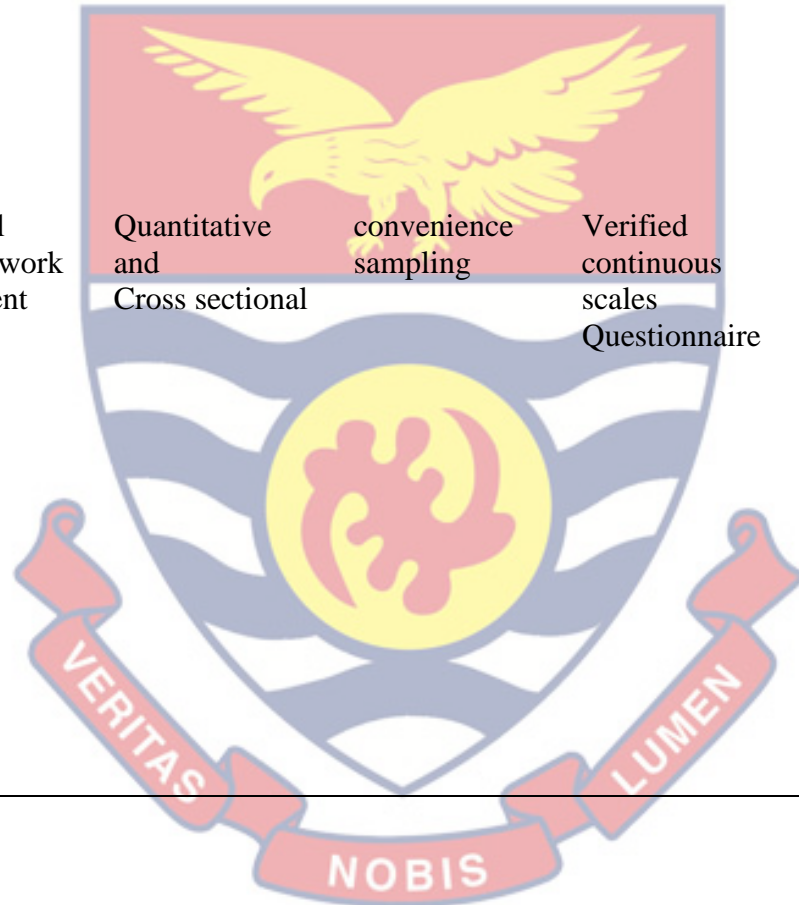


Table 23: Continued

Author (s)/Yr.	Purpose	Theoretical Basis	Research Approach and Study Design	Sampling	Measures and Data Collection	Analysis procedures	Major Findings	Critiques/Gaps
Chhetri (2017)	Examine the drivers and outcomes of employee engagement of bank staff in Nepal	Engagement theory	Quantitative and cross sectional	Census	Verified continuous scale Questionnaire	Multiple regression analysis and bootstrapping through macros developed by Preacher and Hayes (2008)	Employee engagement partially mediated the relationship between core self-evaluation and task performance, organisational citizenship behaviour and counterproductive work behaviours. Employee engagement fully mediated	Viewed the relationships between antecedents of employee engagement and the corresponding outcomes as direct relationships' The study ignored the three psychological states of meaningfulness, safety and availability, which are the mechanisms through which some antecedents must relate to

Table 23: Continued



the association between perceived organisational support and task performance and counterproductive work behaviours

employee engagement and then to organisational outcomes

Source: Author's compilation (2020)



## APPENDIX C

**SELECTED HOSPITALS OF RESPONDENT NURSES AND  
SUMMARY OF RESPONDENTS PER REGION**

**Table 24: Selected Hospitals of Respondent Nurses**

<b>Selected Centre</b>	<b>Hospital/Health</b>	<b>District/Metropolitan/ Municipal</b>	<b>Region</b>
Adidome Government Hospital	Central Tongu	District Assembly	Volta
Peki Government Hospital	North Dayi	District Assembly	Volta
Abrafi Women and Children Hospital	Techiman	Municipal	Bono East
Sunyani Municipal Hospital	Sunyani	Municipal	Bono
Koforidua Central Hospital	Koforidua	Municipal	Eastern
Tafo Government Hospital	Abuakwa	district	Eastern
Akuse Government Hospital	Lower Manya Krobo		Eastern
Sege Health Centre	Ada West	District	Greater Accra
Dodowa District Hospital	Shai-Osudoku	District	Greater Accra
Tema general Hospital	Tema	Metropolitan	Greater Accra
Tamale Central Hospital	Tamale	Municipal	Northern
Savelugu Hospital, Savelugu	Savelugu	Municipal	Northern
Jasikan Government Hospital	Jasikan	District	Oti
Tarkwa Government Hospital	Tarkwa Nsuaem	Municipal	Western

Source: Field survey (2021)

**Table 25: Summary of Respondents per Region**

<b>Randomly Selected Regions</b>	<b>Number of Randomly Selected Districts</b>	<b>Number of Randomly Selected Hospitals</b>	<b>Number of Respondents targeted</b>	<b>Retrieved and Useable Questionnaire</b>
Volta	2	2	122	119
Eastern	3	3	183	178
Greater Accra	3	3	183	169
Northern	2	2	122	118
Oti	1	1	61	53
Western	1	1	61	26
Bono	1	1	61	50
Bono East	1	1	61	48
<b>Total</b>	<b>14</b>	<b>14</b>	<b>854</b>	<b>761</b>

Source: Field survey (2021)

**APPENDIX D**

**QUESTIONNAIRE**

**UNIVERSITY OF CAPE COAST**

**COLLEGE OF HUMANITIES AND LEGAL STUDIES**

**SCHOOL OF BUSINESS**

The aim of this questionnaire is to obtain information regarding employee rewards, psychological conditions, employee engagement, causality orientation and employee performance of public nurses in public hospitals in order to analyse the roles of causality orientations, psychological conditions and employee engagement in the relationship between employee reward and performance. All information provided will be used for PhD research only. Confidentiality is strongly assured. Please, note that in responding to the questions, there are no wrong or correct answers. Thank you in advance.

**PLEASE, TURN OVER EACH PAGE**

**PART I**

**BACKGROUND INFORMATION**

Please, indicate your sex by ticking in the appropriate box.

Male	
Female	

Please, indicate the category of nurse you are

Enrolled nurse	
Registered nurse	

**PART II**

**SECTION A**

**EMPLOYEE REWARDS**

**Social Rewards**

The statements below are about how you perceive your organisation’s social rewards. Please, use the rating scale to select the extent to which each of the statements applies to you. The scale ranges from 1 (weak agreement) to 7 (very strong agreement). Please, circle the number corresponding to the option selected for each statement.

Statement	1	2	3	4	5	6	7
My supervisor values my contribution to the organisation’s well-being.							
My supervisor appreciates any extra effort from me.							
My supervisor attends to any complaint from me.							
The supervisor really cares about my well-being.							
My supervisor is courteous,							
My supervisor respects me							
My supervisor shows me kindness							
My best possible jobs are noticed by the supervisor.							
My supervisor cares about my general satisfaction at work.							
My supervisor shows very much concern for me.							
My supervisor takes pride in my accomplishments at work.							
My colleagues provide me emotional support at work							
I receive feedback from colleagues							
My colleagues are courteous to me							
My colleagues show me kindness							
My colleagues respect me							

**SECTION B**  
**EMPLOYEE PERFORMANCE**

**Contextual Performance/Organisational Citizenship Behaviour**

The statements below are about the extent to which you are engaged in voluntary performance activities in relation to your job. Please, use the rating scale to select the extent to which each of the statements applies to you. The scales range from 1 (never) to 5 (always). Please, circle the number corresponding to the option selected for each statement.

Statement	1	2	3	4	5
I help others who have been absent.					
I willingly give my time to help others who have work-related problems					
I adjust my work schedule to accommodate other employees' requests for time off.					
I go out of the way to make newer employees feel welcome in the work group					
I show genuine concern and courtesy toward coworkers, even under the most trying business or personal situations.					
I give up time to help others who have work or nonwork problems					
I make peace with others at the workplace					
I assist others with their duties.					
I share personal property with others to help their work.					
I endure rather than argue in teamwork					
I make suggestions in teamwork					
I actively participate in teamwork					
I exert extra effort in my job					
I am dedicated to my job					

I attend functions that are not required but that help the organisational image.	1	2	3	4	5
I keep up with developments in the organisation.	1	2	3	4	5
I defend the organisation when other employees criticise it.	1	2	3	4	5
I show pride when representing the organisation in public.	1	2	3	4	5
I offer ideas to improve the functioning of the organisation.	1	2	3	4	5
I take action to protect the organisation from potential problems.	1	2	3	4	5
I demonstrate concern about the image of the organisation.	1	2	3	4	5
I express loyalty towards the organisation.	1	2	3	4	5
I adhere to organisational rules	1	2	3	4	5

### Counterproductive Performance or Behaviour

Please, indicate how often you have engaged in each of the following activities on your present job. Please, use the 5-point scale ranging from 1(never) to (5) always. Please, circle the number corresponding to the option selected for each statement.

Statement	1	2	3	4	5
Made fun of someone at work	1	2	3	4	5
Said something hurtful to someone at work	1	2	3	4	5
Made an ethnic, religious, or racial remark at work	1	2	3	4	5
Cursed someone at work	1	2	3	4	5
Played a mean prank on someone at work	1	2	3	4	5
Acted rudely toward someone at work	1	2	3	4	5
Publicly embarrassed someone at work	1	2	3	4	5
Taken property from work without permission	1	2	3	4	5
Spent too much time fantasizing or daydreaming instead of working	1	2	3	4	5
Falsified a receipt to get reimbursed for more money than	1	2	3	4	5

you spent on business expenses					
Taken an additional or longer break than is acceptable at your workplace	1	2	3	4	5
Came in late to work without permission	1	2	3	4	5
Littered your work environment	1	2	3	4	5
Neglected to follow your boss's instructions	1	2	3	4	5
Intentionally worked slower than you could have worked	1	2	3	4	5
Discussed confidential company information with an unauthorized person	1	2	3	4	5
Used an illegal drug or consumed alcohol on the job	1	2	3	4	5
Put little effort into your work	1	2	3	4	5
Dragged out work in order to get overtime	1	2	3	4	5

### Adaptive Performance

The statements below are about how you adapt to various circumstances on your present job. Please, use the rating scale to select the extent to which each of the statements applies to you. The scale ranges from 1 (weak agreement) to 7 (very strong agreement). Please, tick the number corresponding to the option selected for each statement.

At work, you may encounter various emergencies, risks, or even situations of a dangerous nature. How do you respond?							
I am able to achieve total focus on the situation to act quickly	1	2	3	4	5	6	7
I analyze possible solutions and their ramifications quickly to select the most appropriate one	1	2	3	4	5	6	7
I quickly decide on the actions to take to resolve the problem	1	2	3	4	5	6	7
I am not in a position to be able to respond quickly	1	2	3	4	5	6	7
Think of the most demanding and stressful situations at work to describe the way you act:							
I feel at ease even if my tasks change and occur at a very fast pace	1	2	3	4	5	6	7
I keep my cool in situations where I am required to make many decisions	1	2	3	4	5	6	7
Having to take on additional work unexpectedly makes me very anxious	1	2	3	4	5	6	7
I look for solutions by having a calm discussion with colleagues	1	2	3	4	5	6	7

Work-related stress impacts the quality of what I do	1	2	3	4	5	6	7
My colleagues ask my advice regularly when situations are difficult because of my self-control	1	2	3	4	5	6	7
Events may occur unpredictably at work. You may, then, have to make snap decisions without a comprehensive grasp of the problem or without all the resources at your disposal. How do you respond in situations like these?							
I wait for more accurate information from my superior before acting.	1	2	3	4	5	6	7
I easily reorganize my work to adapt to the new circumstances.	1	2	3	4	5	6	7
I contribute to the stability of my team by driving others towards our priority assignments.	1	2	3	4	5	6	7
Uncertain or unpredictable work situations impair my ability to act.	1	2	3	4	5	6	7
In relation to your specific working conditions (noise, degree of risk/danger inherent in your occupation, ergonomic properties of your workplace, heat, cold...) how do you respond?							
I can only work efficiently in a comfortable environment	1	2	3	4	5	6	7
I sometimes reach my physical limits to accomplish an urgent task	1	2	3	4	5	6	7
I strive to adapt, however difficult, to the working conditions I am in.	1	2	3	4	5	6	7

**PART III**

**SECTION C**

**PSYCHOLOGICAL CONDITIONS**

**Psychological Meaningfulness**

The statements below are about the meaning you derive from your present job. Please, use the rating scale to select the extent to which each of the statements applies to you. The scale ranges from 1 (weak agreement) to 7 (very strong agreement). Please, tick the number corresponding to the option selected for each statement.

Statement							
The work I do on this job is very important to me.	1	2	3	4	5	6	7

My job activities are personally meaningful to me.	1	2	3	4	5	6	7
The work I do on this job is worthwhile.	1	2	3	4	5	6	7
My job activities are significant to me.	1	2	3	4	5	6	7
The work I do on this job is meaningful to me.	1	2	3	4	5	6	7
I feel that the work I do on my job is valuable.	1	2	3	4	5	6	7
I am not taken for granted by my organisation	1	2	3	4	5	6	7
My job has a clear purpose	1	2	3	4	5	6	7
My job involves working towards a social good	1	2	3	4	5	6	7
The return on investment of my effort is commensurate with my rewards	1	2	3	4	5	6	7
I feel personally accomplished in my job	1	2	3	4	5	6	7
There is a fit between the requirements of my job and my values or self-image	1	2	3	4	5	6	7
In the performance of my job, there is room to give and receive	1	2	3	4	5	6	7
My job provides variety and challenge	1	2	3	4	5	6	7
My work permits me to be creative	1	2	3	4	5	6	7

**Psychological Availability**

The statements below are about how confident you are at your work. Please, use the rating scale to select the extent to which each of the statements applies to you. The scale ranges from 1 (weak agreement) to 7 (very strong agreement). Please, circle the number corresponding to the option selected for each statement.

Statement							
I am confident in my ability to handle competing demands at work.	1	2	3	4	5	6	7
I am confident in my ability to deal with problems that come up at work.	1	2	3	4	5	6	7



I am confident in my ability to think clearly at work.	1	2	3	4	5	6	7
I am confident in my ability to display the appropriate emotions at work.	1	2	3	4	5	6	7
I am confident that I can handle the physical demands at work.	1	2	3	4	5	6	7
I feel that I possess the physical resources that are required for my work	1	2	3	4	5	6	7
I feel that I possess the psychological resources for my work	1	2	3	4	5	6	7
I feel that I possess the emotional resources for my work	1	2	3	4	5	6	7
I have opportunity to learn new skills	1	2	3	4	5	6	7
I enjoy security in my work role	1	2	3	4	5	6	7
At work, I experience no distractions in performance	1	2	3	4	5	6	7
Issues in my life outside work have no effects on the demands of my work	1	2	3	4	5	6	7
There are no contradictions about social issues in role performance	1	2	3	4	5	6	7
I have a high sense of self-awareness in role performance	1	2	3	4	5	6	7

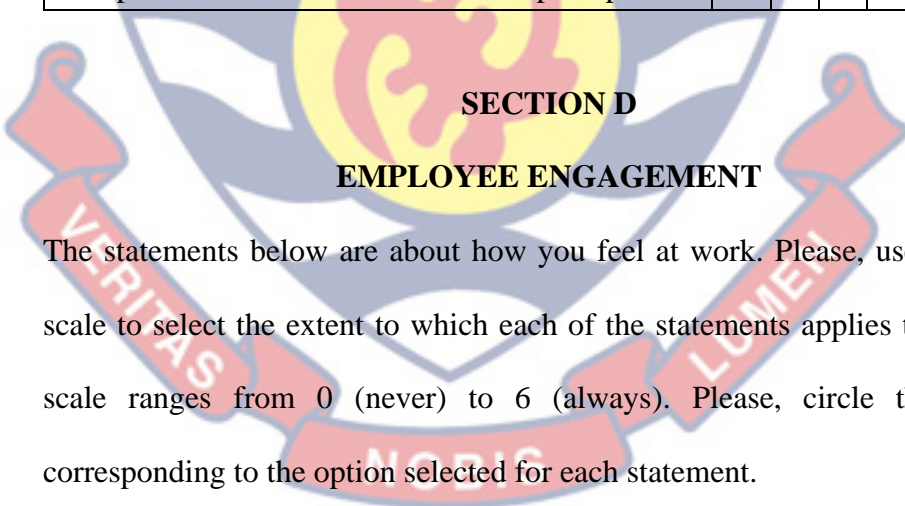
### Psychological Safety

The statements below are about how safe you feel at your work. Please, use the rating scale to select the extent to which each of the statements applies to you.

The scale ranges from 1 (weak agreement) to 7 (very strong agreement). Please cross (x) the option selected for each statement.

Statement	1	2	3	4	5	6	7
I'm not afraid to be myself at work.							
I am not afraid to express my opinions at work.							

I am confident in my ability to think clearly at work.	1	2	3	4	5	6	7
The work environment is not threatening to me.	1	2	3	4	5	6	7
I feel that situations at work are trustworthy and predictable and pose no danger to my behaviour in role performance	1	2	3	4	5	6	7
I experience freedom from the fear harm to my self-image in performing my job	1	2	3	4	5	6	7
There is no fear of harm to my career at work	1	2	3	4	5	6	7
My status is not harmed when performing my job	1	2	3	4	5	6	7
I am confident that my workplace relationships will not embarrass or punish me in role performance	1	2	3	4	5	6	7
I receive supervisor support in role performance	1	2	3	4	5	6	7
The work environment is safe	1	2	3	4	5	6	7
I trust my supervisors	1	2	3	4	5	6	7
The behaviour of my supervisors is consistent	1	2	3	4	5	6	7
The norms in my organisation permit me to devote myself in role performance	1	2	3	4	5	6	7
The work environment is predictable	1	2	3	4	5	6	7
I feel that my work team is safe with respect to interpersonal risks because of shared perception	1	2	3	4	5	6	7



**SECTION D**

**EMPLOYEE ENGAGEMENT**

The statements below are about how you feel at work. Please, use the rating scale to select the extent to which each of the statements applies to you. The scale ranges from 0 (never) to 6 (always). Please, circle the number corresponding to the option selected for each statement.

Statement	0	1	2	3	4	5	6
At my work, I feel full of energy							
At my job, I feel strong and vigorous							
I can continue working for very long periods at a time							
At my work, I always persevere, even when things do not go well							

At my job, I am very resilient, mentally	0	1	2	3	4	5	6
When I get up in the morning, I feel like going to work	0	1	2	3	4	5	6
I find the work that I do full of meaning and purpose	0	1	2	3	4	5	6
I have a positive view of my job	0	1	2	3	4	5	6
I am enthusiastic about my job	0	1	2	3	4	5	6
My job inspires me	0	1	2	3	4	5	6
I am proud of the work that I do	0	1	2	3	4	5	6
To me, my job is challenging	0	1	2	3	4	5	6
Time moves very fast when I am working	0	1	2	3	4	5	6
I get carried away when I am working	0	1	2	3	4	5	6
When I am working, I forget everything else around me	0	1	2	3	4	5	6
I feel happy when I am working intensely	0	1	2	3	4	5	6
I am immersed in my work	0	1	2	3	4	5	6
I invest my whole self in my job performance	0	1	2	3	4	5	6
It is difficult to detach myself from my job	0	1	2	3	4	5	6
I exert my physical strength in executing my job	0	1	2	3	4	5	6

**PART IV**

**CAUSALITY ORIENTATIONS**

The statements under each of the sections below are about the extent to which your behaviour in response to situations at the workplace is explained by the options. We all respond in a variety of ways to situations, and probably each response is at least slightly likely for you. Please, use the rating scale to select the extent to which each of the statements applies to you. The scale ranges from *least likely (1) to 7 (very likely)*. Please circle one number on the scale for each item.













## APPENDIX E

### INTERVIEW GUIDE FOR KEY INFORMANTS

#### Social Reward and Adaptive Performance

1. **Social reward:** Probe

Satisfaction with supervisor support and colleague support,

Effect of social rewards,

Factors that promote social reward,

Importance.

2. **Adaptive Performance:** Probe what nurses do when unexpected

situations come up in their work, reasons for answer, factors that

promote or hinder it, social reward's influence in such situations,

#### Social Reward and Contextual Performance

3. **Contextual Performance:** Probe

Extra-role activities

Reasons

Factors

Role of social reward and reason

#### Social Reward and Counterproductive Performance or Behaviour

4. **Counterproductive Performance or behaviour:** Probe:

Activities that harm the organisation, colleagues and job

Level

Reasons or factors

Role of social reward and reason.

APPENDIX F

PRE-TEST CONSTRUCT RELIABILITY RESULTS

Table 26: Pre-test Construct Reliability Results

Construct	Indicators	No of Items	Mean	Standard deviation	Cronbach's Alpha
1. Social Reward	Supervisor values contribution	16	5.2667	.98027	.886
	Supervisor appreciates any extra effort		4.8000	1.34933	
	Supervisor attends to complaint		4.9000	1.64736	
	Supervisor cares about well-being.		5.7333	1.28475	
	Supervisor is courteous,		5.9333	1.11211	
	Supervisor respects me		5.4333	1.27802	
	supervisor shows me kindness		5.3000	1.08755	
	Noticing of best jobs		5.1667	1.26173	
	Supervisor cares about general satisfaction		5.1000	1.32222	
	Supervisor shows concern.		5.4000	1.35443	
	Supervisor takes pride in accomplishments		5.4000	1.24845	
	Colleagues provide emotional support		5.2667	1.28475	
	Receiving feedback from colleagues		5.4333	1.25075	
	Colleagues are courteous		5.2667	1.25762	
	Colleagues show kindness		5.3667	1.21721	
	Colleagues respect me		5.5667	1.22287	
2. Employee Engagement	Feeling full of energy	20	4.9333	1.04826	.872
	Feeling strong and vigorous		4.8000	.71438	
	Working very long periods at a time		5.0000	.90972	
	Always persevering		5.0667	.82768	
	At my job, I am very resilient, mentally		4.8667	.73030	

**Table 26: Continued**

	Feeling of going to work morning		4.5333	1.04166	
	Work full of meaning and purpose		5.2000	.92476	
	Positive view of job		5.5000	.77682	
	Enthusiastic about job		5.2667	.86834	
	Inspires from job m		5.5667	.72793	
	Proud of work		5.6000	.62146	
	Job challenging		5.1333	1.04166	
	Moves very fast when working		5.2000	.99655	
	Getting carried away when working		4.8000	1.32353	
	Forgetting everything else when working		4.8333	.91287	
	Feeling happy when working intensely		5.1333	.81931	
	Immersed work		5.0333	.66868	
	Investing whole self in my job performance		5.0000	.90972	
	Difficulty detaching from job		4.6333	1.12903	
	Exerting physical strength in executing job		5.0333	.80872	
3. Psychological	Job is very important to me.	14	6.3667	.88992	.784
Meaningfulness	Job activities personally meaningful		6.2000	.92476	
	Job is worthwhile.		6.0667	.94443	
	Job activities are significant		6.2000	1.03057	
	Feeling job is valuable.		6.2000	.99655	
	Not taken for granted by organisation		5.9000	1.32222	
	Job has clear purpose		5.5333	1.00801	
	Job involving working towards a social good		6.3333	.80230	
	Return on investment commensurate		5.4000	1.52225	
	Feeling personally accomplished in job		5.4000	1.27577	
	Fit between job and values or self-image		5.6333	1.06620	
	Room to give and receive		5.3667	1.12903	
	Job provides variety and challenge		5.7000	.98786	
	Work permits creativity		5.8667	1.00801	

**Table 26: Continued**

4. Psychological Availability	Confidence handling competing demands	14	5.6667	1.06134	.836
	Confidence handling problems		5.9667	.88992	
	Confidence in ability to think clearly		5.6333	1.06620	
	Confidence displaying appropriate emotions		5.7333	1.11211	
	Confidence handling physical demands		5.8000	.92476	
	Possessing physical resources for work		5.6333	1.03335	
	Possessing psychological resource for work		5.7667	1.04000	
	Possessing emotional resources for work		5.8000	1.09545	
	Opportunity to learn new skills		5.8333	1.26173	
	Enjoyment of security in work role		4.9000	1.49366	
	Experiences no distraction in performance		4.6667	1.26854	
	Outside issues no effect on performance		5.7667	1.16511	
	No contradictions about social issues in performance		5.5000	.93772	
	High sense of self-awareness in role performance		5.6000	1.03724	
5. Psychological Safety	Not afraid of self at work	16	5.7333	1.11211	.910
	Not afraid to express opinion at work		5.7667	.97143	
	Ability to think clearly at work		5.8333	1.11675	
	Work environment not threatening		5.0000	1.48556	
	Trustworthy work environment		4.8333	1.41624	
	Freedom from harm to self-image		5.2000	1.24291	
	No fear of harm to career status not harmed		5.0333	1.29943	
	Workplace relationship not punishing receives		5.5667	1.10433	
	Supervisor support in role performance		5.4667	1.33218	
	Safe work environment		5.7667	1.04000	
	Trust for supervisor		4.5667	1.43078	
	Consistent supervisor behaviour		5.7000	.91539	
	Org. norms permit devotion in role performance		5.5333	1.10589	
	Predictable work environment		5.3000	1.05536	
Safety with team interpersonal risks		4.8333	1.11675		

Table 26: Continued

			5.3333	1.15470	
6. Contextual Performance	Helps absentees	20	4.3667	.76489	.819
	Gives time to help with work related problems		4.4333	.72793	
	Adjust work schedules to help time off staff		4.3667	.76489	
	Makes newer employees welcomed		4.6000	.56324	
	Courtesy towards coworkers		4.5000	.57235	
	Helps other with nonwork problems		4.2333	.67891	
	Makes peace with others at workplace		4.5667	.62606	
	Assists others with their duties		4.4333	.62606	
	Shares personal property to help others' wk		3.9667	.85029	
	Endure rather than argue in teamwork		4.3000	.91539	
	Makes suggestions in teamwork		4.5333	.68145	
	Actively participates in teamwork		4.7333	.44978	
	Exerts extra effort in job		4.5667	.56832	
	Dedication to job		4.7000	.53498	
	Attends unrequired function to promote org.		4.1000	.92289	
	Keeps up with development in organisation		4.3667	.61495	
	Defends organisation when others criticise		3.9667	.80872	
	Pride representing organisation in public		3.7000	1.02217	
	Offers ideas to improve organisations		4.1667	.64772	
	Acts to protect org from potential problems		4.0667	.63968	
	Demonstrates concerns about organisation image		4.2667	.63968	
	Loyalty towards organisation		4.3333	.60648	
	Adheres to organisational rules		4.4667	1.10589	
7. Counterproductive Behaviour	Made fun of others	19	2.3000	1.36836	.964
	Said something hurtful to someone		1.6667	.88409	
	Made religious remarks at work		1.5000	1.13715	
	Cursed someone at work		1.2333	.72793	
	played mean prank on someone at work		1.6333	1.12903	

Table 26: Continued

	Acted rudely towards someone at work	1.5333	1.00801	
	Publicly embarrassed someone at work	1.3333	.75810	
	Taken work property without permission	1.3333	.92227	
	daydreaming instead of working	1.3000	.74971	
	Falsified receipt to get refund	1.3667	1.06620	
	Taken longer break than accepted	1.5333	.97320	
	Lateness without permission	1.6000	1.03724	
	Littered work environment	1.3333	.84418	
	Neglected to follow bosses' instruction	1.5000	.90019	
	Intentionally worked slowly	1.5000	1.04221	
	Discussed confidential information	1.3333	.75810	
	Used illegal drug at work	1.2667	.73968	
	Put little effort into Work	1.8000	1.32353	
	Dragged out work to get overtime	1.4333	1.00630	
8. Adaptive Performance	Focus to act quickly	5.2333	1.25075	.700
	Quick analysis of possible solutions	5.3000	1.31700	
	Quick decision on action to take	5.4000	1.45270	
	In positions to respond timely	4.2667	1.99885	
	Feels at ease if task change fast	2.5667	1.07265	
	Keeps cool in situations requiring decisions	5.3667	.96431	
	No anxiety performing unexpected work	4.3667	1.79046	
	Looks for solution discussing with colleagues	5.8333	1.11675	
	Work-related stress not impacting work quality	5.1000	1.37339	
	Colleagues seek advice due to my self-control	5.1333	1.56983	
	Not waiting for accurate info before acting	4.9667	1.47352	
	Adapts to new circumstances	5.4333	1.07265	
	Contributes stability of teamwork	5.5333	1.07425	
	Not impairing ability to act	3.5667	1.71572	
	Works efficiently uncomfortable environment	4.0000	1.87543	

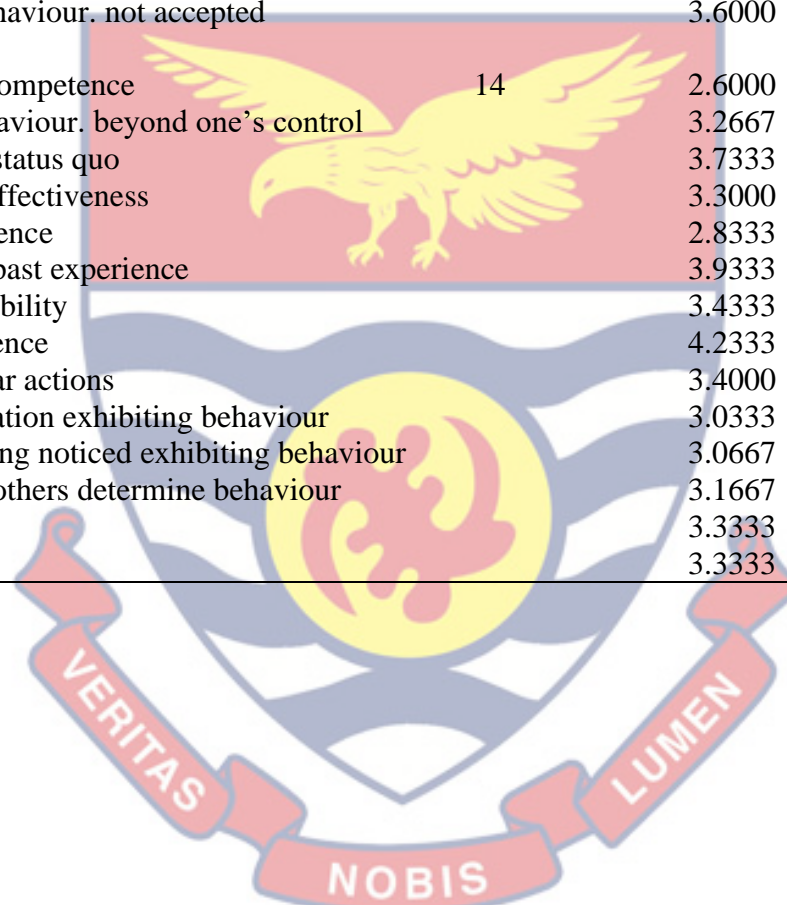
Table 26: Continued

	No physical limits reached during urgent task		5.1667	1.48750	
	Adapts to difficult working conditions		5.3667	1.60781	
9. Autonomous Orientation	Behavioural response based on needs	15	4.2333	1.33089	.899
	Behavioural response based on values		4.8667	1.54771	
	Behavioural response based on interest		4.1667	1.34121	
	Accepts responsibility		5.1667	1.28877	
	Capable of adapting to situations		5.3667	.96431	
	Maintaining relationship		4.9000	1.18467	
	High level of willingness		5.0667	1.22990	
	Guided by preference		4.2667	1.57422	
	Knows value of job		5.5000	1.07479	
	Based on interesting job		4.8000	1.37465	
	Influenced by feedback		4.8333	1.23409	
	Support received		4.5667	1.27802	
	Own decision		4.8667	1.35782	
	Disappointed in poor performance		5.0000	1.25945	
	Assertive about behaviour		4.7667	1.19434	
10. Control Orientation	Influenced by reward	15	3.4333	1.61210	.910
	Avoiding punishment		4.6000	1.24845	
	Guided by tension		3.5333	1.56983	
	Guilty not exhibiting behaviour		5.1333	1.52527	
	Possibility of advancement		4.4667	1.63440	
	Avoid problems		4.9000	1.44676	
	Relies on others' decision		3.0667	1.91065	
	Influenced by pressure		3.2000	1.71001	
	Feels others are better		2.8333	1.72374	
	Shift blame		2.2333	1.81342	
	Will be angry		2.1333	1.65536	
	Guided by environmental controls		3.3667	1.65015	
	Fear of failure		3.8667	1.61316	

Table 26: Continued

	Rely on others		2.9000	1.80707	
	Ideas about behaviour. not accepted		3.6000	1.75381	
11. Impersonal Orientation	Feelings of incompetence	14	2.6000	1.77337	.918
	Exhibiting behaviour. beyond one's control		3.2667	1.70057	
	Influenced by status quo		3.7333	1.48401	
	Feelings of ineffectiveness		3.3000	1.74494	
	Lack of confidence		2.8333	1.91335	
	Influenced by past experience		3.9333	1.72073	
	Doubts about ability		3.4333	1.83234	
	Follow precedence		4.2333	1.50134	
	Look for similar actions		3.4000	1.52225	
	Feeling of isolation exhibiting behaviour		3.0333	1.54213	
	Feeling not being noticed exhibiting behaviour		3.0667	1.41259	
	Suggestion of others determine behaviour		3.1667	1.55549	
	Blame self		3.3333	1.51620	
	Full of anxiety		3.3333	1.68836	

Source: Pre-test survey





## APPENDIX G1

**SUMMARY OF MEASUREMENT MODEL ASSESSMENTS AND  
PREDICTIVE RELEVANCE**

**Table 27: Summaries of Measurement Model Assessment and Predictive Relevance**

Assessment	Criterion	Results	Comment
Internal consistency	Composite reliability (CR)	CR value for all constructs ranged from 0.841 to 0.963	All the construct items were internally consistent (CR $\geq$ 0.6)
Indicator reliability (IR)	Factor loadings (FL)	Except for one indicator, all the item loadings ranged from 0.559 to 0.909	Variables measured what they were intended to measure (FL $\geq$ 0.5)
Convergent validity	AVE	All AVE value ranged from 0.511 to 0.672	There were convergent validities (AVE > 0.5)
Discriminant validity	HTMT	HTMT value for all constructs ranged from 0.061 to 0.805	Hypothesised paths in the structural models of the study were real and not the result of some statistical inconsistencies (HTMTs < 0.85)
Common method bias	VIF	VIF value for all the constructs ranged from 1.00 to 2.971	No threats of common method variance in this study (VIF < 5)
Predictive relevance ( $Q^2$ )	Blindfolding	$Q^2$ value for all models ranged from 0.020 to 0.478	All the models have predicted relevance ( $Q^2 > 0$ )

Source: Field survey (2021)

APPENDIX G2

DESCRIPTIVE STATISTICS OF THE CONSTRUCTS

Table 28: Descriptive Statistics of Constructs

Constructs	N Statistic	Minimum Statistic	Maximum Statistic	Mean Statistic	Std. Deviation Statistic
<b>Employee Reward</b>					
Social Reward	761	1.25	7.00	5.0596	1.06551
<b>Psychological Conditions</b>					
Psychological Meaningfulness	761	1.36	7.00	5.5931	.94889
Psychological Safety	761	1.38	7.00	5.2303	1.08652
Psychological Availability	761	1.29	7.00	5.4728	.93359
<b>Employee Engagement</b>	761	.85	6.00	4.7194	.78574
<b>Employee Performance</b>					
Counterproductive Performance	761	1.00	4.74	1.5532	.77171
Adaptive Performance	761	2.59	6.71	4.7722	.63018
Contextual Performance	761	1.09	5.00	4.1211	.60597
<b>Causality Orientations</b>					
Impersonal Orientation	761	1.00	6.79	3.2550	1.18348
Autonomous Orientation	761	1.20	6.80	4.5869	1.07181
Control Orientation	761	1.00	6.73	3.5574	1.22072

Source: Field survey (2021)

APPENDIX H1

SAMPLE SERIAL MEDIATION CONCEPTUAL MODELS

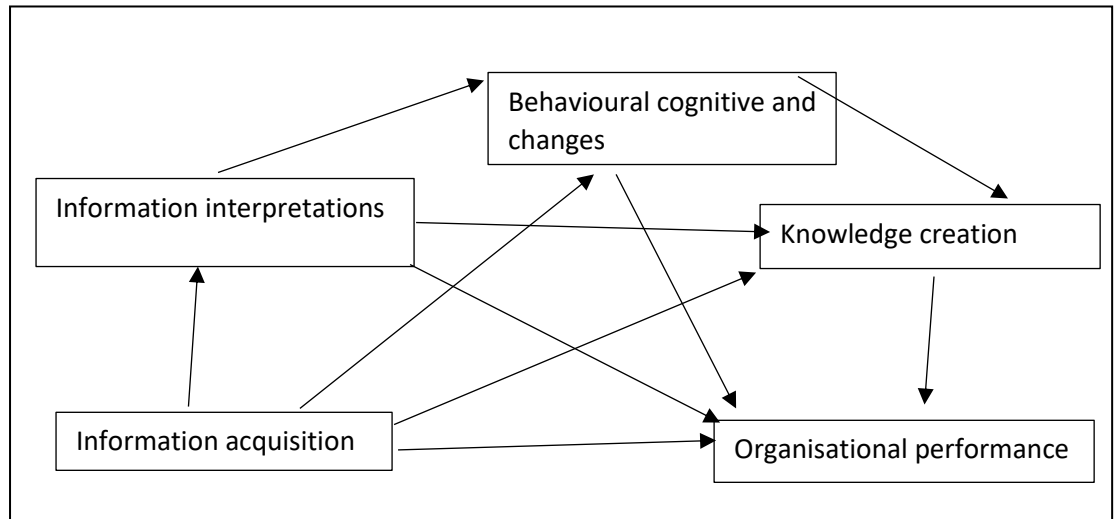


Figure 5: Sample serial mediation conceptual model 1.

Source: Qadri et al. (2021)

L. Pan et al.

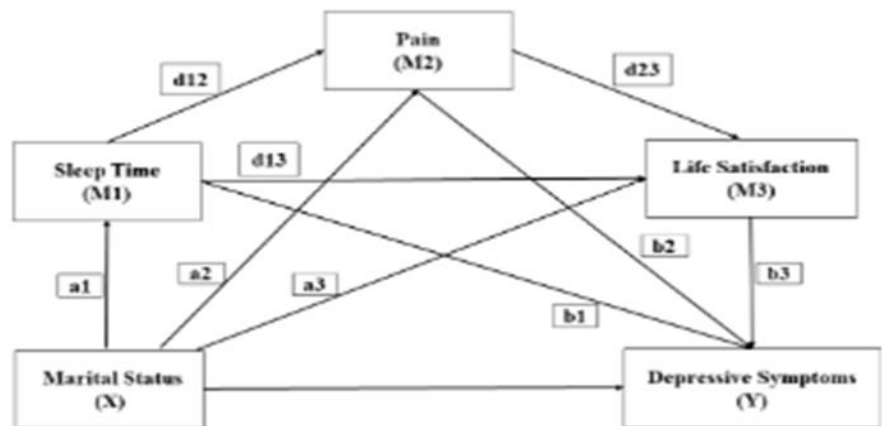
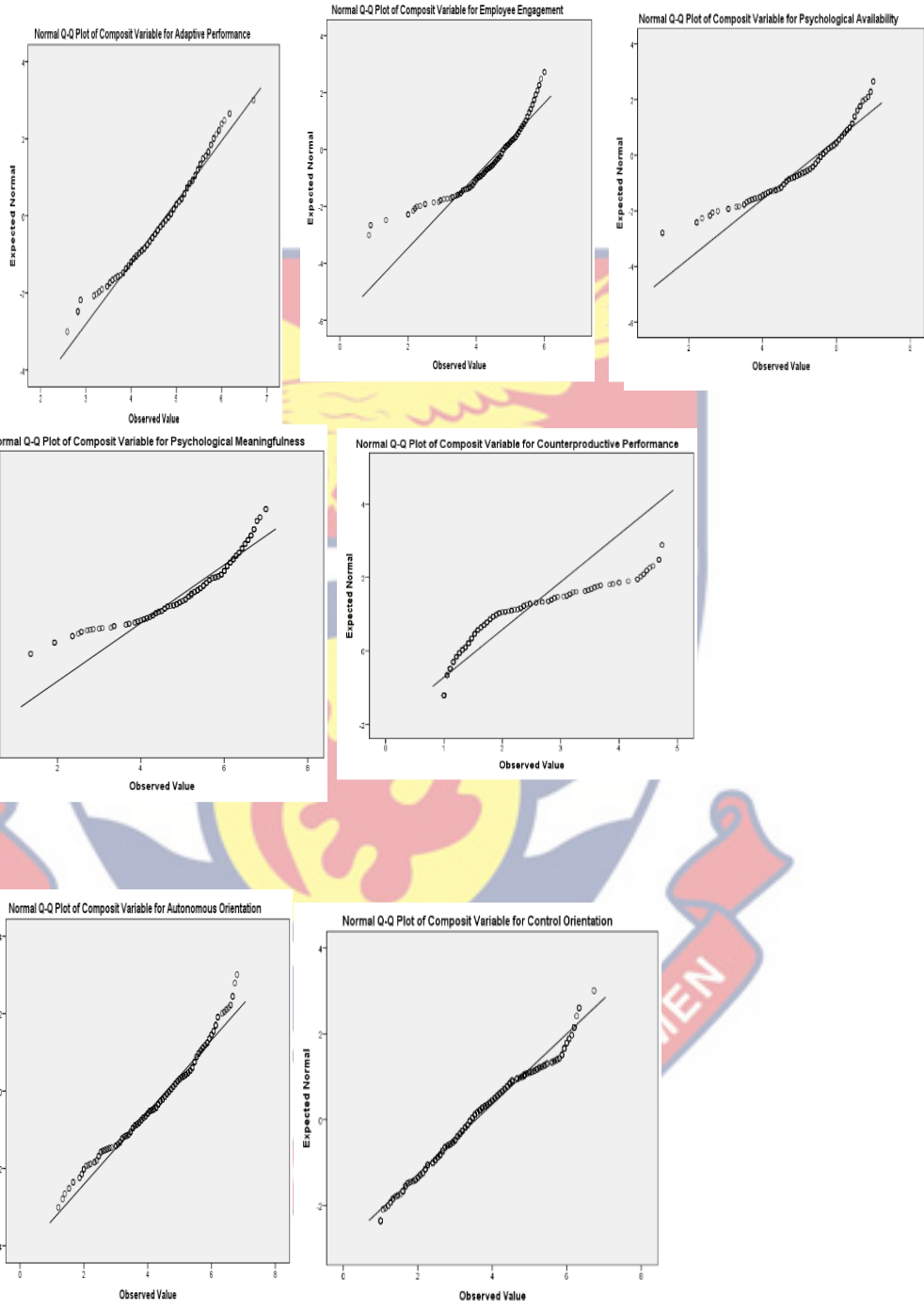


Figure 6 Sample serial mediation conceptual model 2.

Source: Copied from Pan et al. (2022, pg. 54)

## APPENDIX H2

### NORMAL Q-Q PLOTS FOR DISTRIBUTION OF CONSTRUCTS



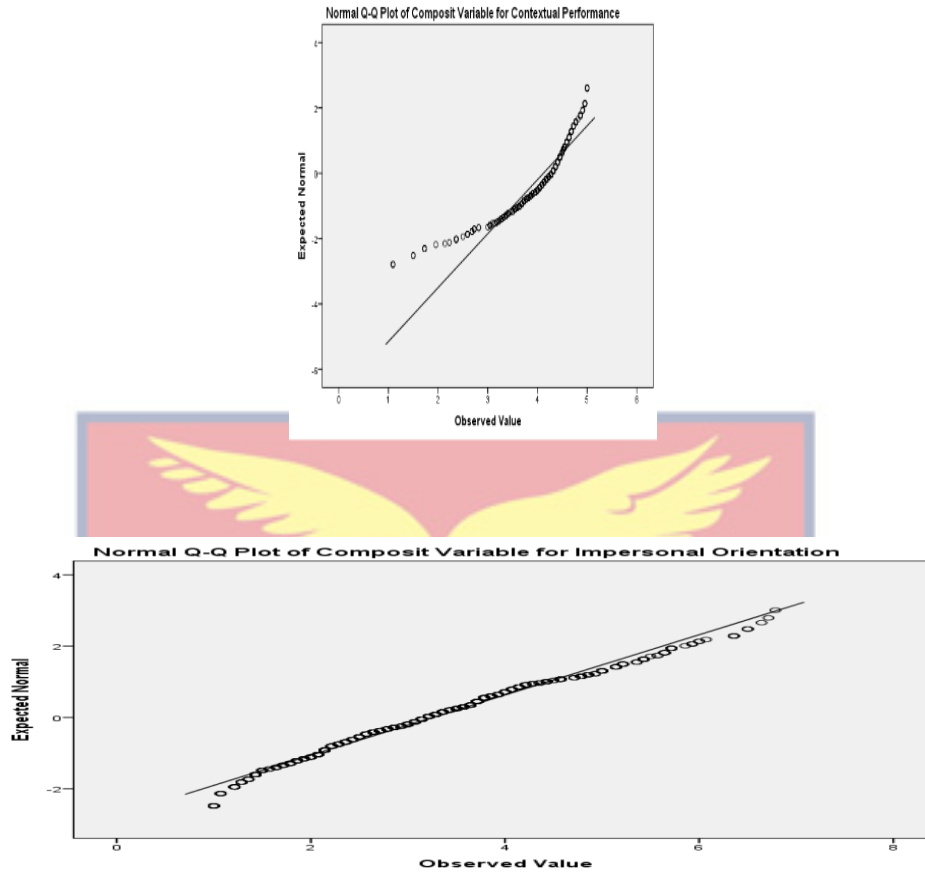
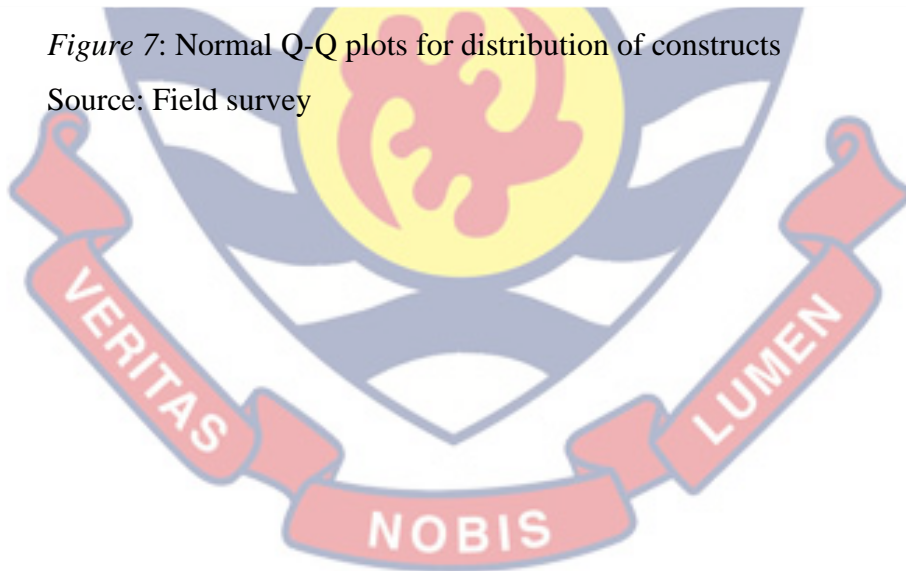


Figure 7: Normal Q-Q plots for distribution of constructs

Source: Field survey



## APPENDIX II

**SPECIFIC INDIRECT EFFECT OF PSYCHOLOGICAL  
CONDITIONS, EMPLOYEE ENGAGEMENT AND CAUSALITY  
ORIENTATIONS IN THE RELATIONSHIPS BETWEEN SOCIAL  
REWARDS AND CONTEXTUAL PERFORMANCE**

**Table 29: Specific Indirect Effect of Psychological Conditions, Employee Engagement and Causality Orientations in the Relationships between Social Rewards and Contextual Performance**

	Beta	t-Statistics	p-value
Safety -> Control -> Contextual performance	-0.019	1.983	0.047
Social Reward -> Meaningfulness -> Engagement -> Impersonal -> Contextual performance	0.003	1.576	0.115
Meaningfulness -> Impersonal -> Contextual performance	0.006	1.272	0.203
Social Reward -> Engagement -> Impersonal	-0.040	2.557	0.011
Social Reward -> Safety -> Control	0.118	3.038	0.002
Safety -> Engagement -> Autonomous -> Contextual performance	0.000	0.081	0.935
Social Reward -> Availability -> Engagement -> Impersonal -> Contextual performance	0.001	1.367	0.172

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Social Reward -> Safety ->	-0.004	1.418	0.156
Impersonal -> Contextual performance			
Social Reward -> Availability	-0.031	2.644	0.008
-> Engagement -> Control			
Social Reward -> Availability	-0.001	0.122	0.903
-> Engagement -> Autonomous			
Social Reward -> Safety ->	0.000	0.081	0.936
Engagement -> Autonomous -> Contextual performance			
Meaningfulness ->	0.073	2.715	0.007
Engagement -> Contextual performance			
Social Reward ->	-0.008	1.654	0.098
Meaningfulness -> Control -> Contextual performance			
Social Reward ->	0.005	2.251	0.024
Engagement -> Control -> Contextual performance			
Meaningfulness ->	-0.144	3.865	0.000
Engagement -> Control Availability -> Engagement -	0.006	1.975	0.048
> Control -> Contextual performance			
Engagement -> Autonomous	-0.001	0.123	0.902
-> Contextual performance			
Social Reward ->	-0.003	0.126	0.900
Meaningfulness -> Engagement -> Autonomous			

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Table 29 Continued

	Beta	t-statistics	p-value
Social Reward -> Availability	0.016	1.705	0.088
-> Engagement -> Contextual performance			
Availability -> Engagement -> Impersonal -> Contextual performance	0.002	1.376	0.169
Social Reward -> Safety -> Contextual performance	-0.001	0.045	0.964
Social Reward -> Meaningfulness -> Impersonal	-0.070	1.726	0.084
Meaningfulness -> Engagement -> Autonomous	-0.005	0.127	0.899
Social Reward -> Engagement -> Impersonal -> Contextual performance	0.002	1.500	0.134
Social Reward -> Meaningfulness -> Control	0.086	1.933	0.053
Social Reward -> Impersonal -> Contextual performance	-0.011	1.919	0.055
Social Reward -> Meaningfulness -> Engagement	0.284	8.461	0.000
Social Reward -> Availability -> Engagement	0.108	3.692	0.000
Safety -> Engagement -> Impersonal	-0.007	0.815	0.415
Social Reward -> Safety -> Autonomous	0.115	2.908	0.004



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Social Reward -> Availability	0.000	0.194	0.846
-> Impersonal -> Contextual performance			
Social Reward -> Safety -> Impersonal	0.088	2.072	0.038
Social Reward -> Availability -> Contextual performance	0.191	6.903	0.000
Meaningfulness -> Engagement -> Impersonal	-0.099	2.705	0.007
Availability -> Control -> Contextual performance	0.003	0.430	0.667
Social Reward -> Meaningfulness -> Engagement -> Impersonal	-0.056	2.617	0.009
Social Reward -> Meaningfulness -> Autonomous	0.050	1.096	0.273
Meaningfulness -> Engagement -> Control -> Contextual performance	0.014	2.216	0.027
Meaningfulness -> Engagement -> Impersonal -> Contextual performance	0.005	1.585	0.113
Social Reward -> Availability -> Autonomous	-0.001	0.030	0.976
Social Reward -> Safety -> Engagement	0.021	0.916	0.360
Safety -> Autonomous -> Contextual performance	0.021	2.150	0.032

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Table 29 Continued

	Beta	t-statistics	p-value
Engagement -> Impersonal -> Contextual performance	0.010	1.570	0.117
Social Reward -> Safety -> Engagement -> Contextual performance	0.003	0.862	0.389
Social Reward -> Safety -> Engagement -> Impersonal	-0.004	0.811	0.417
Social Reward -> Availability -> Engagement -> Control -> Contextual performance	0.003	1.922	0.055
Availability -> Engagement -> Autonomous -> Contextual performance	0.000	0.119	0.905
Availability -> Engagement -> Contextual performance	0.029	1.739	0.082
Social Reward -> Availability -> Engagement -> Autonomous -> Contextual performance	0.000	0.119	0.906
Social Reward -> Safety -> Engagement -> Impersonal -> Contextual performance	0.000	0.692	0.489
Meaningfulness -> Autonomous -> Contextual performance	0.009	1.012	0.312
Social Reward -> Meaningfulness -> Engagement -> Autonomous -> Contextual performance	0.000	0.121	0.904

Social Reward ->	0.158	4.512	0.000
Meaningfulness ->			
Contextual performance			
Social Reward ->	-0.081	3.555	0.000
Meaningfulness ->			
Engagement -> Control			
Social Reward ->	0.041	2.642	0.008
Meaningfulness ->			
Engagement -> Contextual			
performance			
Social Reward ->	0.004	1.276	0.202
Meaningfulness ->			
Impersonal -> Contextual			
performance			
Social Reward -> Availability	0.007	0.216	0.829
-> Impersonal			
Availability -> Engagement -	-0.040	2.151	0.032
> Impersonal			
Social Reward ->	0.000	0.124	0.901
Engagement -> Autonomous			
-> Contextual performance			
Safety -> Engagement ->	0.001	0.797	0.426
Control -> Contextual			
performance			
Social Reward ->	0.029	2.441	0.015
Engagement -> Contextual			
performance			
Safety -> Impersonal ->	-0.008	1.423	0.155
Contextual performance			
Social Reward -> Safety ->	0.000	0.084	0.933
Engagement -> Autonomous			
Social Reward -> Availability	-0.016	0.461	0.645
-> Control			

Table 29 Continued

	Beta	t-statistics	p-value
Safety -> Engagement -> Autonomous	0.000	0.084	0.933
Social Reward -> Engagement -> Autonomous	-0.002	0.128	0.898
Social Reward -> Meaningfulness -> Engagement -> Control -> Contextual performance	0.008	2.164	0.031
Safety -> Engagement -> Control	-0.011	0.874	0.382
Safety -> Engagement -> Contextual performance	0.005	0.867	0.386
Availability -> Autonomous - > Contextual performance	0.000	0.029	0.977
Social Reward -> Safety -> Engagement -> Control	-0.006	0.865	0.387
Social Reward -> Availability -> Autonomous -> Contextual performance	0.000	0.029	0.977
Social Reward -> Meaningfulness -> Autonomous -> Contextual performance	0.005	0.992	0.321
Availability -> Impersonal -> Contextual performance	-0.001	0.195	0.845
Availability -> Engagement - > Control	-0.058	2.796	0.005
Safety -> Engagement -> Impersonal -> Contextual performance	0.000	0.693	0.488

Social Reward ->	0.008	1.350	0.177
Autonomous -> Contextual performance			
Social Reward -> Safety ->	0.001	0.790	0.430
Engagement -> Control -> Contextual performance			
Social Reward -> Control ->	-0.016	2.245	0.025
Contextual performance			
Availability -> Engagement - > Autonomous	-0.002	0.123	0.902
Engagement -> Control ->	0.027	2.319	0.020
Contextual performance			
Social Reward -> Safety ->	0.012	2.123	0.034
Autonomous -> Contextual performance			
Social Reward -> Availability -> Engagement -> Impersonal	-0.021	2.090	0.037
Social Reward -> Availability -> Control -> Contextual performance	0.002	0.427	0.670
Social Reward -> Safety ->	-0.011	1.966	0.049
Control -> Contextual performance			
Social Reward ->	-0.058	3.735	0.000
Engagement -> Control			
Meaningfulness -> Control ->	-0.014	1.689	0.091
Contextual performance			

Source: Field survey (2021)

## APPENDIX I2

**COEFFICIENT OF DETERMINATION, PATH COEFFICIENT AND  
EFFECT SIZE OF ROLE OF PSYCHOLOGICAL CONDITIONS,  
EMPLOYEE ENGAGEMENT AND CAUSALITY ORIENTATIONS IN  
THE RELATIONSHIPS BETWEEN SOCIAL REWARD AND  
ADAPTIVE PERFORMANCE**

**Table 30: Coefficient of Determination, Path Coefficient and Effect Size of Role of Psychological Conditions, Employee Engagement and Causality Orientations in the Relationships between Social Reward and Adaptive Performance**

	Beta	Effect Size ( $f^2$ )	t-statistics	p-value	$R^2$
Autonomous -> Adaptive Performance	0.144	0.025	4.100	0.000	
Availability -> Adaptive Performance	0.251	0.033	4.352	0.000	
Availability -> Autonomous Performance	-0.005	0.000	0.083	0.934	
Availability -> Control Performance	-0.036	0.000	0.557	0.577	
Availability -> Engagement Performance	0.206	0.004	3.891	0.000	0.446
Availability -> Impersonal Control -> Adaptive Performance	0.007	0.000	0.117	0.907	
Engagement -> Adaptive Performance	0.109	0.012	2.452	0.014	
Engagement -> Adaptive Performance	0.033	0.001	0.636	0.525	
Engagement -> Autonomous Performance	-0.008	0.000	0.106	0.916	
Engagement -> Control Performance	-0.274	0.024	4.080	0.000	
Engagement -> Impersonal Performance	-0.185	-0.187	2.580	0.010	
Impersonal -> Adaptive Performance	-0.090	0.010	2.237	0.025	

Meaningfulness -> Adaptive Performance	0.027	0.000	0.455	0.649
Meaningfulness -> Autonomous	0.075	0.002	0.941	0.347
Meaningfulness -> Control	0.158	0.007	2.119	0.034
Meaningfulness -> Engagement	0.499	0.260	10.337	0.000
Meaningfulness -> Impersonal	-0.117	0.003	1.640	0.101
Safety -> Adaptive Performance	0.285	0.043	5.261	0.000
Safety -> Autonomous	0.203	0.014	3.014	0.003
Safety -> Control	0.197	0.013	3.051	0.002
Safety -> Engagement	0.037	0.001	0.911	0.362
Safety -> Impersonal	0.161	0.008	2.360	0.018

**Table 30 Continued**

	Beta	Effect Size ( $f^2$ )	t-statistics	p-value	$R^2$
Social Reward -> Autonomous	0.078	0.004	1.739	0.082	
Social Reward -> Availability	0.527	0.384	15.434	0.000	
Social Reward -> Control	0.172	0.019	3.733	0.000	
Social Reward -> Engagement	0.205	0.091	8.174	0.000	
Social Reward -> Impersonal	0.211	0.027	4.599	0.000	
Social Reward -> Meaningfulness	0.565	0.469	16.831	0.000	
Social Reward -> Safety	0.573	0.4895	18.437	0.000	

Source: Field survey (2021)

## APPENDIX I3

**SPECIFIC INDIRECT EFFECTS OF THE MEDIATION OF  
PSYCHOLOGICAL CONDITIONS, EMPLOYEE ENGAGEMENT,  
AND CAUSALITY ORIENTATIONS IN THE RELATIONSHIP  
BETWEEN SOCIAL REWARD AND ADAPTIVE PERFORMANCE**

**Table 31: Specific Indirect Effects of the Mediation of Psychological Conditions, Employee Engagement and Causality Orientations in the Relationship between Social Reward and Adaptive Performance**

	Beta	t- statistics	p-value
Social Reward -> Meaningfulness -> Engagement -> Impersonal -> Adaptive Performance	0.005	1.579	0.114
Safety -> Impersonal -> Adaptive Performance	-0.015	1.458	0.145
Social Reward -> Impersonal -> Adaptive Performance	-0.019	2.022	0.043
Social Reward -> Meaningfulness -> Adaptive Performance	0.015	0.460	0.646
Engagement -> Impersonal -> Adaptive Performance	0.017	1.657	0.098
Social Reward -> Meaningfulness -> Impersonal - > Adaptive Performance	0.006	1.206	0.228
Social Reward -> Engagement - > Impersonal	-0.038	2.378	0.017
Social Reward -> Availability - > Control -> Adaptive Performance	-0.002	0.492	0.623
Social Reward -> Safety -> Control	0.113	3.021	0.003
Social Reward -> Meaningfulness -> Engagement -> Adaptive Performance	0.009	0.647	0.518



Social Reward -> Engagement - > Impersonal -> Adaptive Performance	0.003	1.603	0.109
Engagement -> Control -> Adaptive Performance	-0.030	1.944	0.052
Safety -> Control -> Adaptive Performance	0.021	1.881	0.060
Safety -> Engagement -> Impersonal -> Adaptive Performance	0.001	0.719	0.472
Social Reward -> Availability - > Engagement -> Control	-0.030	2.631	0.009
Social Reward -> Availability - > Engagement -> Autonomous	-0.001	0.101	0.920
Social Reward -> Meaningfulness -> Engagement -> Control -> Adaptive Performance	-0.008	1.767	0.077
Safety -> Engagement -> Adaptive Performance	0.001	0.371	0.710
Social Reward -> Engagement - > Autonomous -> Adaptive Performance	0.000	0.103	0.918
Meaningfulness -> Engagement -> Control	-0.137	3.697	0.000

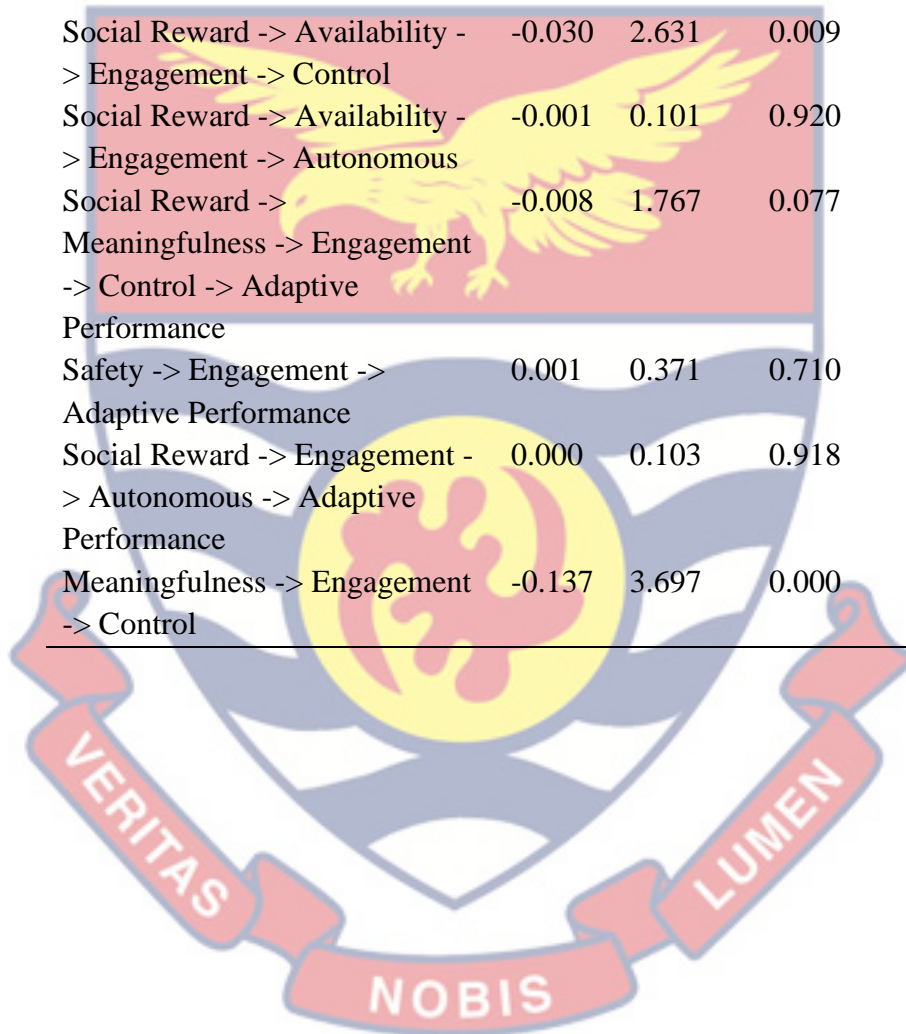


Table 31 Continued

	Beta	t- statistics	p-value
Safety -> Autonomous -> Adaptive Performance	0.029	2.264	0.024
Meaningfulness -> Engagement -> Impersonal -> Adaptive Performance	0.008	1.645	0.100
Social Reward -> Meaningfulness -> Engagement -> Autonomous	-0.002	0.104	0.917
Social Reward -> Meaningfulness -> Impersonal	-0.066	1.629	0.103
Meaningfulness -> Engagement -> Autonomous -> Adaptive Performance	-0.001	0.102	0.919
Meaningfulness -> Engagement -> Autonomous	-0.004	0.105	0.916
Social Reward -> Meaningfulness -> Control	0.089	2.055	0.040
Social Reward -> Meaningfulness -> Engagement	0.282	8.502	0.000
Social Reward -> Availability - > Engagement	0.109	3.795	0.000
Safety -> Engagement -> Impersonal	-0.007	0.782	0.434
Social Reward -> Safety -> Autonomous	0.116	3.006	0.003
Social Reward -> Meaningfulness -> Engagement -> Autonomous -> Adaptive Performance	0.000	0.101	0.919
Availability -> Engagement -> Autonomous -> Adaptive Performance	0.000	0.099	0.921

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Social Reward -> Safety -> Impersonal	0.092	2.271	0.023
Meaningfulness -> Engagement -> Impersonal	-0.093	2.508	0.012
Social Reward -> Availability - > Autonomous -> Adaptive Performance	0.000	0.082	0.935
Engagement -> Autonomous -> Adaptive Performance	-0.001	0.103	0.918
Social Reward -> Meaningfulness -> Engagement -> Impersonal	-0.052	2.437	0.015
Meaningfulness -> Engagement -> Control -> Adaptive Performance	-0.015	1.884	0.060
Social Reward -> Meaningfulness -> Autonomous	0.042	0.930	0.352
Social Reward -> Meaningfulness -> Control -> Adaptive Performance	0.010	1.413	0.158
Social Reward -> Safety -> Impersonal -> Adaptive Performance	-0.008	1.399	0.162
Social Reward -> Safety -> Adaptive Performance	0.164	5.046	0.000
Safety -> Engagement -> Control -> Adaptive Performance	-0.001	0.747	0.455
Social Reward -> Availability - > Autonomous	-0.002	0.084	0.933
Meaningfulness -> Impersonal - > Adaptive Performance	0.011	1.237	0.216
Social Reward -> Safety -> Engagement	0.021	0.909	0.363

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**Table 31 Continued**

	Beta	t-statistics	p-value
Social Reward -> Safety -> Engagement -> Impersonal	-0.004	0.780	0.436
Social Reward -> Safety -> Control -> Adaptive Performance	0.012	1.811	0.070
Social Reward -> Safety -> Engagement -> Impersonal -> Adaptive Performance	0.000	0.708	0.479
Meaningfulness -> Engagement -> Adaptive Performance	0.016	0.647	0.518
Social Reward -> Safety -> Engagement -> Control -> Adaptive Performance	-0.001	0.731	0.465
Social Reward -> Meaningfulness -> Engagement -> Control	-0.077	3.407	0.001
Social Reward -> Availability -> Impersonal	0.004	0.114	0.909
Availability -> Autonomous -> Adaptive Performance	-0.001	0.083	0.934
Availability -> Engagement -> Impersonal	-0.038	2.080	0.038
Social Reward -> Availability -> Engagement -> Autonomous -> Adaptive Performance	0.000	0.098	0.922
Availability -> Engagement -> Control -> Adaptive Performance	-0.006	1.683	0.092
Social Reward -> Safety -> Engagement -> Autonomous	0.000	0.070	0.944
Social Reward -> Safety -> Engagement -> Autonomous -> Adaptive Performance	0.000	0.069	0.945
Social Reward -> Availability -> Engagement -> Adaptive Performance	0.004	0.602	0.547
Social Reward -> Availability -> Control	-0.019	0.563	0.573
Availability -> Control -> Adaptive Performance	-0.004	0.506	0.613
Safety -> Engagement -> Autonomous	0.000	0.071	0.944
Availability -> Engagement -> Adaptive Performance	0.007	0.602	0.547
Social Reward -> Engagement -> Autonomous	-0.002	0.105	0.916

Social Reward -> Engagement - > Control -> Adaptive Performance	-0.006	1.877	0.061
Availability -> Engagement -> Impersonal -> Adaptive Performance	0.003	1.455	0.146
Safety -> Engagement -> Control	-0.010	0.857	0.391
Social Reward -> Safety -> Engagement -> Adaptive Performance	0.001	0.371	0.711
Meaningfulness -> Autonomous -> Adaptive Performance	0.011	0.902	0.367
Social Reward -> Safety -> Engagement -> Control	-0.006	0.849	0.396

**Table 31 Continued**

	Beta	t- statistics	p-value
Social Reward -> Meaningfulness -> Autonomous -> Adaptive Performance	0.006	0.887	0.375
Social Reward -> Control -> Adaptive Performance	0.019	1.955	0.051
Availability -> Engagement -> Control	-0.057	2.796	0.005
Meaningfulness -> Control -> Adaptive Performance	0.017	1.484	0.138
Social Reward -> Engagement - > Adaptive Performance	0.007	0.626	0.531
Availability -> Engagement -> Autonomous	-0.002	0.102	0.919
Social Reward -> Availability - > Engagement -> Impersonal	-0.020	2.024	0.043

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Social Reward -> Safety -> Autonomous -> Adaptive Performance	0.017	2.240	0.025
Availability -> Impersonal -> Adaptive Performance	-0.001	0.104	0.918
Social Reward -> Engagement - > Control	-0.056	3.557	0.000
Social Reward -> Availability - > Impersonal -> Adaptive Performance	0.000	0.101	0.919
Social Reward -> Availability - > Engagement -> Impersonal -> Adaptive Performance	0.002	1.388	0.165
Safety -> Engagement -> Autonomous -> Adaptive Performance	0.000	0.069	0.945
Social Reward -> Autonomous - > Adaptive Performance	0.011	1.511	0.131
Social Reward -> Availability - > Adaptive Performance	0.132	4.280	0.000
Social Reward -> Availability - > Engagement -> Control -> Adaptive Performance	-0.003	1.581	0.114

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Source: Field survey (2021)

## APPENDIX I4

**COEFFICIENT OF DETERMINATION, PATH COEFFICIENT AND  
EFFECT SIZE OF ROLE OF PSYCHOLOGICAL CONDITIONS,  
EMPLOYEE ENGAGEMENT AND CAUSALITY ORIENTATIONS IN  
THE RELATIONSHIPS BETWEEN SOCIAL REWARDS AND  
COUNTERPRODUCTIVE PERFORMANCE OR BEHAVIOUR**

**Table 32: Coefficient of Determination, Path Coefficient and Effect Size of Role of Psychological Conditions, Employee Engagement and Causality Orientations in the Relationships between Social Rewards and Counterproductive Performance or Behaviour**

	Beta	Effect size ( $f^2$ )	t-statistics	p-value	$R^2$
Autonomous -> Counterproductive Behaviour	0.050	0.002	1.440	0.150	0.192
Availability -> Autonomous	-0.007	0.000	0.130	0.897	
Availability -> Control	-0.014	0.000	0.216	0.829	
Availability -> Counterproductive Behaviour	-0.072	0.002	0.827	0.409	
Availability -> Engagement	0.208	0.045	3.933	0.000	
Availability -> Impersonal	0.006	0.004	0.097	0.923	
Control -> Counterproductive Behaviour	0.048	0.002	1.289	0.197	
Engagement-> Autonomous	-0.021	0.000	0.263	0.792	
Engagement -> Control	-0.303	0.029	4.717	0.000	
Engagement -> Counterproductive Behaviour	-0.086	0.003	1.168	0.243	
Engagement -> Impersonal	-0.183	0.010	2.631	0.009	

Impersonal -> Counterproductive Behaviour	0.287	0.068	6.805	0.000	
Meaningfulness - > Autonomous	0.077	0.002	0.950	0.342	
Meaningfulness - > Control	0.133	0.005	1.769	0.077	
Meaningfulness - > Counterproductive Behaviour	-0.262	0.020	3.248	0.001	
Meaningfulness - > Engagement	0.509	0.271	10.547	0.000	
<b>Table 32 Continue</b>					
	Beta	Effect size	t- statistics	p-value	R <sup>2</sup>
Meaningfulness - > Impersonal	-0.118	0.004	1.706	0.088	
Safety -> Autonomous	0.211	0.015	3.150	0.002	
Safety -> Control	0.214	0.015	3.463	0.001	
Safety -> Counterproductive Behaviour	0.134	0.007	2.303	0.021	
Safety -> Engagement	0.030	0.001	0.736	0.462	
Safety -> Impersonal	0.167	0.009	2.721	0.007	
Social Reward -> Autonomous	0.077	0.004	1.676	0.094	
Social Reward -> Availability	0.528	0.386	15.718	0.000	
Social Reward -> Control	0.169	0.018	3.695	0.000	
Social Reward -> Counterproductive Behaviour	0.080	0.004	2.181	0.029	
Social Reward -> Engagement	0.200	0.086	7.786	0.000	
Social Reward -> Impersonal	0.208	0.026	4.732	0.000	
Social Reward -> Meaningfulness	0.564	0.466	16.851	0.000	
Social Reward -> Safety	0.575	0.494	18.812	0.000	

Source: Field survey (2021)



## APPENDIX I5

**SPECIFIC INDIRECT EFFECT OF ROLE OF PSYCHOLOGICAL  
CONDITIONS, EMPLOYEE ENGAGEMENT AND CAUSALITY  
ORIENTATIONS IN THE RELATIONSHIPS BETWEEN SOCIAL  
REWARDS AND COUNTERPRODUCTIVE PERFORMANCE OR  
BEHAVIOUR**

**Table 33: Specific Indirect Effect of Role of Psychological Conditions, Employee Engagement and Causality Orientations in the Relationships between Social Rewards and Counterproductive Behaviour**

	Beta	t-statistics	p-value
Social Reward -> Availability -> Counterproductive Behaviour	-0.038	0.826	0.409
Social Reward -> Safety -> Control -> Counterproductive Behaviour	0.006	1.175	0.240
Social Reward -> Meaningfulness -> Counterproductive Behaviour	-0.148	3.149	0.002
Social Reward -> Engagement -> Impersonal	-0.037	2.424	0.015
Social Reward -> Safety -> Control	0.123	3.359	0.001
Meaningfulness -> Engagement -> Counterproductive Behaviour	-0.044	1.116	0.264
Meaningfulness -> Impersonal -> Counterproductive Behaviour	-0.034	1.646	0.100
Social Reward -> Impersonal -> Counterproductive Behaviour	0.060	3.855	0.000

Availability ->	-0.003	1.168	0.243
Engagement ->			
Control ->			
Counterproductive Behaviour			
Safety -> Control ->	0.010	1.179	0.239
Counterproductive Behaviour			
Availability ->	0.000	0.212	0.832
Engagement ->			
Autonomous ->			
Counterproductive Behaviour			
<b>Table 33 Continued</b>			
	Beta	t-statistics	p-value
Engagement ->	-0.053	2.411	0.016
Impersonal ->			
Counterproductive Behaviour			
Safety -> Engagement ->	-0.003	0.483	0.629
Counterproductive Behaviour			
Social Reward ->	-0.033	2.800	0.005
Availability ->			
Engagement ->			
Control			
Social Reward ->	-0.002	0.254	0.800
Availability ->			
Engagement ->			
Autonomous			
Meaningfulness ->	-0.154	4.219	0.000
Engagement ->			
Control			
Social Reward ->	0.000	0.213	0.831
Engagement ->			
Autonomous ->			
Counterproductive Behaviour			
Social Reward ->	-0.006	0.260	0.795
Meaningfulness ->			
Engagement ->			
Autonomous			
Availability -> Control ->	-0.001	0.174	0.862
Counterproductive Behaviour			
Engagement ->	-0.015	1.231	0.218
Control ->			
Counterproductive Behaviour			

Meaningfulness ->	-0.027	2.375	0.018
Engagement ->			
Impersonal ->			
Counterproductive Behaviour			
Social Reward ->	-0.067	1.703	0.089
Meaningfulness ->			
Impersonal			
Social Reward ->	-0.015	2.302	0.021
Meaningfulness ->			
Engagement ->			
Impersonal ->			
Counterproductive Behaviour			
Meaningfulness ->	-0.011	0.262	0.794
Engagement ->			
Autonomous			
Social Reward ->	0.075	1.721	0.085
Meaningfulness ->			
Control			
Social Reward ->	0.000	0.524	0.601
Safety -> Engagement -> Control -> Counterproductive Behaviour			

**Table 33 Continued**

	Beta	t-statistics	p-value
Social Reward -> Engagement -> Impersonal -> Counterproductive Behaviour	-0.010	2.239	0.025
Availability -> Impersonal -> Counterproductive Behaviour	0.002	0.095	0.924
Social Reward -> Meaningfulness -> Engagement	0.287	8.588	0.000
Social Reward -> Availability -> Engagement	0.110	3.752	0.000
Availability -> Engagement -> Counterproductive Behaviour	-0.018	1.146	0.252

Safety -> Engagement -> Impersonal	-0.005	0.659	0.510
Social Reward ->	0.121	3.079	0.002
Safety -> Autonomous Availability ->	0.000	0.107	0.915
Autonomous -> Counterproductive Behaviour			
Social Reward ->	-0.001	0.479	0.632
Safety -> Engagement -> Counterproductive Behaviour			
Safety -> Autonomous -> Counterproductive Behaviour	0.011	1.324	0.186
Social Reward ->	-0.004	1.190	0.234
Meaningfulness -> Engagement -> Control -> Counterproductive Behaviour			
Social Reward ->	0.096	2.656	0.008
Safety -> Impersonal Meaningfulness ->	-0.093	2.574	0.010
Engagement -> Impersonal			
Social Reward ->	-0.053	2.515	0.012
Meaningfulness -> Engagement -> Impersonal			
Social Reward ->	0.044	0.936	0.350
Meaningfulness -> Autonomous			
Social Reward ->	0.001	0.095	0.925
Availability -> Impersonal -> Counterproductive Behaviour			

Table 33 Continued

	Beta	t statistics	p value
Social Reward -> Availability -> Autonomous	-0.004	0.129	0.897
Social Reward -> Safety -> Engagement	0.017	0.732	0.464
Social Reward -> Engagement -> Control ->	-0.003	1.224	0.221
Counterproductive Behaviour			
Social Reward -> Meaningfulness -> Autonomous ->	0.002	0.682	0.495
Counterproductive Behaviour			
Social Reward -> Safety -> Engagement -> Impersonal	-0.003	0.654	0.513
Social Reward -> Availability -> Engagement ->	-0.009	1.126	0.260
Counterproductive Behaviour			
Social Reward -> Safety -> Autonomous -> Counterproductive Behaviour	0.006	1.333	0.182
Social Reward -> Meaningfulness -> Engagement -> Autonomous ->	0.000	0.218	0.828
Counterproductive Behaviour			
Social Reward -> Availability -> Engagement -> Control ->	-0.002	1.155	0.248
Counterproductive Behaviour			
Social Reward -> Availability -> Autonomous ->	0.000	0.108	0.914
Counterproductive Behaviour			
	0.006	0.953	0.341
Meaningfulness -> Control ->			

Counterproductive Behaviour			
Social Reward ->	0.000	0.113	0.910
Safety -> Engagement -> Autonomous ->			
Counterproductive Behaviour			
Safety -> Engagement -> Control ->	0.000	0.526	0.599
Counterproductive Behaviour			

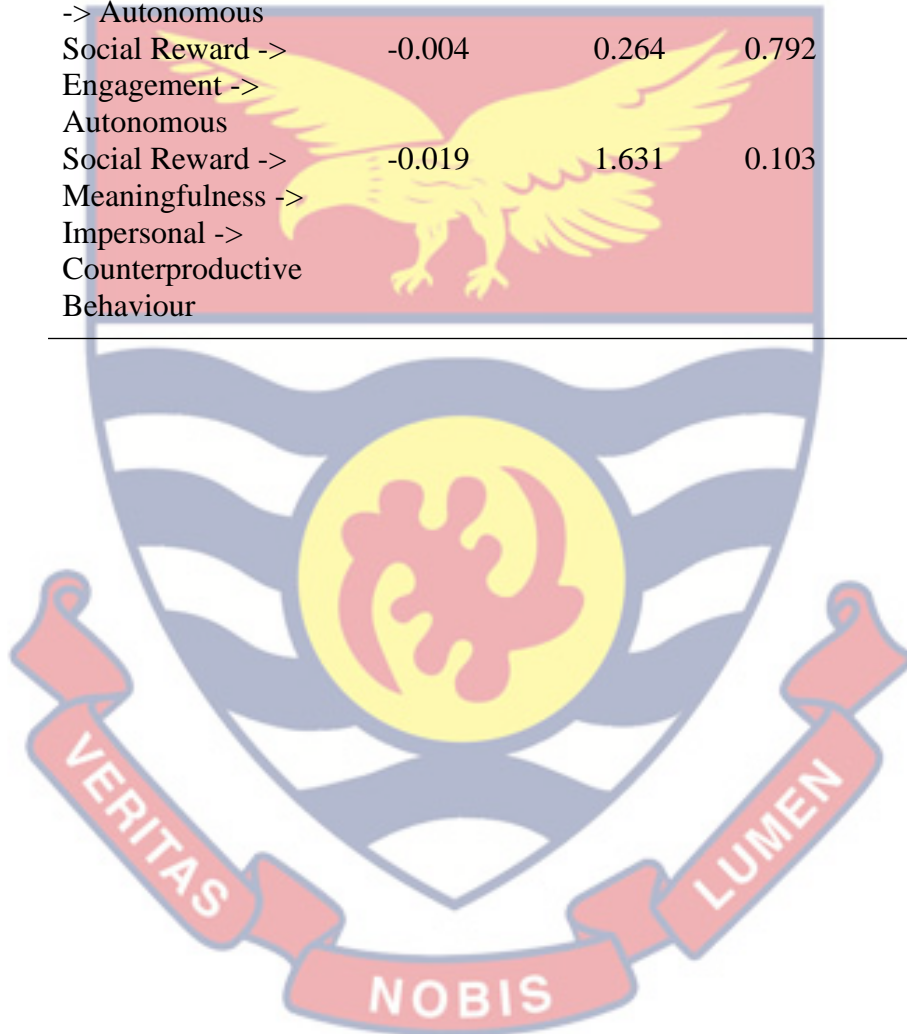
**Table 33 Continued**

	Beta	t-statistics	p-value
Social Reward -> Meaningfulness -> Engagement -> Control	-0.087	3.856	0.000
Engagement -> Autonomous -> Counterproductive Behaviour	-0.001	0.216	0.829
Availability -> Engagement -> Impersonal -> Counterproductive Behaviour	-0.011	1.963	0.050
Social Reward -> Meaningfulness -> Engagement -> Counterproductive Behaviour	-0.025	1.102	0.271
Social Reward -> Availability -> Impersonal -> Social Reward -> Autonomous -> Counterproductive Behaviour	0.003	0.097	0.923
Social Reward -> Autonomous -> Counterproductive Behaviour	0.004	1.007	0.314
Availability -> Engagement -> Impersonal -> Meaningfulness -> Autonomous -> Counterproductive Behaviour	-0.038	2.121	0.034
Meaningfulness -> Autonomous -> Counterproductive Behaviour	0.004	0.684	0.494
Social Reward -> Safety -> Engagement -> Autonomous	0.000	0.149	0.881

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Safety -> Engagement -> Impersonal -> Counterproductive Behaviour	-0.002	0.650	0.515
Social Reward -> Availability -> Control	-0.007	0.215	0.830
Social Reward -> Safety -> Impersonal - > Counterproductive Behaviour	0.028	2.383	0.017
Safety -> Engagement -> Autonomous	-0.001	0.150	0.881
Social Reward -> Engagement -> Autonomous	-0.004	0.264	0.792
Social Reward -> Meaningfulness -> Impersonal -> Counterproductive Behaviour	-0.019	1.631	0.103

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**Table 33 Continued**

	Beta	t- statistics	p- value
Social Reward -> Availability -> Engagement -> Autonomous -> Counterproductive Behaviour	0.000	0.213	0.832
Social Reward -> Control > Counterproductive Behaviour	0.008	1.195	0.232
Social Reward -> Safety -> Counterproductive Behaviour	0.077	2.268	0.023
Safety -> Engagement -> Control	-0.009	0.707	0.479
Social Reward -> Safety -> Engagement -> Control	-0.005	0.700	0.484
Social Reward -> Meaningfulness -> Control -> Counterproductive Behaviour	0.004	0.944	0.345
Availability -> Engagement -> Control	-0.063	2.964	0.003
Social Reward -> Safety -> Engagement -> Impersonal -> Counterproductive Behaviour	-0.001	0.644	0.520
Social Reward -> Availability -> Control -> Counterproductive Behaviour	0.000	0.174	0.862
Safety -> Impersonal - > Counterproductive Behaviour	0.048	2.456	0.014



Availability ->	-0.004	0.256	0.798
Engagement ->			
Autonomous			
Safety -> Engagement	0.000	0.113	0.910
-> Autonomous ->			
Counterproductive			
Behaviour			
Social Reward ->	-0.020	2.074	0.038
Availability ->			
Engagement ->			
Impersonal			
Social Reward ->	-0.061	3.977	0.000
Engagement ->			
Control			

**Table 33 Continued**

	Beta	t- statistics	p- value
Meaningfulness ->			
Engagement ->	-0.007		
Control ->		1.197	0.231
Counterproductive			
Behaviour			
Social Reward ->	-0.006	1.906	0.057
Availability ->			
Engagement ->			
Impersonal ->			
Counterproductive			
Behaviour			
Meaningfulness ->	-0.001	0.217	0.828
Engagement ->			
Autonomous ->			
Counterproductive			
Behaviour			
Social Reward ->	-0.017	1.180	0.238
Engagement ->			
Counterproductive			
Behaviour			

Source: Field survey

APPENDIX J

LETTER OF INTRODUCTION

**UNIVERSITY OF CAPE COAST**  
COLLEGE OF HUMANITIES AND LEGAL STUDIES  
SCHOOL OF BUSINESS  
**DEPARTMENT OF HUMAN RESOURCE MANAGEMENT**

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**UNIVERSITY POST OFFICE**  
**CAPE COAST, GHANA**

**Our Ref: SB/DHRM/PGS/20/07**

10<sup>th</sup> September, 2020

**Your Ref:**

The Chair  
Institutional Review Board  
University of Cape Coast


Dear Sir

**INTRODUCTORY LETTER**

The bearer of this letter, **Mr. Samuel Kwesi Cudjor**, is a PhD (Business Administration) Student of the University. He is currently conducting a research on the topic “**Employee Rewards and Performance of Nurses in Ghana: The Roles of Psychological Conditions, Employee Engagement and Causality Orientations**” and would need ethical clearance from your outfit.

We would be grateful if he is offered the necessary assistance to enable him carry out the research

We appreciate your anticipated assistance.

  
**Dr. Nana Yaw Oppong**  
**(HEAD)**

**NOBIS**